

FINAL

Drainage and Stormwater Management Report – West Section Conservation Halton Area

Highway 413 Preliminary Design and
Assessment of Environmental Impacts

March 2026



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Authors

Report Prepared By:

Ana Ignacio, P.Eng.
Senior Water Resources Engineer
AECOM



Report Reviewed By:

Javeed Khan, P.Eng., PMP
Water Resources Lead (Transportation)
AECOM



Report Approved By:

Brian Richert, P.Eng.
Senior Water Resources Engineer
AECOM



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Executive Summary

The Ontario Ministry of Transportation has retained WSP Canada Inc. and AECOM Canada ULC in collaboration with various sub-consultants and technical firms to undertake the Highway 413 Preliminary Design and Assessment of Environmental Impacts, hereinafter referred to as “the Project”.

The Project is following the requirements of the *Highway 413 Act, 2024*.

The proposed highway crosses three different conservation authority jurisdictions; the Toronto and Region Conservation Authority (TRCA), the Credit Valley Conservation (CVC) and Conservation Halton (CH). Separate drainage and stormwater management reports have been prepared for the proposed highway segments in each jurisdiction and this report represents the highway segment in the CH area.

Within the CH jurisdiction, Highway 413 and the associated Highway 401 / 407 interchange is located within the Sixteen Mile Creek watershed. This 1.3 km long portion of highway mainly consists of the Highway 413 interchange with Highway 401 and Highway 407.

The proposed Highway 413 and associated interchange crosses several watercourses and drainage paths. Within the CH study limit, there are 18 existing culverts that convey flows across the transportation corridor. The proposed works will impact 14 culverts which will require either extension or relocation / modification. In addition, 12 new culverts will be required to convey flows across the proposed transportation corridor. Under existing conditions, there are 6 stormwater management ponds in the Highway 401 / 407 interchange area that provide water quality and quantity controls. The proposed works will impact three existing stormwater management ponds that will require relocation or modification.

Hydrologic and hydraulic assessment was completed for all existing and proposed watercourse crossings. The proposed culverts were sized to meet the required hydraulic criteria set forth by MTO and CH. Other disciplines were also involved in the design process and so structural, environmental, and fluvial geomorphology criteria were also considered in sizing the crossings.

The proposed highway and associated works will add approximately 31 ha of impervious area which will potentially impact the peak flow rates, runoff volumes and

stormwater quality. To mitigate these impacts, the following stormwater management measures are recommended:

- Maintain existing Pond 2, Pond 4 and Pond 5
- Relocate Pond 1
- Relocate and increase Pond 6 capacities
- Modify and increase Pond 3 capacity
- Provide three new wet ponds (Pond 7, 8 and 9)

Catchment areas were delineated to each of the pond locations, and existing and proposed drainage areas were modelled in Visual Otthymo hydrologic model to determine the amount of storage volume required to attenuate peak flows to pre-development levels. Permanent pool and extended detention volumes were determined using the Ministry of Environment, Conservation and Parks' (MECP) Stormwater Management Planning and Design Manual (MOE, 2003), with proposed pond grading assumed to determine the approximate footprint of each pond. These ponds were placed/relocated in locations adjacent to the receiving watercourses. Ponds were designed for an ultimate design scenario where the entire highway area is paved with no grassed swale in the middle. The impervious area of the proposed transitway was also included in the pond designs.

The following report will describe the various criteria to be met, the agencies involved, hydrology and hydraulic assumptions made and the resulting ponds, and culverts within the CH area.

1. Introduction

1.1 Project Overview

The Ontario Ministry of Transportation has retained WSP Canada Inc. and AECOM Canada ULC in collaboration with various sub-consultants and technical firms to undertake the Highway 413 Preliminary Design and Assessment of Environmental Impacts, hereinafter referred to as “the Project”.

The Project is following the requirements of the *Highway 413 Act, 2024*.

The Project includes the 52-kilometre Highway 413 Corridor, a 4 kilometre extension to Highway 410, and a 3 kilometre extension to Highway 427 (both facilitating connections to the Highway 413 Corridor), for a total of 59 kilometres of new infrastructure (Figure 1-1). The highway will have 11 interchanges at municipal roads. Features such as stormwater management ponds, carpool lots, Commercial Vehicle Inspection Facilities, maintenance facilities and the potential for electric vehicle charging stations have been explored as part of Preliminary Design.

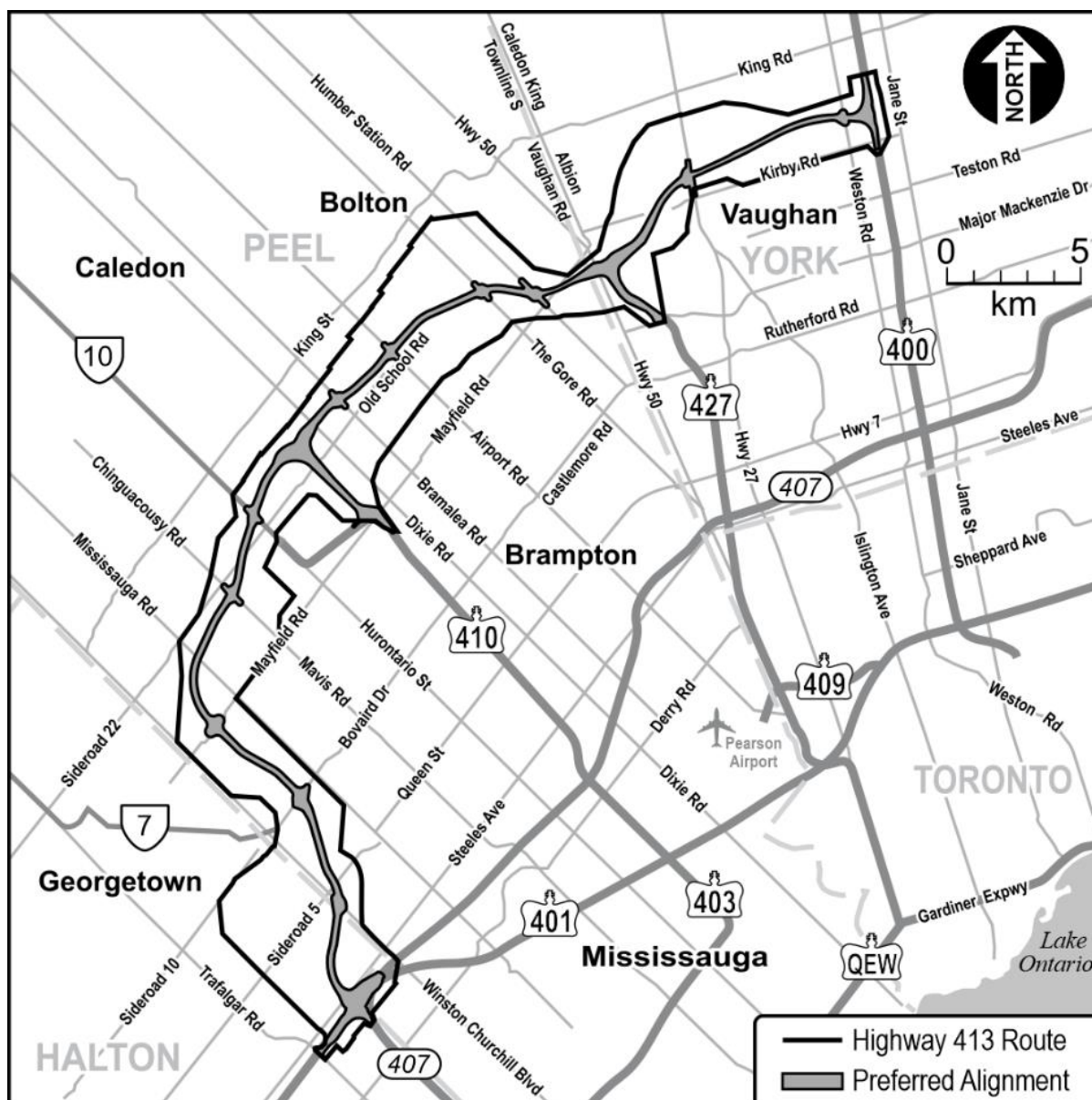
Highway 413 will connect Highway 401 and Highway 407 Express Toll Route in the Regional Municipality of Halton and the Regional Municipality of Peel with Highway 400 in the Regional Municipality of York.

The typical right-of-way will be 170 metres which includes 110 metres for the typical mainline highway and 60 metres for a proposed transitway. A multi-use trail parallel to Highway 413 may be accommodated within the proposed transitway right-of-way. The right-of-way is expanded at interchanges and high fill areas to accommodate ramps to and from the crossing roads, as well as in locations with ancillary highway facilities as mentioned above. The Preliminary Design consists of a typical six-lane cross section (three lanes in each direction) with a grassed median. The right-of-way has been designed to accommodate up to ten-lanes (five lanes in each direction) should future traffic conditions warrant additional capacity. These additional lanes would be provided by widening the highway towards the median.

The proposed transitway will be a separate corridor running alongside the highway, dedicated for public transit, including stations to facilitate passenger access at key locations. The proposed transitway and stations will be subject to a separate future assessment of environmental impacts.

Highway 413 is a 400-series highway, which is a network of controlled-access highways throughout the Province of Ontario. Their primary function is to accommodate through traffic and provide links between urban centres. 400-series highways feature full grade separations (such as bridges) at most intersecting roads and railway lines. Interchanges are provided along the 400-series highways to connect to other highways and municipal roads. These highways have design standards to accommodate high speeds and various collision avoidance and traffic management systems. Highway 413 is proposed to have a posted speed limit of 110 kilometres per hour.

Figure 1-1: Highway 413 Route



The future Highway 413 is expected to:

- Relieve traffic on local roads and parallel highways,
- Help accommodate travel demand,
- Reduce travel times for commuters and goods movement,
- Reduce the social, environmental, and economic costs of congestion,
- Provide greater connectivity between urban growth centres,
- Provide better connections to residential and employment lands, and
- Provide an alternate route in the event of an incident or road closure on local and regional roads.

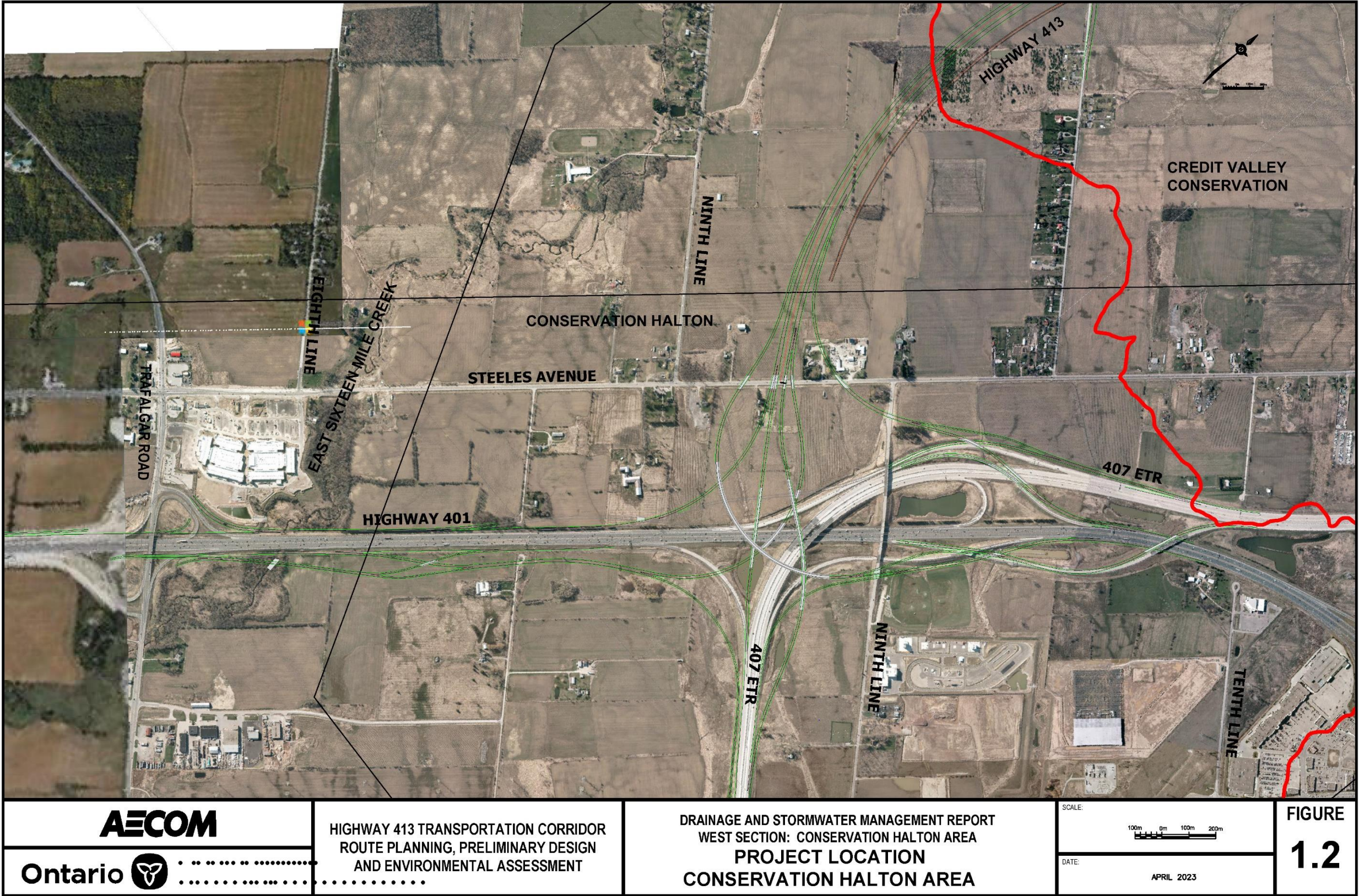
The overall objective of the drainage and stormwater management (SWM) plan is to minimize impacts on existing drainage systems within the study area and on the natural environment due to the proposed highway works in terms of water quantity and quality. For drainage and stormwater management assessment, the project is divided into three sections based on the proposed alignment located in the relevant jurisdiction of each Conservation Authority: Toronto and Region Conservation Authority (TRCA), Credit Valley Conservation Authority (CVC) and Conservation Halton (CH) Section as shown on **Figure 1.1** and described below:

- TRCA Section – an approximately 36.7 km long segment from north of Mayfield Road to Highway 400
- CVC Section – an approximately 12.4 km long segment from west of Tenth Line to north of Mayfield Road
- CH Section – an approximately 1.3 km long segment from west of Tenth Line to Steeles Avenue as well as the Highway 413, Highway 401 and Highway 407 freeway / freeway interchanges and their associated ramps bounded by Trafalgar Road (at Highway 401) to the west, Tenth Line West (at Highway 407) to the east, Steeles Avenue (at Highway 413) to the north and 0.5 km north of Derry Road (at Highway 407) to the south.

A separate drainage and stormwater management report is provided for each section.

This report documents the drainage and stormwater assessment for the proposed improvements at the west limit of the project including the Highway 401, Highway 407 Highway 413 Interchange located within the West Section of the project under the CH jurisdiction as shown on **Figure 1.2**.

Figure 1-2: Project Location



1.2 Background Review

The overall study area is within the jurisdiction of Toronto Region Conservation Authority (TRCA), Credit Valley Conservation Authority (CVC) and Conservation Halton (CH). This report will cover the portion of the study area within the CH jurisdiction.

The CH regulated area is within the West Section of the project study area as shown on **Figure 1.2**. It extends from 0.7 km west of Tenth line to the Highway 401 / Highway 407 Interchange to Trafalgar Road (at Highway 401) to the west, Steeles Avenue (at Highway 413) to the north and 0.5 km north of Derry Road (at Highway 407) to the south.

The foundation for the drainage and stormwater management design is based on a review of the existing documentation, including:

1. 1:10 000 Ontario Base Mapping
2. Topographic information and base maps as provided by MTO
3. MTO contract drawings
4. GTA West Corridor – Stage 1 study material
5. MTO contract documentation
6. Development reports, and hydrologic reports within the study area.

This above information was used to determine existing drainage conditions and to prepare a drainage mosaic for the study area.

1.3 Regulatory Agencies Consultation

The following regulatory agencies were consulted throughout this study to address their concerns and requirements for the proposed alignment.

- TRCA – Two meetings were held with TRCA October 6, 2020, and March 4, 2021, minutes of the meetings are included in Appendix A.
- CVC – Two meeting were held with CVC December 10, 2020, and December 12, 2022, minutes of the meetings are included in Appendix A
- CH – Two meetings were held with CH on September 30, 2020, and December 15, 2022, minutes of the meetings are included in Appendix A.

2. Policy Framework and Design Criteria

2.1 Policy Framework and Guidelines

The relevant guidelines and policies used in this report for the assessment of the Highway 413 drainage system include:

- MTO Drainage Management Manual (1997)
- MTO Highway Drainage Design Standards (2008)
- MOE (now MECP) Stormwater Management Planning and Design Manual (March 2003)
- DIR-PHM-B-014 Drainage Management Policy and Practice (Aug. 23, 2007, Rev. July 2007)
- DIR-PLNG-B-012 Drainage Act – Drainage Works and Municipal Drains (March 16, 2010)
- HSBM DCSO 2016-03 Implementing the New Unified Ontario Flood Method as the Method for Calculating the Design Flow Rates for Water Crossings (March 31, 2016)
- HSBM DCSO 2016-13 Implementation of the Ministry Update IDF Curves Online Application Version 3 (October 28, 2016)
- HSBM DCSO 2016-14 Implementation of the Ministry's Climate Change Consideration in the Design of Highway Drainage Infrastructure (October 28, 2016)
- HSBM DCSO 2020-02 Moratorium on Styrene Containing Cured-in-Place-Pipe (CIPP) Products Remains in Effect (April 2, 2020)
- HSBM DCSO 2020-03 Culvert Design Workbook Version 1.0 for MTO Culvert Design Assignments (May 12, 2020)
- Conservation Halton Guidelines for Stormwater Management Engineering Submissions (CH, November 2021)

2.2 Design Criteria

The documents listed above were reviewed to develop drainage and stormwater management criteria for the project discussed in following sections.

2.2.1 Surface Drainage System

The MTO's Highway Drainage Design Standards prescribe standards for designing Surface Drainage Systems (SD). The standards that are relevant to this study are as follows:

SD-1 Design Flows for Surface Drainage Systems: This standard identifies the minimum design flows that should be used for the highway surface drainage systems. The minor system of a freeway shall be designed for the 10-year design flow while the major system shall be designed for the 100-year design flow.

SD-2 Longitudinal Grade and Cross-fall: This standard identifies the minimum longitudinal grade and cross-fall for highway surface drainage.

SD-3 Flow Spread on to Travel Lanes: This standard identifies the maximum distance flow can spread on to the travel lanes of a highway. It also defines the maximum depth of flow at the edge of the travel lanes.

SD-4, SD-5, and SD-6: These standards identify the design of storm sewer systems, storm sewer inlets on a continuous grade, and storm sewer inlets at highway sags, respectively.

SD-9 Roadside Ditches (Conveyance Only): This standard outlines the minimum design requirements of Roadside Ditches for the conveyance of flow. It does not address the design of roadside ditches for enhancement of water quality.

SD-12 Freeboard above Adjacent Watercourse or Water Bodies: This standard identifies the minimum required freeboard for roadways that are constructed adjacent to watercourses or water bodies.

SD-13 Design Flow and Freeboards for Culverts not on a Watercourse: This standard identifies the design flows and the required freeboard for culverts associated with runoff from roadways and local external catchment areas. Culverts under highways, ramps, and adjacent roadways shall be designed to convey the minor and major systems design flow.

2.2.2 Hydraulic Criteria

The MTO's Highway Drainage Design Standards prescribe standards for designing Water Crossings (WC). The standards that are relevant to this study are as follows:

WC-1 Design Flows (Bridges and Culverts): This standard identifies the minimum design flows for the sizing of bridges and culverts for flow conveyance on regulated and non-regulated watercourses.

For the design flow, Highway 413, Transitway and associated ramps are considered as Freeway and all culverts and bridges will be designed in accordance with the design flow stipulated in the above table.

Regulatory flow will be calculated for all regulated watercourses where Floodline Mapping is available, where there is a potential risk to public safety, or where there is potential damage to adjacent properties. The existing and proposed upstream water surface elevations shall also be calculated for Regulated Watercourses where the Regulatory Flow estimate is required to assess the impacts of the proposed crossings.

WC-2 Freeboard and Clearance at Bridge Crossings: This standard identifies the soffit clearance and freeboard for bridges.

WC-4 Bridge Deck Drainage: This standard identifies the Maximum Allowable Spread Distance onto the travel lanes of highway bridges. It also defines the Maximum Depth of flow at the edge of the travel lanes.

WC-5 Bridge Deck Drains: This standard identifies the requirements for drains in bridge decks.

WC-7 Culvert Crossings on a Watercourse: This standard identifies the minimum freeboard, minimum clearance, and the maximum flood depth at culvert crossings.

WC-8 Minimum Culvert Size: This standard identifies minimum culvert sizes for various road types. The minimum culvert size to be used under freeways and urban arterials is 800 mm diameter for circular culverts and 900 mm rise for box culverts.

WC-12 Fish Passage through Culverts: This standard identifies requirements to facilitate Fish Passage through Culverts on fish bearing streams. The standard defines the width of the culvert, embedment depth, substrate materials to be used, and shape of the low flow channel within the culvert.

The minimum design criteria for the design of watercourse crossings are summarized in **Table 2.1**.

Table 2.1: Design Criteria (Bridges and Culverts)

Functional Road Classification	Bridge and Culverts ¹ Design Flow Total Span up to 6.0 m	Bridge and Culverts ¹ Design Flow Total Span over 6.0 m	Bridge and Culverts ¹ Check Flow	Bridges ² Freeboard (m)	Bridges ² Clearance (m)	Culverts ³ Freeboard (m)	Culverts ³ Clearance ⁴ (m)	Flood Depth Criteria (HW/D Ratio)
Freeway	50-year	100-year	130% of 100-year	≥1.0 m	≥1.0	≥1.0	≥0.3	■ Culverts with diameter or rise <3.0 m ■ HW/D ≤ 1.5 ■ Culverts with diameter or rise 3.0 to 4.5 m ■ HW ≤ 4.5 m ■ Culverts with diameter or rise >4.5 m ■ HW/D ≤ 1.0
Urban Arterial								
Rural Arterial	25-year	50-year	115% of 100-year	≥1.0 m	≥1.0	≥1.0	≥0.3	
Collector Road								
Local Road	10-year	25-year	100% of 100-year	≥ 0.30 m	≥0.3	≥0.3	≥0.3	

Note: 1. Standard WC-1 MTO Drainage Design Standards, January 2008;
 2. Standard WC-2 MTO Drainage Design Standards, January 2008;
 3. Standard WC-7 MTO Drainage Design Standards, January 2008; and
 4. Open footing with erodible bottom only.

2.2.3 Stormwater Management Criteria

The Stormwater Management Criteria for the project is based on the MTO's Highway Design Standards (MTO, 2008), Stormwater Management Planning and Design Manual (MOE, now MECP, March 2003) and Conservation Halton Guidelines for Stormwater Management Engineering Submissions (CH, November 2021) as described below.

The MTO's Highway Drainage Design Standards prescribe standards for the design of stormwater management (SW) best management practices. The standards that are relevant to this study are as follows:

SW-1 Stormwater Management-Level of Control: This standard identifies the level of control requirements for the design of stormwater management facilities for highways.

SW-2 Stormwater Management Ponds: This standard identifies design standards for the design of stormwater quantity and quality pond components (wet, wetlands and dry).

SW-3 Roadside Ditches for Water Quality: This standard provides the minimum design requirement for Roadside Ditches to achieve water quality control.

Conservation Halton Guidelines for Stormwater Management Engineering

Submissions (CH, November 2021): This document identifies CH's regulatory and technical requirements for submission and outlines CH's key expectations for SWM design. Summarized below is CH's SWM criteria and objectives for water quantity, quality, stream erosion and water balance:

- **Treatment Train** – Use of a treatment train approach is encouraged, and may be required, to meet multiple SWM objectives.
- **Water Quantity** – In the absence of current higher-level studies, control post-development flows to pre-development levels for 1:2-year through 1:100-year storm events. Overcontrol may be required where downstream capacity constraints exist. Provide safe conveyance of Regulatory Storm from a SWM facility.
- **Water Quality** – Provide minimum 80% Total Suspended Solids (TSS) removal to an Enhanced (formerly Level 1) standard of treatment unless alternative criterion has been established.
- **Stream Erosion Control** – Use 24-hour detention of the 25 mm storm, where an erosion study is not required.
- **Water Balance** – Consult with CH regarding feature-based water balance requirements.

Stormwater Management Planning and Design Manual (MOE, now MECP, March 2003): This manual provides technical and procedural guidance for the planning, design, and review of stormwater management practices.

Based on the above, the overall stormwater management criteria for the proposed Highway 413 project are summarized below:

- **Quantity Control** – Control post-development peak flows to pre-development levels for all storms up to and including the 100-year storm.
- **Water Quality** – Enhanced level of protection i.e., 80% total suspended solids (TSS) on long-term basis.
- **Erosion Control** – For sites with SWM ponds, detain runoff generated from a 25 mm storm for 24 hours.
- **Water Balance** – Best efforts to maintain groundwater recharge and hydrologic regimes.

3. Methodology and Approach

This section discusses the general methodology and approach considered for the overall project study area as well as general methodology specific to the subject conservation authority section.

3.1 Hydrology

The foundation for the Drainage and Hydrology design will be based on a review of the existing documentation including, among others, the Highway 413 Transportation Corridor – Stage 1 study material, MTO contract documentation, development reports, and hydrologic reports within the study area. Generally, where approved sub-watershed models are available for use, flows will be referenced and verified. Where existing models are not available, flows will be determined based on the site applicability of the following hydrologic techniques: Visual Otthymo (VO), Rational Method for areas less than 20 hectares, and the Unified Ontario Flow Method (UOFM) for areas greater than 20 hectares.

Based on the previous work completed for CH Section in the Highway 401 Expansion Project, it was determined that the Visual Otthymo model is appropriate for use considering the design requirement.

3.2 Hydraulics

The general methodology established for this project is to obtain existing hydraulic models from Conservation Authorities, verify and use them in the hydraulic assessment for the required watercourses crossings under the proposed Highway 413. Where models are not available, CulvertMaster hydraulic model was used in the assessment of existing and proposed culvert crossings.

For the CH Section of the project, most of the watercourse crossings were assessed using CulvertMaster except for the East Sixteen Mile Creek crossing, also identified in this report as SM_EB_SIM_01_WC1 (MTO Site No. 10x-0081/CO). Considering that this crossing was recently replaced in 2020, as part of the Highway 401 Expansion Project, the latest HEC-RAS model as provided in that project was used in the hydraulic assessment of the East Sixteen Mile Creek crossing. The model was updated to represent existing and proposed conditions, and water levels were referenced from the output.

Hydraulic assessments were completed only for the existing watercourse crossings that require extensions and proposed new watercourse crossings. Internal highway drainage (micro drainage) was identified but hydraulic assessment will be deferred in the subsequent design stage.

Further discussion on the hydraulic modeling completed for the CH section of the project is provided in **Section 8**.

3.3 Stormwater Management

The stormwater management methodology and approach considered in preparing a preliminary stormwater management strategy for the proposed Highway 413 includes the following:

- Existing drainage patterns are to be maintained as much as possible given the preferred layout of the Highway 413 Transportation Corridor and profile.
- Runoff from areas external to the proposed Highway 413 Transportation Corridor Right-of-Way (ROW) will be intercepted and conveyed directly to the watercourse.
- The drainage area considered for stormwater management consists of the Highway 413 Transportation Corridor ROW, which includes the highway and the proposed transitway in their ultimate condition. It was assumed that separate stormwater management controls will be provided for future transitway stations and maintenance yards and therefore not considered at this stage.
- Where the proposed highway drainage area exceeds 10 hectares, or significantly impact the receiving system, stormwater management ponds will be provided for water quality and quantity controls. Where highway catchment areas are less than 10 hectares, or the impact on the downstream system is insignificant, engineered swales with check dams will be used to mitigate potential impacts.
- Where stormwater management measures are currently provided, assessment should include verifying the impact to existing SWM measures and providing preliminary modification and or improvements recommendations as required.
- Enhanced (80% TSS removal) level of protection will be provided only for the new impervious and pavement areas.

It is noted that under existing conditions, stormwater management measures are provided for Highway 401 / 407 interchange. These measures include six wet ponds, flow control structures, as well as ditches and swales. Several of these existing SWM features will be impacted by the proposed improvements, and will require modification, improvement, or relocation which accounts for the additional run-off and pollutant load resulting from additional ramps and revised ramp configurations to connect Highway 401 and Highway 407 to the proposed Highway 413. New stormwater management ponds will also be provided to mitigate potential impacts to existing watercourse crossings and recipient drainage downstream of the study limit.

4. Existing Conditions Drainage

The existing highway transportation corridor crosses tributaries of the Sixteen Mile East Branch and the Sixteen Mile Creek East Branch Lisgar as shown on **Figure 4.1**. The CH section of the study area includes the existing Highway 401 and Highway 407 interchange and associated ramps. **Figure 4.1** also shows the existing drainage features as well as the approximate regulatory limits and sub-watershed boundaries obtained from CH. It should be noted that a section of the original East Branch subwater-shed catchments located northwest of Eight Line and Highway 401 has been previously altered and diverted to the south, and currently drains towards a tributary of one of the East Branch Lisgar tributaries.

The area adjacent to the highway corridor is predominantly farmland and improved lands with some small industries and rural residential and natural areas, with the overall drainage pattern from northwest to southeast. These adjacent lands are undergoing extensive developments with lands southeast of the CH Study are already fully developed.

As noted in **Figure 4.1**, the existing Highway 401, Highway 407, and associated ramps traverse six minor and major tributaries of the Sixteen Mile Creek, the largest being the main Sixteen Mile Creek East Branch located east of Trafalgar Road. Several watercourse culvert crossings and stormwater management ponds have been previously constructed during the Highway 401 and Highway 407 developments in the 1950s and 1990s, respectively. The most recent development occurred in 2020-2022 with the widening of Highway 401 as part of the Highway 401 Expansion project. As part of this recent highway improvement, several existing watercourse crossings were recently replaced, and stormwater management measures were implemented. **Table 4.1** list the existing watercourse crossings within the study area which may be impacted by the proposed Highway 413 construction.

There are six stormwater management ponds (Pond 1 through Pond 6, see **Figure 4.1**) that provide quality and quantity controls for the existing Highway 401 and 407 Interchange area. Out of the six ponds, three ponds (Pond 1, Pond 3 and Pond 6) will be impacted by the proposed works and would require relocation and modification.

Figure 4-1: Existing Drainage Conditions

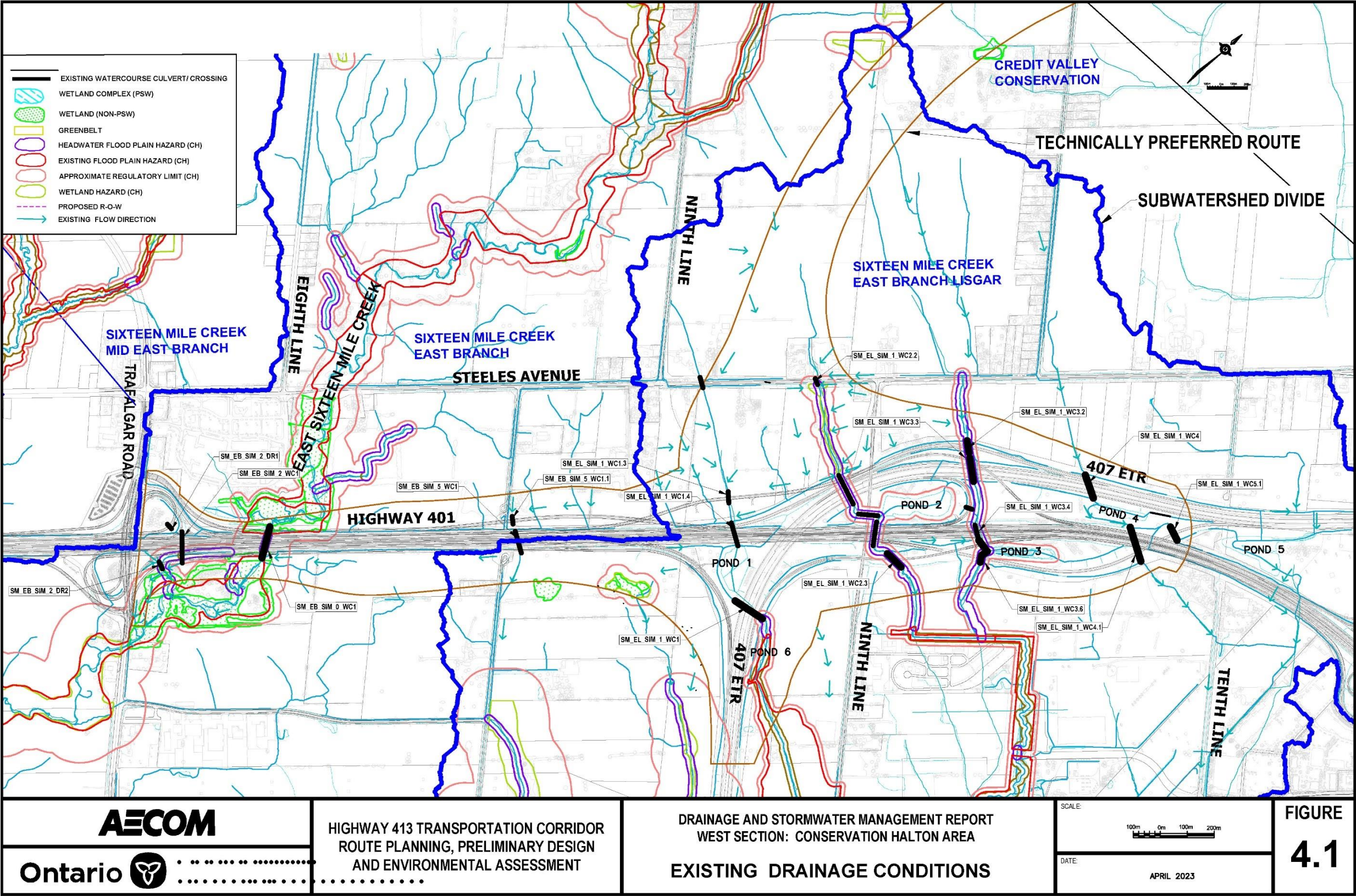


Table 4.1: Existing Watercourse Crossings

Watershed	Subwatershed	Watercourse Name	Tributary No.	Crossing ID*	MTO Site No.	Chainage	Location	Size** w x d/rise (w x d / rise) mm	Type	Structural or Non-Structural?	Drainage Type	Remarks
Sixteen Mile (SM)	East Branch (EB)	Sixteen Mile Creek (SIM)	2	SM_EB_SIM_2_WC1	-	11+528	Highway 401 East of Trafalgar Rd	1800 x 1200 (1800 x 900)	Concrete Box	Non-Structural	Watercourse	■ Culvert W-C03 in Highway 401 Expansion project. ■ Replaced in 2021. ■ Potential extension.
				SM_EB_SIM_2_DR1	-	9+950	Trafalgar Road S to 401 W Ramp	900	Pipe	Non-Structural	Micro Drainage	■ Culvert 52 in Highway 401 Expansion project. ■ Constructed in 2021. ■ Extension may not be required.
				SM_EB_SIM_2_DR2	-	9+595	Trafalgar Road S to 401 E Ramp	900	Pipe	Non-Structural	Micro Drainage	■ Culvert 56 in Highway 401 Expansion project. ■ Constructed in 2021. ■ Extension may not be required.
Sixteen Mile (SM)	East Branch (EB)	Sixteen Mile Creek (SIM)	0	SM_EB_SIM_0_WC1	Site 10X-0081/C0	11+844	Highway 401 East of Trafalgar Rd	2 - 6100 x 4200 (2 - 6100 x 3800)	Concrete Box	Structural	Watercourse	■ Culvert W-C02 in Hwy 401 Expansion project. ■ Replaced in 2021. ■ Potential extension.
Sixteen Mile (SM)	East Branch (EB)	Sixteen Mile Creek (SIM)	5	SM_EB_SIM_5_WC1	-	12+777	Highway 401 East of 8th Line	2400 x 1200 (2400 x 900)	Concrete Box	Non-Structural	Watercourse	■ Culvert E-C01 in Hwy 401 Expansion project. Replaced in 2021. ■ Potential extension.
				SM_EB_SIM_5_WC1.1	-	-	Highway 401 WB Collector Initiation	2400 x 1200 (2400 x 900)	Concrete Box	Non-Structural	Watercourse	■ Culvert 58 in Highway 401 Expansion project. ■ Constructed in 2021. Extension not required.
Sixteen Mile (SM)	East Branch Lisgar (EL)	Sixteen Mile Creek (SIM)	1	SM_EL_SIM_1_WC1.3	-	1519+489	401 W - 407 E Ramp	2400 x 1200	Concrete Box	Non-Structural	Watercourse	■ Culvert 60 in Highway 401 Expansion. ■ Constructed in 2021. ■ Impact maybe eliminated if flow control is provided upstream.
				SM_EL_SIM_1_WC1.4	-	13+587	Highway 401 East of 8th Line	2400 x 1200 (2400 x 900)	Concrete Box	Non-Structural	Watercourse	■ Culvert E-C02 in Hwy 401 Expansion project. ■ Replaced in 2021. ■ Review if impacted by new bridge structures. ■ Modification maybe required.
				SM_EL_SIM_1_WC1	Site 10+550C	9+795 10+187	Highway 413N to 407S Ramp (Highway 407) 407S to 401 E Ramp	3000 x 1800 (3000 x 1500)	Concrete Box	Structural	Watercourse	■ Potential extension.
				SM_EL_SIM_1_WC2.3	-	-	Steeles Avenue	Unknown	Unknown	Unknown	Watercourse	■ Potential Relocation/ Replacement
				SM_EL_SIM_1_WC2.3	SITE 10-553C	11+803/ 10+200	Highway 413 N - 407 E Ramp Highway 413 N/ 407 S - 401 E Ramp	3500 x 1800 (3500 x 1500)	Concrete Box	Structural	Watercourse	■ Potential extension.
				SM_EL_SIM_1_WC3.2	Site 10+558C	10+739	407 E - 401 W Ramp	3500 x 1800 (3500 x 1500)	Concrete Box	Structural	Watercourse	■ Potential extension.

Watershed	Subwatershed	Watercourse Name	Tributary No.	Crossing ID*	MTO Site No.	Chainage	Location	Size** w x d/rise (w x d / rise) mm	Type	Structural or Non-Structural?	Drainage Type	Remarks
Sixteen Mile (SM)	East Branch Lisgar (EL)	Sixteen Mile Creek (SIM)	1	SM_EL_SIM_1_WC3.3	Site 10+557C	10+219	Highway 407 Ramp 401 E - 407 S	3500 x 1800 (3500 x 1500)	Concrete Box	Structural	Watercourse	■ Potential extension.
				SM_EL_SIM_1_WC3.4	Site 10+544C	14+489	Highway 401 East of 9th Line	U/S 2400 x 1800 (2400 x 1500) D/S 3500 x 2400 (3500 x 2100)	Concrete Box	Structural	Watercourse	■ E-C04 in Hwy 401 Expansion project. ■ Potential removal of existing extension culvert. Modification maybe required.
				SM_EL_SIM_1_WC3.6	-	10+486	Highway 407 Ramp 407 W – 407 E	2 – 2000	CSP	Non-Structural	Watercourse	■ Pond 3 Outlet. ■ Potential relocation.
				SM_EL_SIM_1_WC4	Site 10+556C	10+286	Highway 407 Ramp 401 E - 407 N	3500 x 1800 (3500 x 1500)	Concrete Box	Structural	Watercourse	■ Potential extension.
				SM_EL_SIM_1_WC4.1	Site 10+555C	15+079	Highway 401, West of 10th Line	U/S 1800 X 1200 D/S 3500 x 1800	Concrete Box	Structural	Watercourse	■ E-C05 in Hwy 401 Expansion project. ■ Highway 401 section was replaced in 2021. ■ Confirm if extension maybe avoided.
				SM_EL_SIM_1_WC5.1	Site 10-559C	11+129	Ramp 401 W - 407 E	3500 x 1800 (3500 x 1500)	Concrete Box	Structural	Watercourse	■ Overflow culvert from Pond 4. ■ Culvert 407-04 in Highway 401 Expansion EA. ■ Potential extension.

Notes: *- See **Figure 5.3** for location.
** - “w x d/rise” is the actual culvert width and depth/rise, while “(w x d / rise)” is the net culvert opening, width and net depth/rise considering embedment.

5. Proposed Conditions Drainage

Under the proposed condition, the Highway 413 Transportation Corridor will be constructed in stages, initial or interim conditions and the ultimate conditions. The typical highway cross-sections (in stages) of the proposed highway are shown in **Figure 5.1**.

Under the initial construction plan, the proposed highway will consist of 6 lanes (three lanes in each direction) with an open median in the middle and a two lane transitway. The proposed highway will consist of a rural cross section that conveys flows entirely through a series of roadside ditches and culverts. The highway runoff will be collected and conveyed through median and side ditches, and discharged to the adjacent creeks. The proposed transitway will also have a rural cross section and drain through a series of ditches and culverts. In future expansions or ultimate conditions, the highway will be widened to the middle and will consist of 8 lanes and 2 HOV lanes and a two lane transitway. The open median ditch will be replaced with an underground storm sewer to collect and convey storm runoff to the proposed stormwater management ponds / ditches and ultimately to the nearby creeks. This report addresses the ultimate conditions for property acquisition purposes.

Figure 5.2 shows the proposed drainage conditions highlighting the Highway 413 ultimate condition layout plan including the proposed Highway 401, Highway 407 and Highway 413 interchange, existing watercourse crossings and corresponding sub-watershed boundaries.

Figure 5.3 shows the general drainage plan, identifying the existing 18 watercourse culverts that will potentially be impacted by the proposed development along with proposed crossings to convey flows across the transportation corridor within the study limit. Of the 18 existing culverts, 14 will potentially require extension, modification or relocation. In addition to the existing culverts, 12 new watercourse culvert crossings will be required to convey highway and external drainage.

The existing six stormwater management ponds (Pond 1 through 6), are also shown on **Figures 5.2** and **5.3**. Ponds 1, 3 and 6 will be impacted by the new interchange ramps, requiring relocation or modification. It is anticipated that Ponds 2, 4, and 5 will not be significantly impacted by the proposed works. Three additional stormwater management ponds (Ponds 7, 8 and 9) will be required to mitigate potential impacts to the existing highway drainage and downstream recipient watercourses and municipal drainage.

Figure 5-1: Typical Highway 413 Cross Section

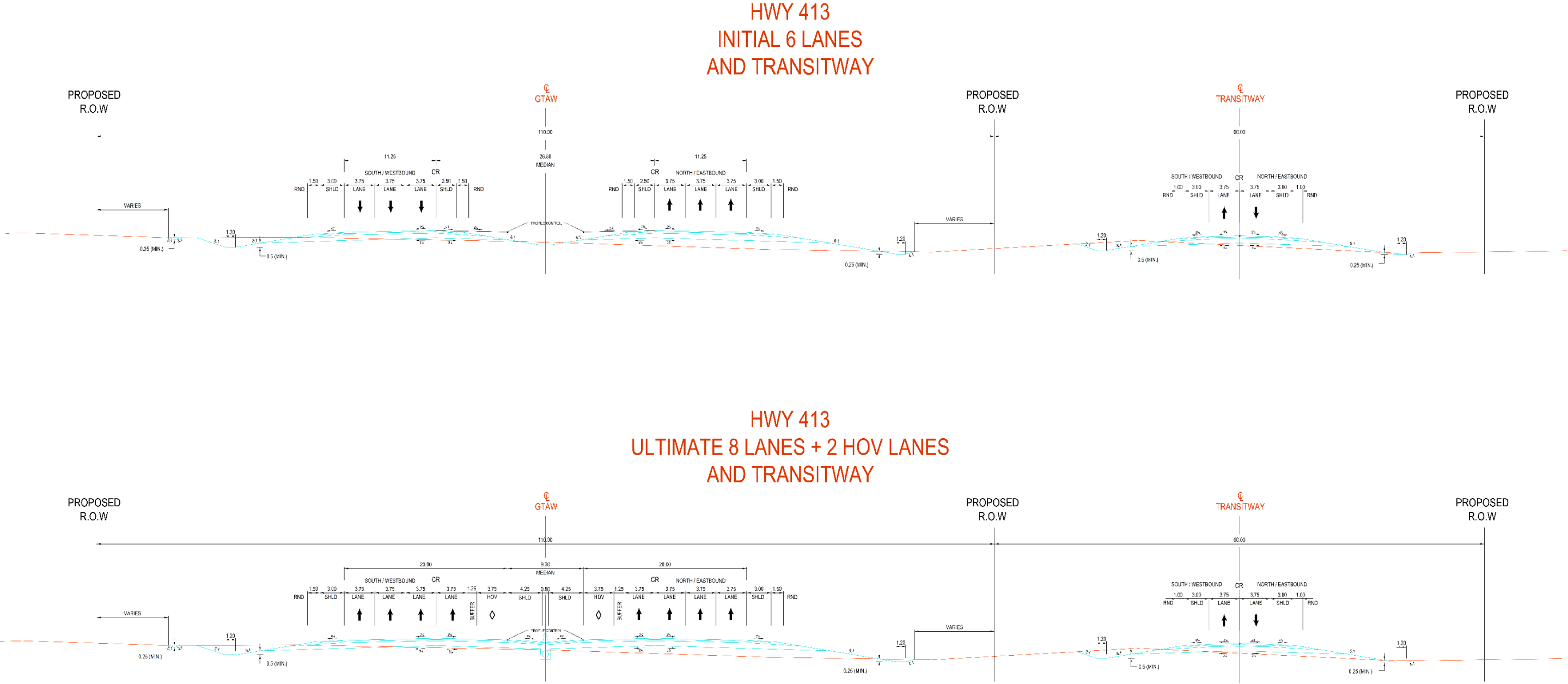


Figure 5-2: Proposed Drainage Conditions

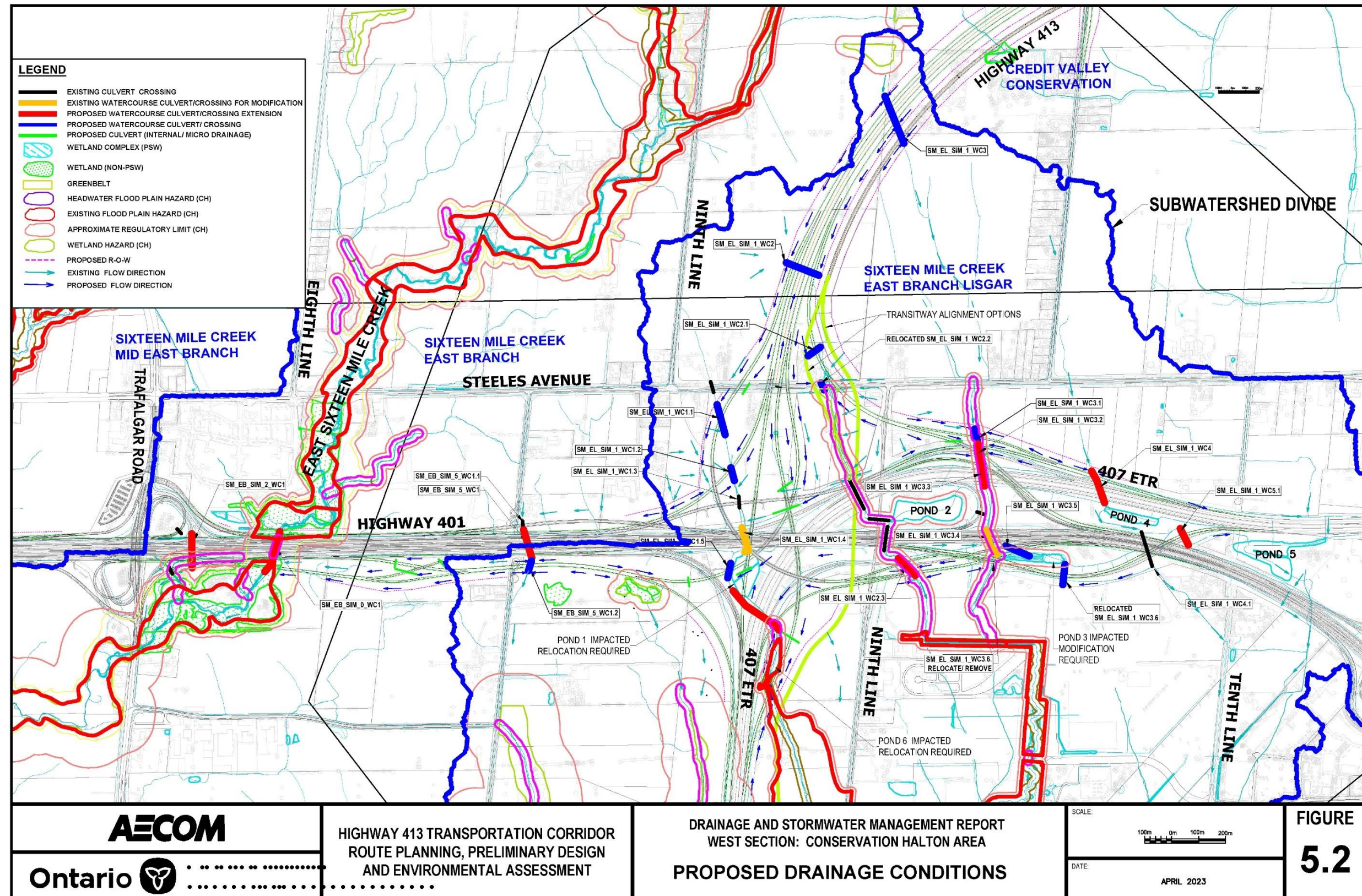
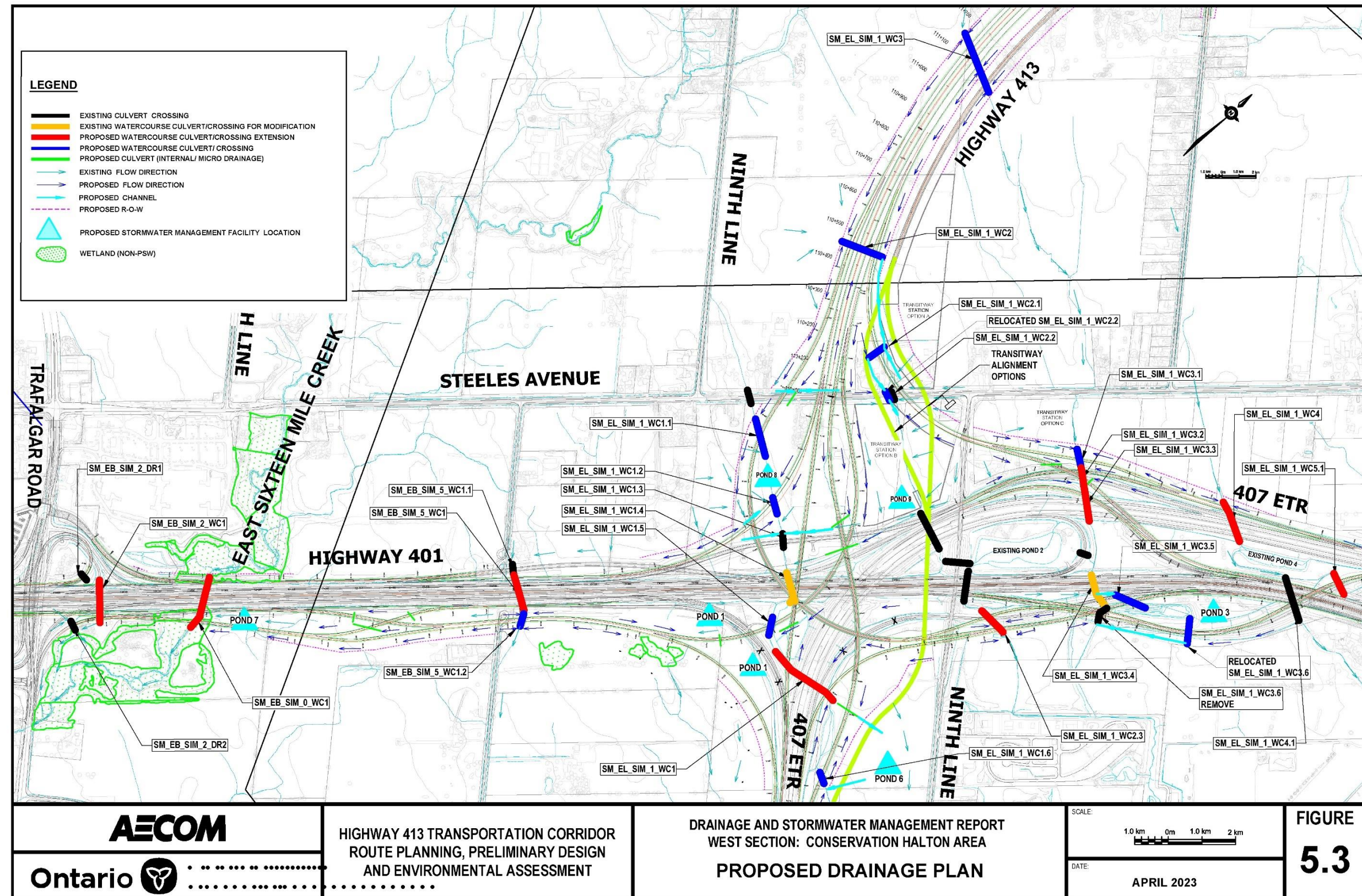


Figure 5-3: Proposed Drainage Plan



6. Geomorphic and Environmental Requirements

Geomorphic assessment was completed for the watercourse crossings along the proposed Highway 413 and will be compiled in a separate report. Similarly, the ecology team completed field investigations for all watercourse crossings and their findings will be documented in a separate report. The geomorphic requirements are summarized in **Tables 6.1**, the fish habitat and wildlife requirements are summarized **Table 6.2** below.

Table 6.1: Geomorphic Requirement Summary

Crossing ID	MTO SITE NO.	Station	Location	Catchment Area (ha)	Existing Culvert Size – w x d / rise (w x d / rise)* mm	Type	Geomorphology Requirement	
							Fluvial Reach ID	Recommendation ¹
SM_EB_SIM_2_WC1	–	11+528	Highway 401 East of Trafalgar Rd	10.3	1800 x 1200 (1800 x 900)	Concrete Box	-	■ Not Applicable
SM_EB_SIM_2_DR1	–	9+940	Trafalgar Road S to 401 W Ramp	N/A	900	Circular	-	■ Not Applicable
SM_EB_SIM_2_DR2	–	9+600	Trafalgar Road S to 401 E Ramp	N/A	900	Circular	SM_EB_SIM_2_1	■ Assume no change in structure is proposed
SM_EB_SIM_0_WC1	Site 10X-0081/C0	11+844	Highway 40 East of Trafalgar Rd	2105.8	2 - 6100 x 4200 (2 - 6100 x 3800)	Concrete Box	SM_EB_SIM_0_2	■ Extension - no change in span (input will be required for channel as part of extension)
SM_EB_SIM_5_WC1	–	12+777	Highway 401 East of 8th Line	34.9	2400 x 1200 (2400 x 900)	Concrete Box	-	■ Not Applicable
SM_EB_SIM_5_WC1.1	–	-	Highway 401 WB Collector Initiation	34.9	2400 x 1200 (2400 x 900)	Concrete Box	-	■ Not Applicable
SM_EB_SIM_5_WC1.2	–	10+631	401 W/ Trafalgar Rd S - 413 N / 407 S	34.9	3500 x 1800 (3500 x 1500)	Concrete Box	-	■ Not Applicable
SM_EL_SIM_1_WC1.1	–	10+662	4013 N - 407 E Ramp	39.5	-	Concrete Box	SM_EB_SIM_1_2	■ Defer to hydraulic flow requirements as well as any fisheries/terrestrial limiting criteria (swale type feature with small upstream drainage area).
SM_EL_SIM_1_WC1.2	–	10+291	413 N - 401 W Ramp	39.5	-	Concrete Box	SM_EB_SIM_1_2	■ Defer to hydraulic flow requirements as well as any fisheries/terrestrial limiting criteria (swale type feature with small upstream drainage area)
SM_EL_SIM_1_WC1.3	Site 10-559C	1519+489	401 W - 407 E Ramp	47.0	2400 x 1200 (2400 x 900)	Concrete Box	SM_EB_SIM_1_2	■ No work is proposed for culvert. No recommendation required
SM_EL_SIM_1_WC1.4	–	13+587	Highway 401 East of 8th Line	55.2	2400 x 1200 (2400 x 900)	Concrete Box	SM_EB_SIM_1_2	■ Defer to hydraulic flow requirements as well as any fisheries/terrestrial limiting criteria (swale type feature with small upstream drainage area)
SM_EL_SIM_1_WC1.5	–	11+396	401W - 413 N Ramp	69.3	-	Concrete Box	SM_EB_SIM_1_2	■ Defer to hydraulic flow requirements as well as any fisheries/terrestrial limiting criteria (swale type feature with small upstream drainage area)
SM_EL_SIM_1_WC1	Site 10+550C	9+795 10+187	Highway 413N to 407S Ramp (Highway 407) 407S to 401 E Ramp	86.9	3000 x 1800 (3000 x 1500)	Concrete Box	SM_EL_SIM_1_3	■ Extension - no change in span (input will be required for channel as part of extension)
SM_EL_SIM_1_WC1.6	–	10+295	407 S - 4013 N Ramp	91.2	4000 x 2300 (4000 x 2000)	Concrete Box	SM_EL_SIM_1_3	■ Extension - no change in span (input will be required for channel as part of extension)
SM_EL_SIM_1_WC2	–	10+450	Highway 413	30.4	-	Concrete Box	-	■ Not Applicable
SM_EL_SIM_1_WC2.1	–	11+306	407 E/ 401 E - 403 N Ramp	41.7	-	Concrete Box	SM_EL_SIM_1_4	■ Defer to hydraulic flow requirements as well as any fisheries/terrestrial limiting criteria (swale type feature at Steeles Road, small upstream drainage area)
SM_EL_SIM_1_WC2.2	–	-	Steeles Avenue	41.7	-	Concrete Box	SM_EL_SIM_1_4	■ Defer to hydraulic flow requirements as well as any fisheries/terrestrial limiting criteria (swale type feature at Steeles Road, small upstream drainage area)
SM_EL_SIM_1_WC2.3	SITE 10-553C	11+803/ 10+200	Highway 413 N - 407 E Ramp Highway 413 N/ 407 S - 401 E Ramp	72.4	3500 x 1800 (3500 x 1500)	Concrete Box	SM_EL_SIM_1_5	■ Extension - no change in span (input will be required for channel as part of extension)
SM_EL_SIM_1_WC3	–	11+125	Highway 413	8.9	-	Concrete Box	-	■ Not Applicable

Crossing ID	MTO SITE NO.	Station	Location	Catchment Area (ha)	Existing Culvert Size – w x d / rise (w x d / rise)* mm	Type	Geomorphology Requirement	
							Fluvial Reach ID	Recommendation ¹
SM_EL_SIM_1_WC3.1	–	10+241	407 E - 413 N Ramp	69.9	-	Concrete Box	SM_EL_SIM_1_8	■ Defer to hydraulic flow requirements as well as any fisheries/ terrestrial limiting criteria (swale type feature) small upstream drainage area)
SM_EL_SIM_1_WC3.2	Site 10+558C	10+739	407 E - 401 W Ramp	69.9	3500 x 1800 (3500 x 1500)	Concrete Box	SM_EL_SIM_1_8	■ Defer to hydraulic flow requirements as well as any fisheries/ terrestrial limiting criteria (swale type feature) small upstream drainage area 89.93 ha)
SM_EL_SIM_1_WC3.3	Site 10+557C	10+219	Highway 407 Ramp 401 E - 407 S	69.9	3500 x 1800 (3500 x 1500)	Concrete Box	SM_EL_SIM_1_8	■ Defer to hydraulic flow requirements as well as any fisheries/ terrestrial limiting criteria (swale type feature) small upstream drainage area)
SM_EL_SIM_1_WC3.4	Site 10+544C	14+489	Highway 401 East of 9th Line	85.3	U/S 2400 x 1800 (2400 x 1500) D/S 3500 x 2400 (3500 x 2100)	Concrete Box	SM_EL_SIM_1_9	Modified structure only. Defer to hydraulic flow requirements as well as any fisheries/ terrestrial limiting criteria
SM_EL_SIM_1_WC3.5	–	10+585	413 N/S - 401 E Ramp	85.3	-	Concrete Box	SM_EL_SIM_1_9	Modified structure only. Defer to hydraulic flow requirements as well as any fisheries/ terrestrial limiting criteria
SM_EL_SIM_1_WC3.6	–	10+486	407W - 407E Ramp	86.8	-	Concrete Box	SM_EL_SIM_1_8	Defer to hydraulic flow requirements as well as any fisheries/ terrestrial limiting criteria (swale type feature) small upstream drainage area)
SM_EL_SIM_1_WC4	Site 10+556C	10+286	Highway 407 Ramp 401 E - 407 N	60.7	3500 x 1800 (3500 x 1500)	Concrete Box	SM_EL_SIM_1_10	Extension - no change in span (input will be required for channel as part of extension)
SM_EL_SIM_1_WC5.1	Site 10-559C	11+129	Ramp 401 W - 407 E	0.7	3500 x 1800 (3500 x 1500)	Concrete Box	-	Not Applicable

Notes: * - (W x d/rise) refers to net hydraulic opening considering embedment.
1. Refer to Highway 413 Transportation Corridor Route Planning, Preliminary Design and Environmental Assessment Study – Stage 2. Fluvial Geomorphological Assessment Draft, AECOM, 2023 for further assessment recommendations.

Table 6.2: Proposed and Existing Watercourse Crossings: Environmental Requirement Summary

Crossing ID	Station	Location	Catchment Area (ha)	Existing Culvert Size w x d / rise (w x d / rise)* mm	Type	Environmental Requirement							
						Environmental Watercourse ID	Fish Habitat	Openness Ratio	Height	Width	Terrestrial Passage Width	Length	Connecting Features
SM_EB_SIM_2_WC1	11+528	Highway 401 East of Trafalgar Rd	10.3	1800 x 1200 (1800 x 900)	Concrete Box	-	Not Fish Habitat	N/A	N/A	N/A	N/A	N/A	Ditch-Watercourse-Wetland
SM_EB_SIM_2_DR1	9+940	Trafalgar Road S to 401 W Ramp	3.0	900	Circular	-	Not Fish Habitat	N/A	N/A	N/A	N/A	N/A	Ditch-Watercourse-Wetland
SM_EB_SIM_2_DR2	9+600	Trafalgar Road S to 401 E Ramp	4.3	900	Circular	-	Not Fish Habitat	N/A	N/A	N/A	N/A	N/A	Ditch-Watercourse-Wetland
SM_EB_SIM_0_WC1	11+844	Highway 40 East of Trafalgar Rd	2,106	2 - 6100 x 4200 (2 - 6100 x 3800)	Concrete Box	SM_EB_SIM_0_E1	Direct Fish Habitat	Recommended: 0.6 - 1.0	Recommended: ≥3 m Min: 2 m	Recommended: ≥3 m	Recommended: 3 m Min: 1 m on both sides	Recommended: < 25 m Max: < 90 m without open median	Wetland - Wetland
SM_EB_SIM_5_WC1	12+777	Highway 401 East of 8th Line	34.9	2400 x 1200 (2400 x 900)	Concrete Box	-	Not Fish Habitat	N/A	N/A	N/A	N/A	N/A	Watercourse - Wetland
SM_EB_SIM_5_WC1.1	-	Highway 401 WB Collector Initiation	34.9	2400 x 1200 (2400 x 900)	Concrete Box								
SM_EB_SIM_5_WC1.2	10+631	401 W/ Trafalgar Rd S - 413 N / 407 S	34.9	3500 x 1800 (3500 x 1500)	Concrete Box								
SM_EL_SIM_1_WC1.1	10+662	4013 N - 407 E Ramp	39.5	-	Concrete Box	SM_EB_SIM_1_E1	Indirect Fish Habitat	Recommended: ≥ 0.1 Min: 0.07	Recommended: ≥ 1 m Min: 0.5 m	Recommended: ≥ 1 m Min: 0.5 m	Recommended: 1 m Min: 0.5 m	Recommended: < 25 m	Meadow - Meadow Forest – Meadow
SM_EL_SIM_1_WC1.2	10+291	413 N - 401 W Ramp	39.5	-	Concrete Box								
SM_EL_SIM_1_WC1.3	1519+489	401 W - 407 E Ramp	47.0	2400 x 1200 (2400 x 900)	Concrete Box								
SM_EL_SIM_1_WC1.4	13+587	Highway 401 East of 8th Line	55.2	2400 x 1200 (2400 x 900)	Concrete Box								
SM_EL_SIM_1_WC1.5	11+396	401W - 413 N Ramp	69.3	-	Concrete Box								
SM_EL_SIM_1_WC1	9+795 10+187	Highway 413N to 407S Ramp (Highway 407) 407S to 401 E Ramp	86.9	3000 x 1800 (3000 x 1500)	Concrete Box								
SM_EL_SIM_1_WC1.6	10+295	407 S - 4013 N Ramp	91.2	4000 x 2300 (4000 x 2000)	Concrete Box								
SM_EL_SIM_1_WC2	10+450	Highway 413	30.4	-	Concrete Box	-	Not Fish Habitat	N/A	N/A	N/A	N/A	N/A	Wetland - Meadow Wetland - Forest
SM_EL_SIM_1_WC2.1	11+306	407 E/ 401 E - 403 N Ramp	41.7	-	Concrete Box	SM_EB_SIM_2_E2	Direct (seasonally)	Recommended: ≥ 0.1 Min: 0.07	Recommended: ≥ 1 m Min: 0.5 m	Recommended: ≥ 1 m Min: 0.5 m	Recommended: 1 m Min: 0.5 m	Recommended: < 25 m	Wetland - Meadow Wetland - Forest
SM_EL_SIM_1_WC2.2	-	Steeles Avenue	41.7	-	Concrete Box								
SM_EL_SIM_1_WC2.3	11+803 / 10+200	Highway 413 N - 407 E Ramp Highway 413 N/ 407 S - 401 E Ramp	72.4	3500 x 1800 (3500 x 1500)	Concrete Box								

Crossing ID	Station	Location	Catchment Area (ha)	Existing Culvert Size w x d / rise (w x d / rise)* mm	Type	Environmental Requirement							
						Environmental Watercourse ID	Fish Habitat	Openness Ratio	Height	Width	Terrestrial Passage Width	Length	Connecting Features
SM_EL_SIM_1_WC3	11+125	Highway 413	8.9	-	Concrete Box	-	Not Fish Habitat	N/A	N/A	N/A	N/A	N/A	Wetland - Meadow Wetland - Forest
SM_EL_SIM_1_WC3.1	10+241	407 E - 413 N Ramp	69.9	-	Concrete Box	SM_EL_SIM_3_E3	Indirect Fish Habitat	Recommended: ≥ 0.1 Min: 0.07	Recommended: ≥ 1 m Min: 0.5 m	Recommended: ≥ 1 m Min: 0.5 m	Recommended: 1 m Min: 0.5 m	Recommended: < 25 m	Wetland - Meadow Wetland – Forest
SM_EL_SIM_1_WC3.2	10+739	407 E - 401 W Ramp	69.9	3500 x 1800 (3500 x 1500)	Concrete Box								
SM_EL_SIM_1_WC3.3	10+219	Highway 407 Ramp 401 E - 407 S	69.9	3500 x 1800 (3500 x 1500)	Concrete Box								
SM_EL_SIM_1_WC3.4	14+489	Highway 401 East of 9th Line	85.3	U/S 2400 x 1800 (2400 x 1500) D/S 3500 x 2400 (3500 x 2100)	Concrete Box								
SM_EL_SIM_1_WC3.5	10+585	413 N/S - 401 E Ramp	85.3	-	Concrete Box								
SM_EL_SIM_1_WC3.6	10+486	407W - 407E Ramp	86.8	-	Concrete Box								
SM_EL_SIM_1_WC4	10+286	Highway 407 Ramp 401 E - 407 N	60.7	3500 x 1800 (3500 x 1500)	Concrete Box	SM_EB_SIM_4_E4	Direct (seasonally)	Recommended: ≥ 0.1 Min: 0.07	Recommended: ≥ 1 m Min: 0.5 m	Recommended: ≥ 1 m Min: 0.5 m	Recommended: 1 m Min: 0.5 m	Recommended: < 25 m	Wetland - Meadow Forest - Wetland
SM_EL_SIM_1_WC5.1	11+129	Ramp 401 W - 407 E	0.7	3500 x 1800 (3500 x 1500)	Concrete Box	-	Not Fish Habitat	N/A	N/A	N/A	N/A	N/A	Ditch - Wet Pond

Note: * - (W x d/rise) refers to net hydraulic opening considering embedment.

7. Hydrologic Assessment

7.1 Watersheds

As noted in **Section 4**, a segment of the proposed Highway 413 Transportation Corridor is within the Sixteen Mile Creek Sub-Watershed regulated by Conservation Halton (CH). The Sixteen Mile Creek watershed is about 360 square kilometers that includes both rural and urban land uses and drains parts of Halton Hills, Milton, Mississauga, and Oakville, ultimately discharging to Lake Ontario. The proposed development lies within the eastern limit of the sub-watershed, in the East Branch and East Branch Lisgar catchments in the municipalities of Milton, Halton Hills and Mississauga. **Figures 4.1** and **5.2** shows the existing sub-watershed boundaries and the Sixteen Mile Creek Tributaries traversing the existing highway and the proposed development.

7.2 Rainfall Data

The rainfall information used in the hydrologic assessment was obtained from the MTO IDF Curve Lookup, a web-based application provided by MTO for the purpose of retrieving Intensity-Duration-Frequency (IDF) curves and for use in MTO projects.

Table 7.1 shows the return period rainfall amounts (mm) during 6-hour, 12-hour and 24-hour storm durations for the 2021 IDF (design analyses start date) and for the future 2096 IDF, assumed at the end of design service life of 75 years. It was estimated that the 50-year and 100-year rainfall amounts would increase by approximately 8% at the end of the design service life of the proposed drainage infrastructures. This 8% increase for climatic change scenario is applied only to the flows used in CH's HEC-RAS model for water crossing SM_EB-SIM_0_WC1 where no hydrologic modeling was completed for this study. For the remaining crossings hydrologic modeling was completed and 2096 IDF was used to determine flows for the future year at the end of design service life of 75 years.

Table 7.1: Rainfall Data

Duration	Depth, mm (2021 MTO IDF)						Depth, mm (2096 MTO IDF)					
	Return Period						Return Period					
	2-year	5-year	10-year	25-year	50-year	100-year	2-year	5-year	10-year	25-year	50-year	100-year
6 hour	38.4	50.4	58.8	68.4	75.6	83.4	43.8	55.8	63.6	73.8	81.0	88.2
12 hour	48	62.4	72	84	93.6	103.2	55.2	69.6	79.2	92.4	100.8	110.4
24 hour	57.6	76.8	88.8	103.2	115.2	127.2	69.6	86.4	100.8	115.2	124.8	136.8

The MTO IDF Curve Lookup outputs for 2021 IDF and 2096 IDF are provided in **Appendix B**.

7.3 Hydrologic Modeling

Hydrologic modelling was completed for all watercourse crossings within the CH area study limit to determine peak flow rates required for the watercourse crossing assessments, hydrologic impact assessments and stormwater management pond sizing. As noted in **Section 3.1**, it was determined that the Visual Otthymo (VO) hydrologic model is appropriate for use considering the design requirements and previous work completed in the area.

Figures 7.1 and **7.2** shows the catchment discretization for existing and proposed conditions, respectively. Catchments were delineated using the latest topographic data considering the current Highway 401 expansion design and approximate ROW limits. Hydrologic Reference Points (HRPs) and Outlet locations, as shown in **Figures 7.1** and **7.2**, were also identified for use in impact assessment and stormwater management calculations.

A VO scenario model was set-up for each corresponding outlet as shown in the schematic diagrams in **Appendices C.1, D.1** and **E.1**. The input parameters and associated calculations are provided in **Appendix C.2** for existing conditions and **Appendix D.2** for proposed conditions.

As previously identified in the sensitivity analysis completed for the Highway 401 Expansion project, the SCS Type II 24-hour storm distribution and duration would yield the most conservative flow estimates for the CH section study area and was accordingly adopted for the hydrologic assessment.

Figure 7-1: Drainage Mosaic - Existing Condition

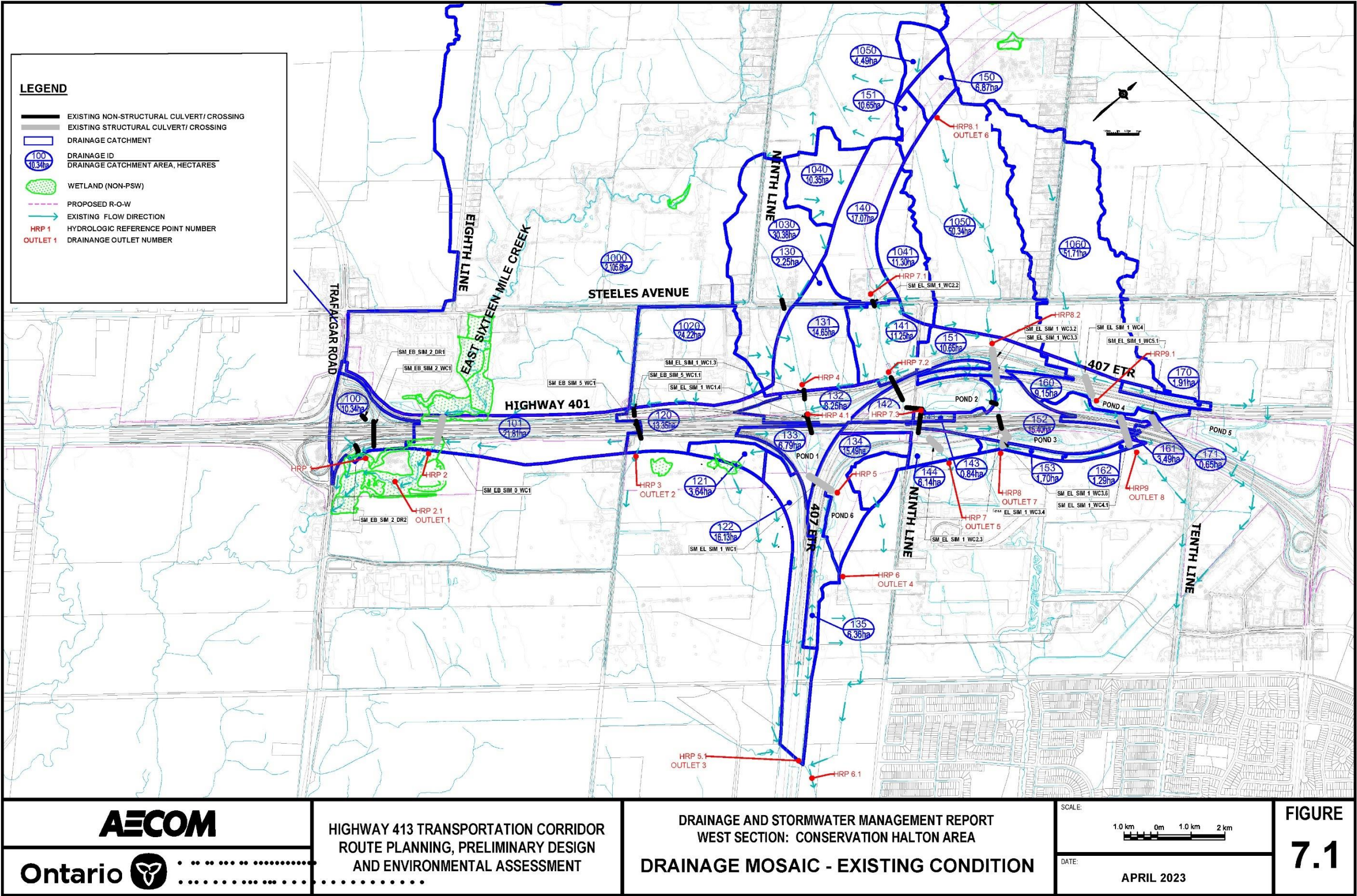
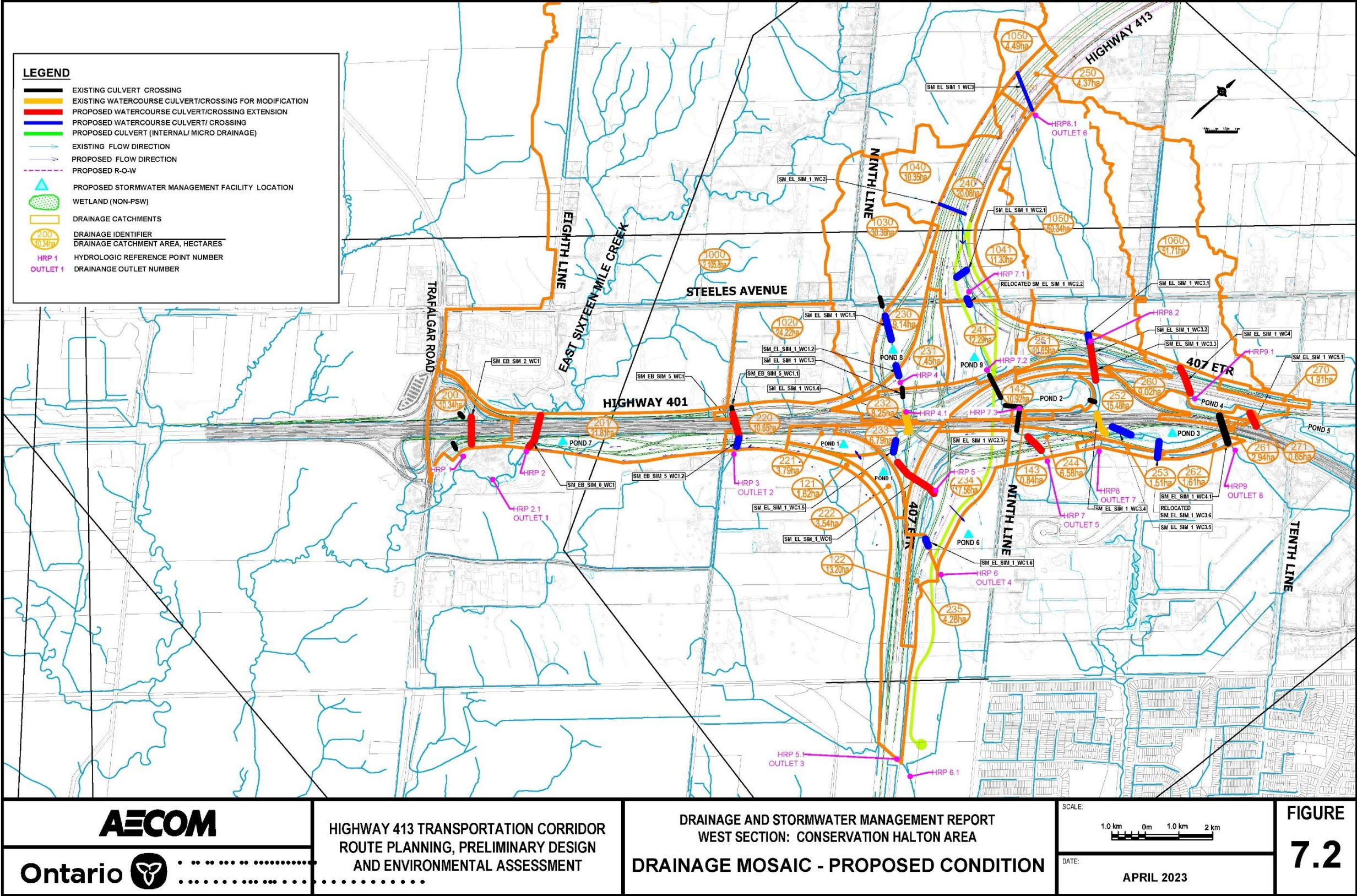


Figure 7-2: Drainage Mosaic - Proposed Condition



7.4 Modeling Results

7.4.1 Watercourse Crossings

Hydrologic simulations were conducted for all watercourse crossings except crossing SM_EB_SIM_0_WC1 and the results are summarized in **Table 7.2**. The peak flow rates for crossing SM_EB_SIM_0_WC1 (MTO Site 10X-0081/C0) were taken from hydraulic model provided by CH. These flows were originally taken from the CH HEC-2 model FOAK17.DAT, the same data provided by CH in 2021 for use in this project. The future flows used (2096 IDF) for this crossing were estimated by adding 8% (increase in precipitation as discussed in **Section 6.2**) to the existing flow to account for the climatic change scenario for the future at the end of design service life (2096).

The peak flows, as summarized in **Table 7.2**, were used in the assessment of existing watercourse crossings' hydraulic performance and hydraulic impact assessments of the proposed culvert extensions as well as future hydraulic performance considering Climate Change at the end of service life (2096 IDF). The Regional storm flows were based on the existing AMC III soil conditions without pond storage and utilizing the Hurricane Hazel storm distribution.

Table 7.3 summarizes the proposed conditions uncontrolled peak flows for the proposed watercourse culvert crossings as well as the Regional storm flow and the future peak flows using the 2096 IDF. The peak flows, as summarized in **Table 7.3**, were used to size the new watercourse crossings considering 2021 IDF and 2096 IDF. The Regional storm flows were based on the existing condition AMC III soil conditions without pond storage and utilizing the Hurricane Hazel storm distribution.

The Visual Otthymo (VO) hydrologic modeling output for existing and proposed conditions is provided in **Appendix C** and **Appendix D**, respectively.

7.4.2 Hydrologic Impact at HRPs

A hydrologic assessment was also completed for the study area to assess the increase in peak flow rates resulting from the proposed works. Mitigation measures in the form of new or modified stormwater management ponds are proposed to reduce the impact of proposed works.

Table 7.4 shows a comparison of the existing conditions peak flows and uncontrolled proposed conditions peak flows at each HRP and watercourse outlet. As noted in **Table 7.4**, the increase in peak flow rates at Outlets 2 and 6 is insignificant and therefore flow attenuation is not required. The proposed flow attenuation measures and stormwater management strategy is discussed further in **Section 9**.

The Visual Otthymo (VO) hydrologic modeling output for existing conditions is provided in **Appendix C**. The VO model output for proposed uncontrolled conditions is in **Appendix D**.

Table 7.2: Hydrologic Modeling Results Summary- Existing Watercourse Crossings

Culvert ID*	MTO Site No.	Chainage	Location	Contributing Catchments	Drainage Area (ha)	Peak Flows, m³/s (2021 IDF)						Reg.	Peak Flows, m³/s (2096 IDF)	
						2-year	5-year	10-year	25-year	50-year	100-year		50-year	100-year
SM_EB_SIM_2_WC1	-	11+528	Highway 401 East of Trafalgar Rd	100	10.3	0.96	1.43	1.77	2.13	2.45	2.77	N/A	2.51	2.89
SM_EB_SIM_0_WC1	Site 10X-0081/C0	11+844	Highway 40 East of Trafalgar Rd	1000, 1001, 101	2105.8	5.50	15.78	19.28	24.22	28.52	31.83	122.13	30.89	34.47
SM_EB_SIM_5_WC1¹	-	12+777	Highway 401 East of 8th Line	1020, 120	37.6	1.02	1.64	2.05	2.56	2.99	3.44	4.91	3.24	3.72
SM_EL_SIM_1_WC1	Site 10+550C	9+795 10+187	Highway 413N to 407S Ramp (Highway 407) 407S to 401 E Ramp	1030, 130,131, 132, 133, 134	77.8	0.82	2.07	3.03	4.19	4.92	5.81	10.02	5.74	6.72
SM_EL_SIM_1_WC2.3	SITE 10-553C	11+803/ 10+200	Highway 413 N - 407 E Ramp Highway 413 N/ 407 S - 401 E Ramp	1040, 140, 1041, 141, 142, 143, 144	67.9	0.92	2.28	3.29	4.47	5.46	6.47	8.94	6.95	8.01
SM_EL_SIM_1_WC3.2	Site 10+558C	10+739	407 E - 401 W Ramp	1050, 150, 1051, 151	72.4	1.96	3.22	4.08	5.16	6.12	7.05	8.65	6.47	7.34
SM_EL_SIM_1_WC3.3	Site 10+557C	10+219	Highway 407 Ramp 401 E - 407 S	1050, 150, 1051, 151	72.4	1.96	3.22	4.08	5.16	6.12	7.05	8.65	6.47	7.34
SM_EL_SIM_1_WC4	Site 10+556C	10+286	Highway 407 Ramp 401 E - 407 N	1060, 160	60.9	2.05	3.24	4.04	5.03	5.87	6.72	7.79	6.53	7.38

Notes: *- See **Figures 4.1 and 7.1** for location.
1. Modeled separately as lump sum area. See Crossing Scenario in VO in **Appendices C.3 and C.5**.

Table 7.3: Hydrologic Modeling Results Summary- Proposed Watercourse Crossings

Culvert ID*	Chainage	Location	Contributing Catchments	Drainage Area (ha)	Peak Flows, m³/s (2021 IDF)						Reg.	Peak Flows, m³/s (2096 IDF)	
					2-year	5-year	10-year	25-year	50-year	100-year		50-year	100-year
SM_EB_SIM_5_WC1.2	10+631	401 W/ Trafalgar Rd S - 413 N / 407 S	1020, 220	34.87	1.02	1.64	2.05	2.56	2.99	3.44	4.91	4.65	5.25
SM_EL_SIM_1_WC1.1	10+662	4013 N - 407 E Ramp	1030, 230	39.52	1.18	1.93	2.44	3.08	3.63	4.19	6.34	4.08	4.65
SM_EL_SIM_1_WC1.2	10+291	413 N - 401 W Ramp	1030, 230	39.52	1.18	1.93	2.44	3.08	3.63	4.19	6.34	4.08	4.65
SM_EL_SIM_1_WC1.5	11+396	401W - 413 N Ramp	1030,230, 231, 232, 233	69.34	2.56	3.98	4.99	6.17	7.33	8.42	8.61	8.20	9.30
SM_EL_SIM_1_WC1.6	10+295	407 S - 4013 N Ramp	1030, 231,232, 233, 234, 235	91.18	1.32	2.36	3.14	4.34	5.17	6.05	10.90	5.93	6.88
SM_EL_SIM_1_WC2	10+450	Highway 413	1040, 240	30.43	1.63	2.46	3.05	3.74	4.45	5.08	N/A	4.77	5.39
SM_EL_SIM_1_WC2.1	11+306	407 E/ 401 E - 403 N Ramp	1040, 240, 1041	41.73	2.03	3.16	3.94	4.89	5.81	6.66	N/A	6.49	7.36
SM_EL_SIM_1_WC2.2	-	Steeles Avenue	1040, 240, 1041	41.73	2.03	3.16	3.94	4.89	5.81	6.66	N/A	6.49	7.36
SM_EL_SIM_1_WC3	11+125	Highway 413	1050, 250	8.86	0.70	1.13	1.41	1.77	2.07	2.38	N/A	2.09	2.36
SM_EL_SIM_1_WC3.1	10+241	407 E - 413 N Ramp	1050, 250, 1051, 251	69.85	1.96	3.22	4.08	5.16	6.12	7.05	8.65	6.47	7.34
SM_EL_SIM_1_WC3.5	10+585	413 N/S - 401 E Ramp	1050, 250, 1051, 251, 252	85.33	2.51	3.82	4.69	5.83	6.78	7.84	10.25	7.42	8.33
SM_EL_SIM_1_WC3.6	10+486	407W - 407E Ramp	1050, 250, 1051, 251, 252, 253	86.84	1.88	3.37	4.36	5.53	6.59	7.62	10.40	7.25	8.23

Note: * - See **Figure 5.3** for location.



Table 7.4: Comparison of Computed Peak Flows– No Stormwater Management

HRP No. ¹ /Outlet No.	Existing Condition									Proposed Condition - No SWM									Change in Peak Flows						Remarks
	VO Hyd No. ²	Contributing Catchments	Drainage Area (ha)	Peak Flows, m ³ /s						VO Hyd No. ³	Contributing Catchments	Drainage Area (ha)	Peak Flows - No SWM, m ³ /s						2-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr	
1	100	100	10.3	0.96	1.43	1.77	2.13	2.45	2.77	100	200	10.3	0.96	1.36	1.64	2.00	2.28	2.56	0.01	-0.07	-0.13	-0.14	-0.17	-0.21	■ No increase in peak flows.
2 ¹	101	101	21.8	1.97	2.91	3.53	4.46	5.12	5.79	2 ¹	201	21.8	2.87	3.99	4.70	5.58	6.32	7.07	0.91	1.08	1.17	1.12	1.20	1.28	■ Excludes flow from upstream, 1000. Increase in peak flow. Provide Pond east of crossing, Pond 7.
2.1 Outlet 1	9	101, 100	32.2	2.92	4.34	5.30	6.59	7.56	8.56	9	1000, 1001, 201, 200	32.2	3.83	5.34	6.34	7.57	8.59	9.63	0.91	1.01	1.04	0.98	1.03	1.07	■ Drainage within ROW only. Provide pond east of crossing, Pond 7
3 Outlet 2	6	1020, 120	37.6	1.59	2.47	3.10	3.82	4.44	5.08	-	1020, 220	34.9	1.55	2.35	2.86	3.51	4.07	4.72	-0.04	-0.13	-0.24	-0.31	-0.37	-0.36	■ No increase in peak flows. Pond not required.
5.1 Outlet 3	19	121, 122	19.8	1.41	2.20	2.70	3.34	3.83	4.38	19	221, 222	20.4	1.59	2.44	2.98	3.64	4.37	4.98	0.18	0.24	0.28	0.31	0.54	0.60	■ Increase in peak flow.
4	5	1030, 130, 131	47.3	1.43	2.35	2.96	3.73	4.39	5.06	5	1030, 230, 231	47.0	1.46	2.35	2.92	3.66	4.25	4.89	0.02	0.00	-0.04	-0.06	-0.14	-0.17	■ No increase in peak flows at this node, however, peak flow increases in Highway 401.
4.1 (401)	22	1030, 130, 131, 132	55.5	1.68	2.72	3.43	4.25	5.00	5.77	22	1030, 230, 231, 232	55.2	1.77	2.84	3.63	4.55	5.39	6.20	0.09	0.12	0.20	0.30	0.39	0.43	■ Increase in peak flows. Pond 8 to be provided upstream.
5 (407)	11	1030, 130, 131, 132, 133, 134	77.8	0.82	2.07	3.03	4.19	4.92	5.81	11	1030, 231, 232, 233, 234	86.9	1.40	2.22	2.76	3.68	4.72	5.76	0.58	0.15	-0.26	-0.51	-0.20	-0.05	■ Increase in peak flow will be compensated by relocated Pond 1 and 6.
6 Outlet 4	12	1030, 130, 131, 132, 133, 134, 135	84.2	0.85	2.16	3.14	4.34	5.17	6.05	12	1030, 231, 232, 233, 234, 235	91.2	1.32	2.36	2.98	3.79	4.98	6.01	0.47	0.21	-0.15	-0.56	-0.19	-0.04	■ Increase in peak flow will be compensated by relocated Pond 1 and 6.
6.1	20	1030, 130, 131, 132, 133, 134, 135, 121, 122	103.9	1.74	2.75	3.41	4.68	5.73	6.73	20	1030, 231, 232, 233, 234, 235 221, 222	105.9	1.75	3.18	4.16	5.25	6.31	7.18	0.01	0.43	0.75	0.57	0.58	0.45	■ D/S of 407 culvert at confluence. Increase in peak flow will be compensated by relocated Pond 1 and 6.
7.1 (Steeles)	18	1040, 140, 1041	38.7	1.17	1.95	2.50	3.18	3.78	4.38	18	1040, 240, 1041	41.7	2.03	3.16	3.94	4.89	5.81	6.66	0.86	1.20	1.44	1.70	2.04	2.28	■ Increase will be compensated D/S, new Pond 9 before Highway 407 culvert
7.2 (407)	21	1040, 140, 1041, 141	50.0	1.53	2.58	3.30	4.22	5.01	5.82	21	1040, 240, 1041	41.7	2.07	3.21	4.01	4.96	5.90	6.76	0.54	0.63	0.71	0.75	0.89	0.94	■ Pond 9 proposed upstream.
7.3 (401)	26	1040, 140, 1041, 141, 142, 143	61.7	0.86	2.14	3.07	4.18	5.11	6.04	26	1040, 240, 1041, 241, 142, 143	65.8	1.90	3.35	4.19	5.19	6.12	7.13	1.03	1.22	1.11	1.01	1.01	1.09	■ Increase will be compensated U/S, new Pond 9 before Highway 407 culvert
7 Outlet 5	28	1040, 140, 1041, 141, 142, 143, 144	67.9	0.92	2.28	3.29	4.47	5.46	6.47	28	1040, 240, 1041, 241, 142, 143, 244	72.4	1.91	3.37	4.21	5.21	6.15	7.16	0.98	1.09	0.92	0.75	0.68	0.70	■ Increase will be compensated U/S, new Pond 9 before Highway 407 culvert
8.1 Outlet 6	18	1050, 150	11.4	0.70	1.13	1.41	1.77	2.07	2.38	18	1050, 250	8.9	0.68	1.04	1.31	1.62	1.88	2.15	-0.02	-0.08	-0.11	-0.15	-0.19	-0.24	■ No Increase, No Pond required.
8.2 (407)	31	1050, 150, 1051, 151	72.4	1.96	3.22	4.08	5.16	6.12	7.05	31	1050, 250, 1051, 251	69.9	1.93	3.12	3.93	4.93	5.78	6.64	-0.04	-0.09	-0.14	-0.23	-0.34	-0.41	■ No Increase, No Pond required.
Pond 3	33	1050, 150, 15051, 151, 152	87.8	2.18	3.48	4.45	5.70	6.78	7.84	33	1050, 250, 1051, 251, 252	85.3	2.51	3.82	4.69	5.83	6.68	7.62	0.33	0.34	0.24	0.13	-0.09	-0.23	■ Pond 3 impacted. Increase will be compensated by modified Pond 3.
8 Outlet 7	35	1050, 150, 15051, 151, 153	89.5	1.74	3.26	4.29	5.53	6.59	7.62	35	1050, 250, 1051, 251, 252, 253	86.8	1.88	3.37	4.36	5.49	6.46	7.45	0.13	0.11	0.07	-0.04	-0.13	-0.17	■ Increase in Peak flows will be compensated by Modified Pond 3.
9.1	3	1060, 160	60.9	2.05	3.24	4.04	5.03	5.87	6.72	3	1060, 260	60.7	2.10	2.10	4.04	5.00	5.83	6.70	0.05	-1.14	0.00	-0.02	-0.04	-0.02	■ Insignificant Increase during the 2-year storm. ■ No Pond required.
9 Outlet 8	7	1060, 160, 161, 162	65.6	1.38	2.82	3.56	4.53	5.34	6.34	7	1060, 240, 261, 262	65.3	1.40	1.40	3.57	4.53	5.33	6.30	0.03	-1.41	0.01	0.00	-0.01	-0.04	■ Insignificant Increase during the 2-year storm. ■ No Pond required.

Notes: 1 - See Figures 6.1 & 6.2 for location / 2. See VO Schematics in Appendix C.1 / 3. See VO Schematics in Appendix D.1

8. Hydraulic Assessment

8.1 Hydraulic Modeling

Hydraulic assessment was completed for all watercourse crossings within the study limits. As noted in **Table 2.1** in **Section 2**, the conveyance and peak flow criteria were based on the roadway classification. The existing Highway 401, Highway 407 and the proposed Highway 413 are classified as Freeway highways, and therefore for crossing spans less than 6 m, the design flow is the 50-year storm while for spans greater than 6 m, the design flow is the 100-year.

The majority of the existing and proposed crossings have spans less than 6 m, therefore, the design flow is the 50-year storm. For crossings SM_EB_SIM_0_WC1 (MTO Site 10X-0081/C0) and SM_EB_SIM_1_WC2.2, the design flow is the 100-year event.

For crossing SM_EB_SIM_0_WC1 (MTO Site 10X-0081/C0), the updated HEC-RAS model as provided in the Highway 401 Expansion project was utilized and further updated to generate existing conditions and proposed conditions models appropriate for the site. All other watercourse crossings were assessed using Bentley's CulvertMaster hydraulic modeling software program.

Utilizing the peak flows summarized in **Tables 7.2** and **7.3**, the crossings were analyzed for the 50-year, 100-year, Check Flow and Regional storm, where applicable. Hydraulic performance of each crossing was determined based on minimum freeboard, flood depth (headwater depth and rise) ratio and overtopping. As noted in **Table 2.1**, the minimum design flow freeboard is 1.0, while maximum headwater depth and rise ratio (HW/D) is 1.5. Overtopping criteria is based on the 100-year, Check Flow and Regional storm, where applicable.

The tailwater condition was assumed as 60% of the pipe rise or depth where backwater was not considered to be an issue. In areas where a culvert outlet is in close vicinity to an existing water body, it was assumed that the tail water would be at the obvert of the culvert or known water elevations.

8.1.1 Existing Watercourse Crossings

Figures 4.1, 5.2 and **5.3** shows the existing watercourse crossings within the CH study limit. As identified in **Section 4** and listed in **Table 4.1**, there are approximately 18

culverts that will potentially be impacted by the proposed Highway 413 and associated works. A high-level review indicates that 4 of these culverts potentially do not require any extension/rehabilitation works and therefore were not included in the hydraulic assessment but should further be confirmed in the subsequent design phase when more information is made available. Two of these culverts will require removal and relocation, 3 will potentially require structural modification and 9 culverts will require extension.

The following culverts (Refer **Figure 5.3** in **Section 5**) will potentially require structural modification / extension or removal but are not included in the hydraulic assessment and will require further assessment in the subsequent design stage:

- SM_EB_SIM_1_WC1.4 at Highway 401 13+578. The south section of this culvert could potentially be impacted by the proposed Highway 401 West to Highway 413 North Ramp embankment. Partial removal of the south section and a skewed extension to the southwest will be potentially required.
- SM_EB_SIM_1_WC3.4 (MTO Site 10+544C) at Highway 401 14+489. This culvert currently drains to Pond 3; however, the south section of this culvert will be impacted by the proposed re-alignment of Highway 413 / 407 North / South to Highway 401 East Ramp preventing drainage to Pond 3, which will also require modification. Partial removal of the downstream section and providing a new culvert (SM_EB_SIM_1_WC3.5) connection for efficient hydraulic connection is recommended.
- SM_EB_SIM_1_WC3.6 at Highway 401W - 407E Ramp 10+380. This culvert serves as a flow by-pass and outlet for existing Pond 3. It will be in conflict with the proposed bridge abutment and embankments, and will require removal and relocation.
- SM_EB_SIM_1_WC4.1 (MTO Site 10-555C) at Highway 401 15+079. This culvert serves as a by-pass outlet from Highway 407 upstream drainage and the existing Pond 4 outlet. This culvert will require additional information to confirm if extension can be avoided. The preliminary recommendation is to avoid extension as much possible to avoid impacting the Pond 5 outlet as well as the by-pass channel to the culvert.
- SM_EB_SIM_1_WC5.1 (MTO Site 10-559C) at Highway 401W – 407 E Ramp 11+129. This culvert serves as overflow culvert from Pond 3 to Pond 5 and potentially impacted by the proposed re-alignment and re-grading of the Highway 401W to 407 E Ramp. This culvert will potentially require extension or modification, to be confirmed in the subsequent design stage.

The following culverts (Refer **Figure 5.3** in **Section 5**) will not require any culvert extension / improvement works and need to be confirmed further in the subsequent design stage when detailed information is made available:

- SM_EB_SIM_2_DR1 at Trafalgar Road S to 401 W Ramp 9+950.
- SM_EB_SIM_2_DR2 at Trafalgar Road S to 401 E Ramp.
- SM_EB_SIM_5_WC1.1 at Highway 401 WB Collector Initiation.
- SM_EB_SIM_1_WC1.3 at Highway 407 E - 401 W Ramp. This culvert will not be significantly impacted by the proposed works. Flow attenuation will be provided upstream through proposed Pond 8 to mitigate potential hydraulic impact.

Three additional culverts not listed in **Table 4.1**, that directs flow to Pond 2, will not to be significantly impacted by the proposed works since these culverts are outside the proposed highway grading limits. Flow attenuation will be provided upstream through the proposed Pond 9 to mitigate potential hydraulic impact to the culverts and Pond 2.

A hydraulic assessment was completed for the culverts that require extension. The existing culvert data (inverts, length) were taken from existing drawings. For the proposed extensions, extension lengths were assumed based on grading limits maintaining the existing slope, where feasible. Results of the assessment are provided in **Section 8.2**.

8.1.2 Proposed Watercourse Crossings

In addition to the existing culverts discussed above, 12 new watercourse crossings (refer to **Figure 5.3** in **Section 5**) are being proposed to convey run-off from upstream drainage and the proposed Highway 413 and the expanded Highway 401, 407 and 413 interchange drainage. They are sized according to the hydraulic modeling methodology discussed above with results provided in **Section 8.2**. below.

For the internal highway drainage (micro drainage), also identified in **Figure 5.3**, hydraulic assessment will be deferred in the subsequent design stage. As a preliminary estimate, a minimum 900 mm diameter culvert is anticipated to provide sufficient conveyance capacity.

8.2 Modeling Results

The results of the hydraulic assessment completed for the existing and proposed watercourse crossings are summarized in **Tables 8.1-8.5**.

Table 8.1 summarizes the hydraulic performance of the existing watercourse crossings requiring extension. As noted in the table, all culverts satisfy all hydraulic requirements under existing conditions.

Table 8.2 summarizes the proposed hydraulic performance of the existing watercourse crossings with extensions. As noted in the table, all culverts satisfy all hydraulic requirements under proposed conditions.

Table 8.3 summarizes the hydraulic impact of the proposed extension of existing watercourse crossings. As noted in the table, the proposed extensions will result in an increase in the headwater elevations, ranging from 0.01 m to 0.14 m. The increase in flood elevations for the majority of these culverts is within the MTO right-of-way except for the East Sixteen Mile Creek crossing identified as SM_EB_SIM_0_WC1 (Site No.10X-0081/C0), where the Regional storm headwater elevation will increase by 0.11 m and will extend beyond the MTO right-of-way.

Table 8.4 shows a comparison of the water surface elevations from the upstream and downstream river stations of East Sixteen Mile Creek crossing identified as SM_EB_SIM_0_WC1 (MTO Site No.10X-0081/C0). As noted in the table, the Regional Storm water level is increased by a maximum 0.11 m extending from the upstream face of the culvert up to Steeles Avenue where the increase in flood elevation is dissipated, approximate 1 km upstream of the culvert. It should be noted, however, that the East Sixteen Mile Creek is in a deep valley and the proposed water level increase will be contained within the valley.

Table 8.5 summarizes the hydraulic performance of the proposed new watercourse crossings. As noted in the table, all proposed culverts satisfy all hydraulic requirements.

Table 8.6 summarizes the hydraulic performance of all existing and proposed new watercourse crossings considering climate change at the end of the design service life (2096 IDF). As noted in the table, all existing and proposed culvert crossing satisfy all hydraulic requirements during future conditions (2096 IDF).

The CulvertMaster output for culverts under existing conditions is included in **Appendix G.1** and proposed conditions in **Appendix G.2**. The CulvertMaster output for future conditions (IDF 2096) is provided in **Appendix G.3**.

Table 8.1: Hydraulic Performance of Existing Watercourse Crossings- Existing Conditions

Crossing ID	Approx. Station	Location	Drainage Are (ha)	Crossing Configuration								2021 IDF Peak Flow (m ³ /s)				Edge of Pavement Elevation (EP) ² (m)	App. U/S Cover ± (m)	Existing Hydraulic Performance												Meet Criteria (Y/N)		
				No. of Barrel	Hydraulic Opening			Type	Inverts (m)		Slope (%)							Headwater Elevation, m.				Freeboard (FB), m		HW/D ⁴		Overtopping?			Min. FB	HW/D ⁴	Over-topping	
					Span (mm)	Rise ¹ (mm)	Length (m)		U/S	D/S								50-Year	100-Year	Check Flow	Reg. Flow	50 year	100 year	Check Flow ³	Reg. Flow	50 year	100 year	50 year				100 year
SM_EB_SIM_2_WC1	11+528	Highway 401 East of Trafalgar Rd	10.3	1	1800	900	124.8	Conc. Box	200.75	200.07	0.54	2.45	2.77	3.60	-	203.04	1.39	201.74	201.92	202.58	-	1.30	1.12	1.10	1.30	No	No	-	Y	Y	Y	
SM_EB_SIM_0_WC1	11+844	Highway 40 East of Trafalgar Rd	2105.8	2	6100	3800	117.4	Conc. Box	197.24	196.75	0.42	28.52	31.83	41.40	122.13	204.03	2.99	198.68	198.79	199.08	200.99	5.35	5.24	0.38	0.41	No	No	No	Y	Y	Y	
SM_EB_SIM_5_WC1	12+777	Highway 401 East of 8th Line	37.6	1	2400	900	107.3	Conc. Box	206.65	206.53	0.11	2.99	3.44	4.47	4.91	208.91	1.36	207.74	207.94	208.49	208.76	1.17	0.97	1.21	1.43	No	No	No	Y	Y	Y	
SM_EL_SIM_1_WC1	9+795 10+187	Highway 413N to 407S Ramp (Highway 407) 407S to 401 E Ramp	77.8	1	3000	1500	121.5	Conc. Box	208.20	207.88	0.26	4.92	5.81	7.55	10.02	214.00	4.30	209.61	209.68	209.94	210.37	4.39	4.32	0.94	0.99	No	No	No	Y	Y	Y	
SM_EL_SIM_1_WC2.3	11+803/ 10+200	Highway 413 N - 407 E Ramp Highway 413 N/ 407 S - 401 E Ramp	67.9	1	3500	1500	71.0	Conc. Box	208.85	208.70	0.21	5.46	6.47	8.40	8.94	215.36	5.01	209.99	210.11	210.33	210.39	5.37	5.25	0.76	0.84	No	No	No	Y	Y	Y	
SM_EL_SIM_1_WC3.2	10+739	407 E - 401 W Ramp	72.4	1	3500	1500	44.5	Conc. Box	210.90	210.74	0.35	6.12	7.05	9.17	-	215.64	3.23	212.08	212.19	212.43	-	3.55	3.44	0.79	0.86	No	No	-	Y	Y	Y	
SM_EL_SIM_1_WC3.3	10+219	Highway 407 Ramp 401 E - 407 S	72.4	1	3500	1500	77.0	Conc. Box	210.63	210.36	0.35	6.12	7.05	9.17	-	221.93	9.80	211.81	211.92	212.17	-	10.12	10.01	0.79	0.86	No	No	-	Y	Y	Y	
SM_EL_SIM_1_WC4	10+286	Highway 407 Ramp 401 E - 407 N	60.9	1	3500	1500	89.0	Conc. Box	212.58	212.36	0.24	5.87	6.72	8.74	-	215.49	1.41	214.05	214.10	214.30	-	1.44	1.39	0.98	1.01	No	No	-	Y	Y	Y	
1 - Clear hydraulic rise from stream bed to obvert.																																
2 - In sag, EP at low point.																																
3 - Check Flow is 130% of the 100-year flow .																																
4 - HW/D ≤ 1.5 for culverts with diameter or rise < 3.0m; HW ≤ 4.5 for culverts with diameter or rise 3.0 to 4.5m; HW/D ≤ 1.0 for culverts with diameter or rise > 4.5m																																



Table 8.2: Hydraulic Performance of Existing Watercourse Crossings- Proposed Conditions

[illegible]

Table 8.3: Existing Watercourse Crossing Extensions - Hydraulic Impact Assessment Results

Crossing ID	Approx. Station	Location	Drainage Are (ha)	Crossing Configuration						Edge of Pavement Elevation (EP) ² (m)	Headwater Elevation, m.						Change in Headwater Elevation,m			Remarks						
				No. of Barrel	Hydraulic Opening		Length (m)				Existing Conditions			Proposed Conditions												
					Span (mm)	Rise ¹ (mm)	Existing	Proposed	Approx. Extension	Existing	Proposed	Change	50 year	100 year	Reg. Flow	50 year	100 year	Reg. Flow	50 year		100 year	Reg. Flow				
SM_EB_SIM_2_WC1	11+528	Highway 401 East of Trafalgar Rd	10.3	1	1800	900	124.8	127.0	2.2	203.04	202.98	-0.06	201.74	201.92	-	201.75	201.93	-	0.01	0.01	-	Increase in headwater within MTO ROW.				
SM_EB_SIM_0_WC1	11+844	Highway 40 East of Trafalgar Rd	2105.8	2	6100	3800	117.4	160.3	42.9	204.03	203.95	-0.08	198.68	198.79	200.99	198.72	198.83	201.10	0.04	0.04	0.11	Increase in water level due to downstream extension skew angle. Increase up to Steeles Avenue. See Table 8.4.				
SM_EB_SIM_5_WC1	12+777	Highway 401 East of 8th Line	37.6	1	2400	900	107.3	111.9	4.6	208.91	208.90	-0.01	207.74	207.94	208.76	207.75	207.99	208.88	0.01	0.05	0.12	Increase in Headwater due to backwater from new culvert. Increase within MTO ROW.				
SM_EL_SIM_1_WC1	9+795 10+187	Highway 413N to 407S Ramp (Highway 407) 407S to 401 E Ramp	77.8	1	3000	1500	121.5	225.6	104.1	214.00	213.58	-0.42	209.61	209.68	210.37	209.57	209.71	210.51	-0.04	0.03	0.14	Increase in headwater within MTO ROW.				
SM_EL_SIM_1_WC2.3	11+803/ 10+200	Highway 413 N - 407 E Ramp Highway 413 N/ 407 S - 401 E Ramp	67.9	1	3500	1500	71.0	113.6	42.6	215.36	220.47	5.11	209.99	210.11	210.39	210.07	210.19	210.48	0.08	0.08	0.09	Increase in headwater within MTO ROW.				
SM_EL_SIM_1_WC3.2	10+739	407 E - 401 W Ramp	72.4	1	3500	1500	44.5	66.1	21.6	215.64	214.32	-1.32	212.08	212.19	-	212.35	212.41	-	0.27	0.22	-	Increase in headwater within MTO ROW.				
SM_EL_SIM_1_WC3.3	10+219	Highway 407 Ramp 401 E - 407 S	72.4	1	3500	1500	77.0	93.7	16.7	221.93	221.93	0.00	211.81	211.92	-	211.84	211.96	-	0.03	0.04	-	Increase in headwater within MTO ROW.				
SM_EL_SIM_1_WC4	10+286	Highway 407 Ramp 401 E - 407 N	60.9	1	3500	1500	89.0	126.0	37.0	215.49	215.30	-0.19	214.05	214.10	-	214.09	214.15	-	0.04	0.05	-	Increase in headwater within MTO ROW.				
¹ - Clear hydraulic rise from stream bed to obvert.									Note:																	
² - In sag, EP at low point.									Further consideration should be given during the next design phase, the potential for combining SM_EL_SIM_1_WC3.2 and SM_EL_SIM_1_WC3.3 along with new crossing SM_EL_SIM_1_WC3.1.																	
³ - Check Flow is 130% of the 100-year flow.																										

Table 8.4: Hydraulic Impact of Proposed East Sixteen Mile Creek Crossing Extension (SM_EB_SIM_01_WC1 -SITE 10x-0081/CO)

River Station	Headwater Elevation (HWE), m						Change in HWE (m)		
	Existing Condition			Proposed Condition					
	50 year	100 year	Reg. Flow	50 year	100 year	Reg. Flow	50 year	100 year	Reg. Flow
68	200.87	200.93	202.21	200.87	200.93	202.21	0.00	0.00	0.00
67	200.26	200.30	201.17	200.26	200.30	201.25	0.00	0.00	0.08
66	199.45	199.49	201.01	199.45	199.48	201.12	0.00	-0.01	0.11
65	199.01	199.06	201.01	199.01	199.07	201.11	0.00	0.01	0.10
64	198.65	198.77	200.99	198.70	198.81	201.10	0.05	0.04	0.11
63.167	198.68	198.79	200.99	198.72	198.83	201.10	0.04	0.04	0.11
63	198.68	198.79	200.99	198.72	198.83	201.10	0.04	0.04	0.11
61.5	Culvert								
60.5	197.40	197.43	198.00	197.08	197.11	197.58	-0.32	-0.32	-0.42
60	197.08	197.11	197.58						
59.5	196.38	196.42	197.24	196.38	196.42	197.24	0.00	0.00	0.00
59	195.64	195.67	197.19	195.64	195.67	197.19	0.00	0.00	0.00



Table 8.5: Hydraulic Performance of New Watercourse Crossings- Proposed Conditions

Crossing ID	Approx. Station	Location	Drainage Area (ha)	Crossing Configuration								2021 IDF Peak Flow (m³/s)				Edge of Pavement Elevation (EP) ² (m)	App. U/S Cover ± (m)	Proposed Hydraulic Condition - 2021 IDF																		
				No. of Barrel	Hydraulic Opening			Type	Inverts (m)		Slope (%)							Headwater Elevation				Freeboard		HW/D ⁴		Overtopping?			Meet Criteria (Y?N)							
					Span (mm)	Rise ¹ (mm)	Length (m)		U/S	D/S		50- Year	100- Year	Check Flow	Reg. Flow			50 year	100 year	Check Flow ³	Reg. Flow	50 year	100 year	50 year	100 year	100 year	Check Flow ³	Reg. Flow	Min. FB	HW/D ⁴	Over-topping					
SM_EB_SIM_5_WC1.2	10+631	401 W/ Trafalgar Rd S - 413 N / 407 S	34.9	1	3500	1500	43.60	Box	206.53	206.49	0.10	2.99	3.44	4.47	4.91	209.01	0.98	207.29	207.35	207.49	207.54	1.72	1.66	0.51	0.55	No	No	No	Y	Y	Y					
SM_EL_SIM_1_WC1.1	10+662	4013 N - 407 E Ramp	39.5	1	2400	1500	122.40	Box	212.40	211.54	0.70	3.63	4.19	5.45	6.34	224.41	10.51	213.48	213.59	213.81	213.96	10.93	10.82	0.72	0.79	No	No	No	Y	Y	Y					
SM_EL_SIM_1_WC1.2	10+291	413 N - 401 W Ramp	39.5	1	2400	1500	78.50	Box	211.20	210.55	0.83	3.63	4.19	5.45	6.34	221.70	9.00	212.73	212.77	212.89	212.99	8.97	8.93	1.02	1.05	No	No	No	Y	Y	Y					
SM_EL_SIM_1_WC1.5	11+396	401W - 413 N Ramp	69.3	1	4000	1800	57.40	Box	208.47	208.39	0.14	7.33	8.42	10.94	-	215.63	5.36	209.76	209.84	210.06	-	5.9	5.8	0.72	0.76	No	No	-	Y	Y	Y					
SM_EL_SIM_1_WC1.6	10+295	407 S - 4013 N Ramp	91.2	1	4000	2000	75.50	Box	206.63	206.55	0.10	5.17	6.05	7.87	10.90	214.13	5.50	207.87	207.92	208.03	208.25	6.3	6.2	0.62	0.64	No	No	No	Y	Y	Y					
SM_EL_SIM_1_WC2	10+450	Highway 413	30.4	1	3000	1200	120.70	Box	216.22	215.62	0.50	2.51	2.91	3.79	3.91	218.87	1.45	216.95	217.02	217.18	217.20	1.9	1.9	0.61	0.67	No	No	No	Y	Y	Y					
SM_EL_SIM_1_WC2.1	11+306	407 E/ 401 E - 403 N Ramp	41.7	1	4500	1200	44.40	Box	214.74	214.70	0.10	3.78	4.38	5.70	-	220.41	4.47	215.75	215.77	215.84	-	4.7	4.6	0.84	0.85	No	No	-	Y	Y	Y					
SM_EL_SIM_1_WC2.2	-	Steeles Avenue	41.7	1	8500	900	27.60	Box	214.95	214.61	1.23	3.78	4.38	5.70	-	216.61	0.76	215.43	215.48	215.58	-	1.2	1.1	0.53	0.59	No	No	-	Y	Y	Y					
SM_EL_SIM_1_WC3	11+125	Highway 413	8.9	1	1500	1200	120.80	Box	219.40	219.09	0.26	1.88	2.15	2.79	-	222.29	1.69	220.35	220.44	220.64	-	1.9	1.8	0.79	0.87	No	No	-	Y	Y	Y					
SM_EL_SIM_1_WC3.1	10+241	407 E - 413 N Ramp	69.9	1	3500	1500	54.00	Box	212.19	211.30	1.65	6.12	7.05	9.17	-	223.77	10.08	213.38	213.49	213.74	-	10.4	10.3	0.79	0.87	No	No	-	Y	Y	Y					
SM_EL_SIM_1_WC3.5	10+585	413 N/S - 401 E Ramp	85.3	1	3500	2100	62.00	Conc. Box	209.12	208.50	1.00	6.78	7.84	10.19	10.25	215.03	3.81	210.39	210.52	210.79	210.79	4.6	4.5	0.60	0.67	No	No	No	Y	Y	Y					
SM_EL_SIM_1_WC3.6	10+486	407W - 407E Ramp	86.8	1	3500	2100	87.00	Conc. Box	208.50	208.40	0.11	6.59	7.62	9.90	10.40	219.66	9.06	210.58	210.61	210.68	210.70	9.1	9.0	0.99	1.00	No	No	No	Y	Y	Y					
¹ - Clear hydraulic rise from stream bed to obvert.												Note:																								
² - In sag, EP at low point.												Further consideration should be given in the next design phase, the potential for combining SM_EL_SIM_1_WC3.1 with SM_EL_SIM_1_WC3.2 and SM_EL_SIM_1_WC3.3.																								
³ - Check Flow is 130% of the 100-year flow.																																				
⁴ - HW/D ≤ 1.5 for culverts with diameter or rise < 3.0m; HW ≤ 4.5 for culverts with diameter or rise 3.0 to 4.5m; HW/D ≤ 1.0 for culverts with diameter or rise > 4.5m																																				

Table 8.6: Hydraulic Performance of Existing and Proposed Watercourse Crossings- Future Conditions (2096 IDF)

Crossing ID	Approx. Station	Location	Drainage Are (ha)	Crossing Configuration								2096 IDF Peak Flow (m³/s)			Edge of Pavement Elevation (EP) ² (m)	App. U/S Cover ± (m)	Proposed Hydraulic Condition - 2096 IDF											
				No. of Barrel	Hydraulic Opening			Type	Inverts (m)		Slope (%)						Headwater Elevation			Freeboard		HW/D ⁴		Overtopping?		Meet Criteria (Y?N)		
					Span (mm)	Rise ¹ (mm)	Length (m)		U/S	D/S		50- Year	100- Year	Check Flow			50 year	100 year	Check Flow ³	50 year	100 year	50 year	100 year	100 year	Check Flow ³	Min. FB	HW/D ⁴	Over- topping
SM_EB_SIM_2_WC1	11+528	Highway 401 East of Trafalgar Rd	10.34	1	1800	900	127	Conc. Box	200.8	200.1	0.545	2.70	3.03	3.94	202.98	1.32	201.89	202.12	202.92	1.09	0.86	1.25	1.51	No	No	Y	Y	Y
SM_EB_SIM_0_WC1	11+844	Highway 401 East of Trafalgar Rd	2105.77	2	6100	3800	160.3	Conc. Box	197.2	196.8	0.306	30.89	34.47	44.84	203.95	2.91	198.81	198.92	199.23	5.14	5.03	0.41	0.44	No	No	Y	Y	Y
SM_EB_SIM_5_WC1	12+777	Highway 401 East of 8th Line	34.87	1	2400	900	111.9	Conc. Box	206.7	206.5	0.112	3.35	3.79	4.93	208.90	1.34	207.88	208.09	208.90	1.02	0.81	1.36	1.59	No	No	Y	Y	Y
SM_EB_SIM_5_WC1.2	10+631	401 W/ Trafalgar Rd S - 413 N / 407 S	34.87	1	3500	1500	43.6	Box	206.5	206.5	0.1	3.35	3.79	4.93	209.01	0.98	207.34	207.39	207.55	1.67	1.62	0.54	0.57	No	No	Y	Y	Y
SM_EL_SIM_1_WC1.1	10+662	4013 N - 407 E Ramp	39.52	1	2400	1500	122.4	Box	212.4	211.5	0.703	4.08	4.65	6.05	224.41	10.51	213.56	213.67	213.91	10.85	10.74	0.77	0.85	No	No	Y	Y	Y
SM_EL_SIM_1_WC1.2	10+291	413 N - 401 W Ramp	39.52	1	2400	1500	78.5	Box	211.2	210.6	0.828	4.08	4.65	6.05	221.70	9.00	212.76	212.81	212.96	8.94	8.89	1.04	1.07	No	No	Y	Y	Y
SM_EL_SIM_1_WC1.5	11+396	401W - 413 N Ramp	69.34	1	4000	1800	57.4	Box	208.5	208.4	0.139	8.20	9.30	12.09	215.63	5.36	209.83	209.92	210.16	5.80	5.71	0.76	0.81	No	No	Y	Y	Y
SM_EL_SIM_1_WC1	9+795 10+187	Highway 413N to 407S Ramp	86.9	1	3000	1500	225.6	Conc. Box	208.2	207.8	0.186	5.59	6.66	8.66	213.58	3.88	209.67	209.83	210.11	3.91	3.75	0.98	1.09	No	No	Y	Y	Y
SM_EL_SIM_1_WC1.6	10+295	407 S - 4013 N Ramp	91.18	1	4000	2000	75.5	Box	206.6	206.6	0.1	5.93	6.93	9.01	214.13	5.50	207.91	207.96	208.10	6.22	6.17	0.64	0.67	No	No	Y	Y	Y
SM_EL_SIM_1_WC2	10+450	Highway 413	30.43	1	3000	1200	120.7	Box	216.2	215.6	0.5	4.77	5.39	7.00	218.87	1.45	217.33	217.43	217.66	1.54	1.44	0.93	1.01	No	No	Y	Y	Y
SM_EL_SIM_1_WC2.1	11+306	407 E/ 401 E - 403 N Ramp	41.73	1	4500	1200	44.4	Box	214.7	214.7	0.1	6.49	7.36	9.57	220.41	4.47	215.88	215.94	216.10	4.53	4.47	0.95	1.00	No	No	Y	Y	Y
SM_EL_SIM_1_WC2.2	-	Steeles Avenue	41.73	1	8500	900	27.6	Box	215	214.6	1.232	6.49	7.36	9.57	216.61	0.76	215.63	215.69	215.83	0.98	0.92	0.76	0.82	No	No	Y	Y	Y
SM_EL_SIM_1_WC2.3	11+803/ 10+200	Highway 413 N - 407 E Ramp	72.36	1	3500	1500	113.6	Conc. Box	208.9	208.7	0.097	6.27	7.30	9.49	220.47	10.12	210.16	210.28	210.54	10.31	10.19	0.87	0.95	No	No	Y	Y	Y
SM_EL_SIM_1_WC3	11+125	Highway 413	8.86	1	1500	1200	120.8	Box	219.4	219.1	0.257	2.32	2.63	3.42	222.29	1.69	220.50	220.59	220.83	1.79	1.70	0.92	0.99	No	No	Y	Y	Y
SM_EL_SIM_1_WC3.1	10+241	407 E - 413 N Ramp	69.85	1	3500	1500	54	Box	212.2	211.3	1.648	6.87	7.86	10.22	223.77	10.08	213.47	213.59	213.86	10.30	10.18	0.85	0.93	No	No	Y	Y	Y
SM_EL_SIM_1_WC3.2	10+739	407 E - 401 W Ramp	69.85	1	3500	1500	66.1	Conc. Box	210.9	210.7	0.35	6.87	7.86	10.22	214.32	1.92	212.40	212.47	212.70	1.92	1.85	1.00	1.05	No	No	Y	Y	Y
SM_EL_SIM_1_WC3.3	10+219	Highway 407 Ramp 401 E - 407 S	69.85	1	3500	1500	93.7	Conc. Box	210.7	210.4	0.329	6.87	7.86	10.22	221.93	9.76	211.94	212.05	212.32	9.99	9.88	0.85	0.92	No	No	Y	Y	Y
SM_EL_SIM_1_WC3.5	10+585	413 N/S - 401 E Ramp	85.33	1	3500	2100	62	Conc. Box	209.1	208.5	1	7.63	8.74	11.37	215.03	3.81	210.49	210.62	210.91	4.54	4.41	0.65	0.71	No	No	Y	Y	Y
SM_EL_SIM_1_WC3.6	10+486	407W - 407E Ramp	86.84	1	3500	2100	87	Conc. Box	208.5	208.4	0.115	7.41	8.50	11.05	219.66	9.06	210.60	210.63	210.73	9.06	9.03	1.00	1.01	No	No	Y	Y	Y
SM_EL_SIM_1_WC4	10+286	Highway 407 Ramp 401 E - 407 N	60.73	1	3500	1500	126	Conc. Box	212.7	212.4	0.245	6.55	7.41	9.64	215.30	1.13	214.14	214.21	214.52	1.16	1.09	0.98	1.03	No	No	Y	Y	Y
				¹ - Clear hydraulic rise from stream bed to obvert.																								
				² - In sag, EP at low point.																								
				³ - Check Flow is 130% of the 100-year flow.																								
				⁴ - HW/D ≤ 1.5 for culverts with diameter or rise < 3.0m; HW ≤ 4.5 for culverts with diameter or rise 3.0 to 4.5m; HW/D ≤ 1.0 for culverts with diameter or rise > 4.5m																								

The HEC-RAS modelling output for East Sixteen Mile Creek watercourse crossing SM_EB_SIM_0_WC1 (Site No.10X-0081/C0), is provided in **Appendix F**.

8.3 Summary of Watercourse Crossing Hydro-Technical Recommendation

Table 8.7 summarizes the preliminary hydro-technical recommendations based on the results of the hydrologic and hydraulic assessments completed for the culverts within the CH study limits. It summarizes the minimum hydraulic opening requirements as well as the preliminary slope, assumed extension length and new culvert length. As indicated in **Table 8.7**, 9 existing culverts will require extensions and 12 new culverts will be required to convey flows across the proposed highway corridor. The existing and proposed crossing culverts as well as internal micro-drainage are identified in **Figure 5.3**. It is anticipated that a 900 mm minimum diameter culvert will have sufficient capacity to convey the anticipated flows. Their sizes will be further confirmed in the subsequent design stage.

8.4 Geomorphic and Environmental Considerations

Table 8.8 summarizes the watercourse crossing recommendations considering hydraulic, geomorphic, and environmental requirements. It should be noted that majority of the crossings are existing, therefore, the recommended sizes were governed by hydraulic requirements except for watercourse crossings SM_EL_SIM_1_WC1.1 and SM_EL_SIM_1_WC1.2. The recommended sizes for these two crossings were governed by the environmental requirement for openness ratio.

Considering also that majority of the watercourses are either direct or indirect fish habitats, a minimum 300 mm substrate was added in the recommended culvert sizes as required by MTO's 2008 HDDS WC-12 Fish Passage through Culverts.

Table 8.7: Summary of Preliminary Watercourse Crossing Hydro Technical Recommendations

Crossing ID	MTO SITE NO.	Station	Location	Type	Hydrotechnical Requirement						Preliminary Hydrotechnical Recommendation
					Minimum Hydraulic Opening		Assumed Extension Length (m)	Assumed Slope	Approximate Total Length		
										Span (mm)	
					U/S	D/S	(%)	(m)			
SM_EB_SIM_2_WC1	—	11+528	Highway 401 East of Trafalgar Rd	Concrete Box	1800	900	2.2	-	0.54	127.0	■ Extension
SM_EB_SIM_2_DR1	—	9+940	Trafalgar Road S to 401 W Ramp	Circular		900	-	-	-	29.0	■ Maintain existing. ■ Confirm impact in detail design.
SM_EB_SIM_2_DR2	—	9+600	Trafalgar Road S to 401 E Ramp	Circular		900	-	-	-	23.0	■ Maintain existing. ■ Confirm impact in detail design.
SM_EB_SIM_0_WC1	Site 10X-0081/C0	11+844	Highway 401 East of Trafalgar Rd	Concrete Box	6100	3800	-	42.9	0.31	160.3	■ Extension
SM_EB_SIM_5_WC1	—	12+777	Highway 401 East of 8th Line	Concrete Box	2400	900	4.6	-	0.11	111.9	■ Extension with improved inlet.
SM_EB_SIM_5_WC1.1	Site 10-559C	-	Highway 401 WB Collector Initiation	Concrete Box	N/A	N/A	-	-	-	N/A	■ No culvert work required. ■ Confirm in detail design.
SM_EB_SIM_5_WC1.2	—	10+631	401 W/ Trafalgar Rd S - 413 N / 407 S	Concrete Box	3500	1500	-	-	0.10	43.6	■ New watercourse crossing. ■ Size enlarged to reduce backwater to U/S culvert. ■ Inlet requirement: Headwall, beveled inlet 45deg.
SM_EL_SIM_1_WC1.1	—	10+662	4013 N - 407 E Ramp	Concrete Box	2400	1500	-	-	0.70	122.4	■ New watercourse crossing.
SM_EL_SIM_1_WC1.2	—	10+291	413 N - 401 W Ramp	Concrete Box	2400	1500	-	-	0.83	78.5	■ New watercourse crossing.
SM_EL_SIM_1_WC1.3	Site 10-559C	1519+489	401 W - 407 E Ramp	Concrete Box	N/A	N/A	-	-	-	N/A	■ No culvert work being proposed. ■ Confirm in detail design.
SM_EL_SIM_1_WC1.4	—	13+587	Highway 401 East of 8th Line	Concrete Box	2400	900	-	-19.0	-	96.0	■ Outlet modification required. ■ Confirm hydraulic impact in detail design.
SM_EL_SIM_1_WC1.5	—	11+396	401W - 413 N Ramp	Concrete Box	4000	1800	-	-	0.14	57.4	■ New watercourse crossing.
SM_EL_SIM_1_WC1	Site 10+550C	9+795 10+187	Highway 413N to 407S Ramp (Highway 407) 407S to 401 E Ramp	Concrete Box	3000	1500	72.2	31.9	0.28	225.6	■ Extension.
SM_EL_SIM_1_WC1.6	—	10+295	407 S - 4013 N Ramp	Concrete Box	4000	2000	-	-	0.10	75.5	■ New watercourse crossing.
SM_EL_SIM_1_WC2	—	10+450	Highway 413	Concrete Box	3000	1200	-	-	0.50	120.7	■ New watercourse crossing.
SM_EL_SIM_1_WC2.1	—	11+306	407 E/ 401 E - 403 N Ramp	Concrete Box	4500	1200	-	-	0.10	44.4	■ New watercourse crossing.
SM_EL_SIM_1_WC2.2	—	-	Steeles Avenue	Concrete Box	8500	900	-	-	1.23	27.6	■ Relocated Steeles Avenue culvert. ■ Wider due to low road profile
SM_EL_SIM_1_WC2.3	SITE 10-553C	11+803/ 10+200	Highway 413 N - 407 E Ramp Highway 413 N/ 407 S - 401 E Ramp	Concrete Box	3500	1500	-	42.6	0.10	113.6	■ Extension.
SM_EL_SIM_1_WC3	—	11+125	Highway 413	Concrete Box	1500	1200	-	-	0.26	120.8	■ New watercourse crossing.
SM_EL_SIM_1_WC3.1	—	10+241	407 E - 413 N Ramp	Concrete Box	3500	1500	-	-	1.65	54.0	■ New watercourse crossing.
SM_EL_SIM_1_WC3.2	Site 10+558C	10+739	407 E - 401 W Ramp	Concrete Box	3500	1500	6.2	15.4	0.35	66.10	■ Extension.
SM_EL_SIM_1_WC3.3	Site 10+557C	10+219	Highway 407 Ramp 401 E - 407 S	Concrete Box	3500	1500	16.7	-	0.35	93.7	■ Extension.
SM_EL_SIM_1_WC3.4	Site 10+544C	14+489	Highway 401 East of 9th Line	Concrete Box	2400	1500		-55.0	0.00	70.2	■ Structure modification. ■ Remove skewed section downstream , ±55 m.
SM_EL_SIM_1_WC3.5	—	10+585	413 N/S - 401 E Ramp	Concrete Box	3500	2100	-	-	1.00	62.0	■ New watercourse crossing.
SM_EL_SIM_1_WC3.6	—	10+486	407W - 407E Ramp	Concrete Box	3500	2100	-	-	0.11	87.0	■ Relocated watercourse crossing.
SM_EL_SIM_1_WC4	Site 10+556C	10+286	Highway 407 Ramp 401 E - 407 N	Concrete Box	3500	1500	-	37.0	0.24	126.0	■ Extension.
SM_EL_SIM_1_WC5.1	Site 10-559C	11+129	Ramp 401 W - 407 E	Concrete Box	3500	1500	13.6	-	-	67.7	■ Extension. ■ Overflow culvert from Pond 4. ■ Confirm hydraulic impact in detail design

Table 8.8: Summary of Watercourse Crossing Recommendation

Crossing ID	MTO SITE NO.	Station	Location	Type	Hydrotechnical Requirement				Environmental Consideration			Governing Design Criteria	Recommended Structure					Preliminary Recommendation
					Minimum Hydraulic Opening		Assumed Extension Length (m)	Environmental Watercourse ID	Flow and Thermal Regime	Fish Habitat	Structure Type		Span (mm)	Rise (mm)	Embed -ment (mm)	Approximate Total Length (m)		
					Span (mm)	Rise (mm)											U/S	
SM_EB_SIM_2_WC1	—	11+528	Highway 401 East of Trafalgar Rd	Concrete Box	1800	900	2.2	-	-	Intermittent/ Ephemeral Coolwater	Not Fish Habitat	Existing Condition	Concrete Box	1800	1200	300	127.0	■ Extension. ■ Provide 300 mm substate to match existing and provision for fisheries.
SM_EB_SIM_2_DR1	—	9+940	Trafalgar Road S to 401 W Ramp	Circular		900	-	-		N/A	Not Fish Habitat	Existing Condition	Circular	-	900	-	29.0	■ Maintain existing. ■ Confirm impact in detail design.
SM_EB_SIM_2_DR2	—	9+600	Trafalgar Road S to 401 E Ramp	Circular		900	-	-		N/A	Not Fish Habitat	Existing Condition	Circular	-	900	-	23.0	■ Maintain existing. ■ Confirm impact in detail design.
SM_EB_SIM_0_WC1	Site 10X-0081/C0	11+844	Highway 401 East of Trafalgar Rd	Concrete Box	6100	3800	-	42.9	SM_EB_SIM_0_E1	Permanent Coolwater	Direct Fish Habitat	Existing Condition	Concrete Box	6100	4200	400	160.3	■ Extension. ■ Provide 400 mm substate to match existing and provision for fisheries.
SM_EB_SIM_5_WC1	—	12+777	Highway 401 East of 8th Line	Concrete Box	2400	900	4.6		-	N/A	Not Fish Habitat	Existing Condition	Concrete Box	2400	1200	300	111.9	■ Extension with improved inlet. ■ Provide 300 mm substate to match existing.
SM_EB_SIM_5_WC1.1	—	-	Highway 401 WB Collector Initiation	Concrete Box	2400	900	-	-				Existing Condition	N/A	N/A	N/A	N/A	28.5	■ No culvert work required. ■ Confirm in detail design.
SM_EB_SIM_5_WC1.2	—	10+631	401 W/ Trafalgar Rd S - 413 N / 407 S	Concrete Box	3500	1500	-	-				Hydro Technical	Concrete Box	3500	1800	300	43.6	■ New watercourse crossing. ■ Provide 300 mm substrate to match upstream crossing condition.
SM_EL_SIM_1_WC1.1	—	10+662	4013 N - 407 E Ramp	Concrete Box	2400	1500	-	-	SM_EB_SIM_1_E1	Intermittent/ Ephemeral, Warmwater	Indirect Fish Habitat	Environmental	Concrete Box	3000	3300	300	122.4	■ New watercourse crossing. ■ Size enlarged to meet openness criteria. ■ Provide 300 mm substate for fisheries.
SM_EL_SIM_1_WC1.2	—	10+291	413 N - 401 W Ramp	Concrete Box	2400	1500	-	-				Environmental	Concrete Box	3000	3300	300	78.5	■ New watercourse crossing. Size enlarged to meet openness criteria. ■ Provide 300 mm substate for fisheries.
SM_EL_SIM_1_WC1.3	Site 10-559C	1519+489	401 W - 407 E Ramp	Concrete Box	N/A	N/A	N/A	N/A				Hydro Technical	Concrete Box	N/A	N/A	N/A	N/A	■ No culvert work being proposed. ■ Confirm in detail design.
SM_EL_SIM_1_WC1.4	—	13+587	Highway 401 East of 8th Line	Concrete Box	2400	900	-	-19.0				N/A	N/A	N/A	N/A	N/A	96.0	■ Outlet modification required. ■ Confirm hydraulic impact in detail design.
SM_EL_SIM_1_WC1.5	—	11+396	401W - 413 N Ramp	Concrete Box	4000	1800	-	-				Hydro Technical	Concrete Box	4000	2100	300	57.4	■ New watercourse crossing. Provide 300 mm substate for fisheries.
SM_EL_SIM_1_WC1	Site 10+550C	9+795 10+187	Highway 413N to 407S Ramp (Highway 407) 407S to 401 E Ramp	Concrete Box	3000	1500	72.2	31.9				Hydro Technical	Concrete Box	3000	1800	300	225.6	■ Extension. ■ Provide 300 mm substate to match existing and provision for fisheries.
SM_EL_SIM_1_WC1.6	—	10+295	407 S - 4013 N Ramp	Concrete Box	4000	2000	-	-				Hydro Technical	Concrete Box	4000	2300	300	75.5	■ New watercourse crossing. Provide 300 mm substate for fisheries.



Crossing ID	MTO SITE NO.	Station	Location	Type	Hydrotechnical Requirement				Environmental Consideration			Governing Design Criteria	Recommended Structure					Preliminary Recommendation
					Minimum Hydraulic Opening		Assumed Extension Length (m)		Environmental Watercourse ID	Flow and Thermal Regime	Fish Habitat		Structure Type	Span (mm)	Rise (mm)	Embed -ment (mm)	Approximate Total Length (m)	
					Span (mm)	Rise (mm)	U/S	D/S										
SM_EL_SIM_1_WC2	—	10+450	Highway 413	Concrete Box	3000	1200	-	-	-	N/A	Not Fish Habitat	Hydro Technical	Concrete Box	3000	1500	300	120.7	New watercourse crossing. Contributing to Warmwater Direct Fish Habitat. Provide 300 mm substrate.
SM_EL_SIM_1_WC2.1	—	11+306	407 E/ 401 E - 403 N Ramp	Concrete Box	4500	1200	-	-	SM_EB_SIM_2_E2	Intermittent/ Ephemeral, Warmwater	Direct (seasonally)	Hydro Technical	Concrete Box	4500	1500	300	44.4	New watercourse crossing. Provide 300 mm substate for fisheries.
SM_EL_SIM_1_WC2.2	—	-	Steeles Avenue	Concrete Box	8500	900	-	-				Hydro Technical	Concrete Box	8500	1200	300	27.6	Relocated Steeles Avenue culvert. Wider due to low road profile. Provide 300 mm substate for fisheries.
SM_EL_SIM_1_WC2.3	SITE 10-553C	11+803/ 10+200	Highway 413 N - 407 E Ramp Highway 413 N/ 407 S - 401 E Ramp	Concrete Box	3500	1500	-	42.6				Permanent, Warmwater	Hydro Technical	Concrete Box	3500	1800	300	113.6
SM_EL_SIM_1_WC3	—	11+125	Highway 413	Concrete Box	1500	1200	-	-	-	N/A	Not Fish Habitat	Hydro Technical	Concrete Box	1500	1500	300	120.8	New watercourse crossing. Headwater of Intermittent/Ephemeral, Warmwater Direct Fish Habitat. Provide 300 mm substrate.
SM_EL_SIM_1_WC3.1	—	10+241	407 E - 413 N Ramp	Concrete Box	3500	1500	-	-	SM_EL_SIM_3_E3	Intermittent/ Ephemeral, Warmwater	Indirect Fish Habitat	Hydro Technical	Concrete Box	3500	1800	300	54.0	New watercourse crossing. Provide 300 mm substate for fisheries.
SM_EL_SIM_1_WC3.2	Site 10+558C	10+739	407 E - 401 W Ramp	Concrete Box	3500	1500	6.2	15.4				Hydro Technical	Concrete Box	3500	1800	300	66.1	Extension. Provide 300 mm substate to match existing.
SM_EL_SIM_1_WC3.3	Site 10+557C	10+219	Highway 407 Ramp 401 E - 407 S	Concrete Box	3500	1500	16.7	-				Hydro Technical	Concrete Box	3500	1800	300	93.7	Extension. Provide 300 mm substate to match existing.
SM_EL_SIM_1_WC3.4	Site 10+544C	14+489	Highway 401 East of 9th Line	Concrete Box	2400	1500		55.0				Hydro Technical	Concrete Box	2400	1800	300	70.2	Structure modification. Remove skewed section downstream , ±55 m.
SM_EL_SIM_1_WC3.5	—	10+585	413 N/S - 401 E Ramp	Concrete Box	3500	2100	-	-				Hydro Technical	Concrete Box	3500	2400	300	62.0	New watercourse crossing. Provide 300 mm substate for fisheries.
SM_EL_SIM_1_WC3.6	—	10+486	407W - 407E Ramp	Concrete Box	3500	2100	-	-				Hydro Technical	Concrete Box	3500	2400	300	87.0	Relocated watercourse crossing. Provide 300 mm substate for fisheries.
SM_EL_SIM_1_WC4	Site 10+556C	10+286	Highway 407 Ramp 401 E - 407 N	Concrete Box	3500	1500	-	37.0	SM_EB_SIM_4_E4	Intermittent/ Ephemeral, Warmwater	Direct (seasonally)	Hydro Technical	Concrete Box	3500	1800	300	126.0	Extension. Provide 300 mm substate to match existing and provision for fisheries.
SM_EL_SIM_1_WC5.1	Site 10-559C	11+129	Ramp 401 W - 407 E	Concrete Box	3500	1500	13.6	-	-	N/A	Not Fish Habitat	Hydro Technical	Concrete Box	3500	1800	300	67.7	Extension. Overflow culvert from Pond 4. Confirm hydraulic impact in detail design Provide 300 mm substate to match existing and provision for fisheries.

9. Stormwater Management

Runoff from the proposed Highway 413 Transportation Corridor will discharge to a combination of intermittent, ephemeral, and permanent watercourses and to municipal sewer systems which could potentially be impacted. Potential impacts to the receiving watercourses and municipal sewer system are addressed by the proposed stormwater quality treatment and quantity control measures discussed as follows.

9.1 Potential Impacts of Proposed Highway 413

The proposed Highway 413 Transportation Corridor will result in an increase in impervious and pavement area. The total increase in pavement areas within the CH study limit is approximately 31 ha which could increase pollutant loading and peak flow rates. This will potentially impact the receiving watercourses, municipal sewer systems, existing highway culvert crossings and stormwater management ponds. As noted in **Figure 5.2** and **5.3**, three existing stormwater management facilities (Ponds 1, 6 and 3) will be impacted by the proposed works and will require relocation and or modification.

To quantify the potential impacts of the proposed Highway 413 improvements on the water quality and quantity of downstream drainage systems, an impact analysis was completed at each hydrologic reference point (HRP) and outlet. For HRP and outlet locations, refer to **Figures 7.1** and **7.2**.

Table 7.4 in **Section 7.4.2** provides the results of the hydrologic impact assessment at each HRP and outlets. **Table 9.1** provides a summary of potential impacts at each outlet and recommended stormwater management strategy to mitigate the impacts.

9.2 Screening of Alternatives

A list of stormwater best management practices (BMPs) was screened, with consideration of the general advantages and disadvantages, experience, and practical feasibility for the site-specific conditions, such as:

- Integration with the standard type of drainage (storm sewers and outside ditches).
- Space availability and practical outlet points.
- Functionality of using small orifice sizes to control discharge rates; and
- Future integration/replacement with future SWM plans for the developed lands.

It was determined at the start of the study that the “do nothing” alternative is not an acceptable course of action. The proposed increase in pavement area and the associated potential increase in pollutant loading to the receiving watercourses would result in negative effects such as reduced stream water quality, degraded aquatic habitat, flooding, and in-stream erosion, which necessitate provision of appropriate mitigation measures. To reduce the potential impacts of the proposed works, a treatment train approach is recommended that utilizes a combination of source, conveyance, and end-of-pipe practices.

The MECP has identified a broad range of SWMPs that may be considered for the proposed Highway 413 Transportation Corridor. The recommended practices that can be implemented as part of this project are:

- Dry linear facilities providing quantity control.
- Vegetated grassed swale providing quality treatment and quantity control.
- Special SWMPs such as oil and grit separators to provide quality treatment.

Storage SWMPs such as wet ponds, dry ponds, linear SWM facilities, can be effective in providing combined quality treatment and/or quantity control where drainage areas are sufficient, and space is available.

9.3 Quantity Control

The proposed highway improvements will result in an increase in pavement area, which could potentially lead to an increase in peak flows. **Table 9.1** summarizes the proposed water quantity control strategy to mitigate the potential increases in peak flow rates.

As discussed in **Section 2.2.3**, the quantity control criterion is to control the post-development peak flows to pre-development levels for all storms up to and including the 100-year storm (i.e., 2, 5, 10, 25, 50 and 100-year storms) for all watercourses within the study area. This will be achieved through the following stormwater management measures:

- Maintain existing Pond 2, Pond 4 and Pond 5
- Relocate Pond 1
- Relocate and increase Pond 6 capacities
- Modify Pond 3.
- Provide three new Wet Ponds (Pond 7, 8 and 9)

Table 9.1: Summary of Highway Drainage Impact and SWM Strategy

Outlet No	Total Drainage Area (ha)	Estimated Highway Pavement Area (ha)				Hydrologic Impact		Outlet Description	SWM Strategy	
		Existing Condition	Proposed Condition	Pavement Area Increase		Peak Flow Increase m³/s	Remarks		Quantity Control	Quality and Erosion Control
				Increase (ha)	Increase (%)					
1	2,105.8	14.5	20.5	6.1	42%	0.91 - 1.07	■ Significant Impact	■ Wetland	■ Wet Pond	■ Pond 7 ■ Existing Ditches
2	34.9	6.0	5.8	0.0	0%	0	■ No impact.	■ Farmland ditches	■ Not Required	■ Ditch swale
3	20.4	5.0	6.3	1.4	28%	0.18 - 0.60	■ Significant Impact	■ Existing - Wetland to open channel ■ Proposed - Open Channel via 407 Culvert	■ Flow Diversion	■ Ditch swale
4	91.2	11.5	15.8	4.3	38%	0.01 - 0.75	■ Significant Impact	■ Open Channel	■ Wet Ponds	■ Wet Ponds ■ Ditch swale
5	72.4	11.1	26.7	15.6	141%	0.70 - 0.98	■ Significant Impact	■ Open Channel to municipal drain	■ Wet Ponds	■ Wet Ponds ■ Ditch swale
6	8.9	0.0	2.0	2.0	100%	0	■ No impact.	■ Farmland ditches to open channel	■ Not Required	■ Ditch swale
7	86.8	10.1	11.0	0.9	9%	0.07 - 0.13	■ Increase during 2-year - 10- year event only. Insignificant impact.	■ Open Channel to municipal drain	■ Existing Wet Pond	■ Existing Wet Pond ■ Ditch swale
8	65.3	5.6	6.2	0.5	9%	0.05	■ Increase during 2-year event only. Insignificant impact.	■ Open Channel to municipal drain	■ Existing Wet Pond	■ Existing Wet Pond ■ Ditch swale
9	56.7	0.9	1.1	0.2	27%	0	■ Not modeled. Insignificant pavement area increase.	■ Open Channel to municipal drain	■ Existing Wet Pond	■ Existing Wet Pond ■ Ditch swale
Total		64.5	95.4	31.0	48%					

The existing Pond 2 and Pond 5 will not be significantly impacted by the proposed works and will continue to function as constructed. This decision needs to be further confirmed in the subsequent design stage when more information is available.

Table 9.2 shows a comparison of the peak flows under existing and proposed conditions with the proposed stormwater management facilities in place. As noted in the table, the anticipated increases in peak flow rates that could potentially impact the existing highway culvert crossings, existing SWM ponds, receiving watercourse and municipal sewer system systems have been mitigated..

The Visual Otthymo modelling outputs for the proposed condition with the proposed SWM ponds in place are provided in **Appendix E**.

9.4 Quality Control

An enhanced level of storm water treatment was identified for the study area. This is the highest level of treatment (80% removal of total suspended solids) identified in the MECP SWM Planning and Design Manual (2003). This criterion will be achieved through existing and proposed SWM facilities and grassed swales with check dams for the proposed impervious and pavement areas of 31 ha.

Table 9.3 summarizes the result of the water quality assessment based on a weighted treatment rate considering the proposed treatment train approach.

Table 9.2: Comparison of Peak Flows – With Stormwater Management

HRP No. ¹	Existing Condition									Proposed Condition - With SWM In Place									Change in Peak Flows						Remarks
	VO Hyd No. ²	Contributing Catchments	Drainage Area (ha)	Peak Flows, m³/s						VO Hyd No. ³	Contributing Catchments	Drainage Area (ha)	Peak Flows - No SWM, m³/s						2-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr	
1	100	100	10.3	0.96	1.43	1.77	2.13	2.45	2.77	1	200	10.3	0.96	1.36	1.64	2.00	2.28	2.56	0.01	-0.07	-0.13	-0.14	-0.17	-0.21	■ No increase in peak flows.
2¹	101	101	21.8	1.97	2.91	3.53	4.46	5.12	5.79	2¹	201	21.8	1.94	2.81	3.27	4.15	4.81	5.40	-0.03	-0.09	-0.26	-0.31	-0.31	-0.40	■ Pond 7 East of crossing provided.
2.1	9	101, 100	32.2	2.92	4.34	5.30	6.59	7.56	8.56	9	1000, 1001, 201, 200	32.2	2.77	4.01	4.76	5.92	7.00	7.89	-0.15	-0.33	-0.54	-0.67	-0.57	-0.67	■ Pond 7 East of crossing provided.
3	6	1020, 120	37.6	1.59	2.47	3.10	3.82	4.44	5.08	6	1020, 220	34.9	1.55	2.35	2.86	3.51	4.07	4.72	-0.04	-0.13	-0.24	-0.31	-0.37	-0.36	■ No increase in peak flows.
5.1	19	121, 122	19.8	1.41	2.20	2.70	3.34	3.83	4.38	19	221, 222	14.7	1.30	1.95	2.43	2.94	3.39	3.83	-0.11	-0.25	-0.27	-0.39	-0.45	-0.55	■ Area diverted to relocated Pond 1.
4	5	1030, 130, 131	47.3	1.43	2.35	2.96	3.73	4.39	5.06	5	1030, 230, 231	47.0	1.28	2.08	2.52	3.06	3.57	4.12	-0.15	-0.26	-0.44	-0.67	-0.82	-0.95	■ Pond 8 provided.
4.1 (401)	22	1030, 130, 131, 132	55.5	1.68	2.72	3.43	4.25	5.00	5.77	22	1030, 230, 231, 232	55.2	1.50	2.38	3.05	3.79	4.51	5.20	-0.18	-0.34	-0.38	-0.46	-0.50	-0.58	■ Pond 8 provided.
5	11	1030, 130, 131, 132, 133, 134	77.8	0.82	2.07	3.03	4.19	4.92	5.81	11	1030, 231, 232, 233, 234	86.9	1.40	2.22	2.74	3.71	4.62	5.72	0.58	0.15	-0.29	-0.49	-0.30	-0.09	■ Relocated Pond 1 provided. Additional increase in peak flow to be compensated D/S at Pond 6.
6	12	1030, 130, 131, 132, 133, 134, 135	84.2	0.85	2.16	3.14	4.34	5.17	6.05	12	1030, 231, 232, 233, 234, 235	91.2	0.78	1.70	2.57	3.54	4.55	5.68	-0.07	-0.46	-0.57	-0.81	-0.62	-0.37	■ Relocated Pond 6 provided.
6.1	20		103.9	1.74	2.75	3.41	4.68	5.73	6.73	20	1030, 231, 232, 233, 234, 235 221, 222	105.9	1.70	2.62	3.31	4.10	4.84	5.86	-0.03	-0.13	-0.10	-0.58	-0.89	-0.87	■ D/S of 407 culvert at confluence.
7.1 (Steeles)	18	1040, 140, 1041	38.7	1.17	1.95	2.50	3.18	3.78	4.38	18	1040, 240, 1041	41.7	2.03	3.16	3.94	4.89	5.81	6.66	0.86	1.20	1.44	1.70	2.04	2.28	■ Increase will be compensated D/S, new Pond 9 before Highway 407 culvert
7.2 (407)	21	1040, 140, 1041, 141	50.0	1.53	2.58	3.30	4.22	5.01	5.82	211	1040, 240, 1041	54.0	0.83	2.11	3.30	4.20	5.00	5.82	-0.70	-0.47	-0.01	-0.01	-0.01	-0.01	■ Pond 9 provided.
7.3 (401)	26	1040, 140, 1041, 141, 142, 143	61.7	0.86	2.14	3.07	4.18	5.11	6.04	26	1040, 240, 1041, 241, 142, 143	65.8	0.91	2.19	3.18	4.27	5.16	6.02	0.05	0.05	0.11	0.09	0.05	-0.03	■ EC-03 in Highway 401 Expansion. Minor increase in peak flow at culvert. Upstream is Pond 2.
7	28	1040, 140, 1041, 141, 142, 143, 144	67.9	0.92	2.28	3.29	4.47	5.46	6.47	28	1040, 240, 1041, 241, 142, 143, 244	72.4	0.92	2.21	3.20	4.30	5.20	6.05	0.00	-0.08	-0.09	-0.16	-0.27	-0.42	■ Pond 9 provided.
8.1	18	1050, 150	11.4	0.70	1.13	1.41	1.77	2.07	2.38	18	1050, 250	8.9	0.68	1.04	1.31	1.62	1.88	2.15	-0.02	-0.08	-0.11	-0.15	-0.19	-0.24	■ No Increase, No Pond required.
8.2 (407)	31	1050, 150, 1051, 151	72.4	1.96	3.22	4.08	5.16	6.12	7.05	31	1050, 250, 1051, 251	69.9	1.93	3.12	3.93	4.93	5.78	6.64	-0.04	-0.09	-0.14	-0.23	-0.34	-0.41	■ No Increase, No Pond required.
Pond 3	33	1050, 150, 15051, 151, 152	87.8	2.18	3.48	4.45	5.70	6.78	7.84	33	1050, 250, 1051, 251, 252	85.3	2.51	3.82	4.69	5.83	6.68	7.62	0.33	0.34	0.24	0.13	-0.09	-0.23	■ Increase in peak flow at Pond 3. Increase will be compensated by modified Pond 3.
8	35	1050, 150, 15051, 151, 153	89.5	1.74	3.26	4.29	5.53	6.59	7.62	35	1050, 250, 1051, 251, 252, 253	86.8	1.74	3.25	4.27	5.53	6.54	7.48	0.00	-0.01	-0.02	0.00	-0.04	-0.14	■ Modified Pond 3 provided.
9.1	3	1060, 160	60.9	2.05	3.24	4.04	5.03	5.87	6.72	3	1060, 260	60.73	2.10	2.10	4.04	5.00	5.83	6.70	0.05	-1.14	0.00	-0.02	-0.04	-0.02	■ No Increase, No Pond required.
9	7	1060, 160, 161, 162	65.6	1.38	2.82	3.56	4.53	5.34	6.34	7	1060, 240, 261, 262	65.28	1.40	1.40	3.57	4.53	5.33	6.30	0.03	-1.41	0.01	0.00	-0.01	-0.04	■ No Increase, No Pond required.

Note: 1. See Figures 6.1 & 6.2 for location.
2. See VO Schematics in Appendix C.1.

Table 9.3: Summary of Water Quality Assessment Results

Outlet No	Existing Condition					Proposed Condition With SWM					Summary of Treatment for New Pavement Areas					Equivalent Protection Level Provided for New Pavement Area
	Total Pavement Area Treated (ha)	Pavement Area (ha) to SWM Measures / TSS Removal Rate				Total Pavement Area Treated (ha)	Pavement Area (ha) to SWM Measures / TSS Removal Rate				Total Pavement Area Treated (ha)	New Pavement Area (ha) to SWM Measures / TSS Removal Rate				
		Existing Ditches	Existing Wet Ponds (1 Treatment)	Existing Wet Ponds (2 Treatments)	Weighted Treatment (%)		Ditches/ Swale	Proposed Wet Ponds	Proposed Wet Ponds (2-3 Treatments)	Weighted Treatment (%)		Ditches/ Swale	Proposed Wet Ponds	Proposed Wet Ponds (2-3 Treatments)	Weighted Treatment (%)	
1	14.5	14.5	-	-	50%	20.5	17.6	2.9	-	54%	6.1	3.1	2.9	-	65%	Basic
2	6.0	6.0	-	-	50%	5.8	5.8	-	-	50%	-	-	-	-	-	-
3	5.0	5.0	-	-	50%	6.3	6.3	-	-	50%	1.4	1.4	-	-	50%	50% Long Term S.S. Removal
4	11.5	2.3	2.4	6.8	80%	15.8	1.3	5.0	9.6	84%	4.3	-	1.2	3.2	87%	Enhanced
5	11.1	2.7	8.4	-	73%	26.7	3.4	23.2	-	76%	15.6	-	-	15.6	90%	Enhanced
6	0.0		-	-	-	2.0	-	2.0	-	80%	2.0	-	2.0	-	80%	Enhanced
7	10.1	0.3	9.7	-	79%	11.0	0.3	10.6	-	79%	0.9	-	0.9	-	80%	Enhanced
8	5.6	1.2	4.4	-	74%	6.2	1.2	5.0	-	74%	0.5	-	0.5	-	80%	Enhanced
9	0.9		0.9	-	80%	1.1		1.1	-	80%	0.2	-	0.2	-	80%	Enhanced
Overall	64.5	32.0	25.8	6.8	66%	95.4	36.0	49.8	9.6	70%	31.0	4.5	7.8	18.7	82%	Enhanced
Overall Treatment Level, Existing Condition>>					Basic	Overall Treatment Level, Proposed Condition >>				Normal	Overall Treatment Level, New Pavements>>				Enhanced	

Note: 1. According to the MTO document entitled “The Effectiveness of Grass-Lined Highway Embankments and Ditches in Improving Water Quality”, June 2007, a minimum 40 m of ditches/swales could provide 50% removal efficiency rate.



9.5 Erosion and Sediment Control

Flat bottom ditches offer water quality control and space to incorporate check dams to reduce velocities where required. Additionally, flat bottom grassed swales are designed to reduced flow velocities and to promote sedimentation. Both measures are particularly applicable for highway applications due to their linear nature. However, specific design criteria must be achieved as discussed in **Section 2.2**.

Flat bottom swales are proposed along the east, west, north, and south side of the proposed highway and associated ramps. The bottom width is selected based on the available land and grading constraints to maintain the swale within the MTO Right-of-Way. In addition, in areas where swales are in the proximity of wetlands, they were designed as shallow as possible to minimize adverse impacts to ground water levels in the wetlands.

9.6 Proposed Drainage and SWM Facilities

The following summarizes the proposed drainage and stormwater management practices (SWMPs) proposed along the proposed highway.

9.6.1 Stormwater Management Ponds

Within CH's jurisdiction, three existing ponds (Pond 2, Pond 4 and Pond 5) needs to be maintained, three existing ponds (Pond 1, Pond 3 and Pond 6) needs to be relocated and three new ponds (Pond 7, Pond 8 and Pond 9) are proposed along the Highway 413, Highway 401, and Highway 407 Interchange Corridor. These ponds are designed as Wet Ponds which will provide the required quality, quantity, and erosion controls. The proposed impervious area is based on the ultimate design scenario. The required quality storage and quantity storage of these ponds are summarized in **Table 9.4** and will be further refined in the next design phase.

9.6.2 Grass Swales

Grass swales are proposed on both sides of highway, ramp, interchange loops and in the middle in the open median under the initial widening plan. These ditches / swales will be designed as flat bottom with check dams and will collect, treat, attenuate, and convey storm runoff generated at highway surfaces. Hydraulic design of these swales will be carried out in the next design phase, but typically these swales will have a bottom width of 1 m and 2:1 (H:V) side slope.

Table 9.4: Proposed Stormwater Management Facility Characteristics

Stormwater Management Facility ID	Drainage Area (ha)	Imperviousness (%)	Pond Characteristics						
			Quality Storage			Quantity Storage			
			Total Treatment Volume (m³/ha)		Permanent Pool Volume (m³)	Per 40 m³/ha (m³)	25 mm Storm Runoff Volume (m³)	Recommended Extended Detention Volume (m³)	100 Year Volume (m³)
			(m³/ha)	(m³)					
New Pond 7	10.10	35	140	1,410	1,006	404	2,525	1,798	3,615
New Pond 8	39.5	20	95	4,446	2,160	1,581	11,743	1,751	2,830
Existing Pond 1 Relocated	29.8	35	140	2,880	2,972	1,193	5,157	1,736	15,300
Existing Pond 6, relocated and modified	17.6	35	140	2,452	1,750	703	4,391	1,164	6,210
Pond 9	54.0	40	153	8,284	6,124	2,160	13,500	5,222	6,600
Existing Pond 3 Modified	85.3	20	95	8,075	4,663	3,413	4,265	6,664	10,800

10. Conclusions and Recommendations

This Preliminary Drainage and Stormwater Management Report is prepared in support of the proposed Highway 413 within the CH's jurisdiction for an approximately 1.3 km long segment from west of Tenth Line to Steeles Avenue as well as the proposed Highway 413, Highway 401 and Highway 407 Freeway to Freeway Interchanges and their associated ramps.

Field investigations and desktop assessments were completed to assess the existing and proposed drainage conditions of the proposed Highway 413 corridor. The potential impacts were evaluated, and a conceptual drainage plan was prepared as part of the proposed works. Based on the preceding analysis, the following conclusions and recommendations are made.

- Under the current plan, the proposed Highway 413 corridor consists of a 6-lane divided highway with an open median and a two-lane transitway. In the ultimate conditions, the proposed highway will consist of an 8 lane + 2 HOV lanes highway and two lane transitway.
- The proposed highway corridor will add approximately 31 ha of impervious cover for the ultimate conditions within the CH's study limit.
- The proposed highway corridor and associated interchange improvement will cross various watercourses and requires:
 - Extension of 9 existing watercourse crossing culverts including the East Sixteen Mile Creek Crossing
 - Fourteen new watercourse crossing culverts.
 - Structural modification or removal of 5 watercourse crossing culverts.
 - Relocation of Ponds 1 and 6.
 - Modification of Pond 3.
 - Three new stormwater management facilities Ponds 7, 8, and 9.
- Hydrologic and hydraulic assessment of the existing and proposed watercourse crossings was completed as summarized in **Tables 8.1 to 8.6**. Hydro-technical requirements are summarized in **Table 8.7** while preliminary recommendations considering Geomorphic and Environment requirements are summarized in **Table 8.8**. The proposed bridges and culverts meet the required freeboard, clearance, and overtopping criteria.

The hydraulic analysis of the existing watercourse crossings indicates that proposed extensions will have a maximum increase in flood elevations of 0.14 m. For the majority of culverts, the increase in flood elevation is within the MTO right of way except for the East Sixteen Mile Creek Crossing. The increase in flood elevation at the East Sixteen Mile Creek will be confined within the valley extends north of Highway 401 until it dissipates at Steeles Avenue. This should be further investigated at the next design stage to reduce or avoid the bend in the culvert and reduce the increase in flood elevation.



A

Agency Meeting Minutes/ Correspondence



Minutes

Meeting name Drainage consultation meeting with Conservation Halton, Consultants and MTO	Meeting date December 15, 2022	Attendees Jennifer Young, CH Jacek Strakowski, CH Lisa Jennings, CH Jessica Bester, CH Shahbaz Asif, MTO Hossein Hosseini, MTO Curtis Beyer, MTO Jonathan McGarry, MTO Brian Richert, AECOM Javeed Khan, AECOM Ana Ignacio, AECOM Rhonneke Van Riezen, AECOM Gary Epp, AECOM Tim Soroichinsky, AECOM Felipe Sapaterio, AECOM Usha Parvathy, AECOM	Jay Goldberg, WSP Gentile, Catherine, WSP Josh Tong, WSP
Time 1:00pm	Location MS Teams		
Project name Highway 413 GWP 13 20001 Assignment Number 2013-E-0008	AECOM project number 60347240		
Prepared by A. Ignacio/ B. Richert/J. Khan			

- 1) Brian Richert (BR) led the discussion attendees introduced themselves; The PowerPoint presentation is attached to these minutes.
- 2) BR discussed the agenda and started with Safety Moments regarding Safe Winter Walking.
- 3) BR went through the slide presentation, giving study overview, project status, drainage scope and showed the study area with Conservation Halton and the Freeway-to-Freeway Interchange Layout.
- 4) BR discussed the methodology and design criteria:
 - a) Hydrology for watercourse crossings were developed using Visual Otthymo (VO) considering the Highway 401 expansion design, accurately delineating the highway catchments, and utilizing the latest existing topography.
 - b) The rainfall distribution and duration used in the VO models is the SCS Type II 24-hour as already identified in the sensitivity analysis completed for Highway 401 expansion project. The rainfall data used are the 2021 IDF and 2096 IDF or climate change consideration.
 - c) The hydraulic model as used for watercourse course crossings assessments are HEC-RAS for Main East Branch of Sixteen Mile Creek and Culvert Master/HY-8 for other crossings. The crossings were sized and assessed considering the MTO Design Standard. The new crossings were sized based on proposed condition flow.
 - d) Stormwater Management Facilities were also sized based on the same VO models. Preliminary pond grading is currently on-going.
- 5) BR discussed the watercourse crossing scope showing, existing and proposed crossing locations, the existing and proposed condition catchments, how they are sized:
 - a) The crossings are within 2 sub watersheds (Sixteen Mile Creek East Branch and Sixteen Mile Creek East Branch Lisgar) and 7 tributaries.
 - b) There are 8 potential extensions including the 16 Mile Creek Culvert, 1 modification and 11 new crossings
 - c) Hydraulic minimum sizing to mee MTO Highway Drainage Design Standards, e.g., 1 m freeboard for design flood, conveyance of check flood, no flooding impact upstream and no overtopping for 100-year or Regulatory flood.
- 6) BR discussed the stormwater management scope showing the drainage outlets, general locations of proposed ponds, their catchments indicating that there are challenges in design.
 - a) There are 7 outlets within the CH study limits, drainage discharging to either watercourse or municipal drain.
 - b) There are 3 new ponds being proposed and 3 ponds that will be impacted by the proposed ramps/bridges requiring relocation or modifications.
 - c) The existing Pond 1 will be impacted by new ramps and will be relocated west of existing resulting to drainage diversion and wetland impact.
 - d) The existing Pond 6 is also impacted by new ramp; 2 alternative locations are being considered.
 - e) The existing Pond 3 will be impacted by existing ramp realignment resulting to modification of existing culvert upstream and relocation of downstream culvert and relocating the existing pond to the east.
- 7) BR discussed the following key issues:

- a) The Sixteen Mile Creek Extension – The extension will result in a maximum increase of 0.15m (6 inches) in Regulatory headwater level but is confined within the channel. The water level increase starts from Highway 401 until it is dissipated in Steeles Avenue (approximately 840m).
 - i) CH indicated that there is an on-going development upstream of Steeles avenue that could affect this branch and will need to look at the model.
 - ii) CH asked if the increased are contained within the valley. AECOM confirmed that increase is contained within the valley.
 - iii) AECOM indicated that they will get into the process of informing property owners, follow the process, and discuss with property owners.
 - iv) Lisa Jennings (LS) of CH said that there is Redside Dace upstream of Steeles Avenue. Epp Gary (EP) of AECOM indicated that there is no record of Redside Dace but will need to make sure that records will be updated. CH will provide the updated environmental data to AECOM.
 - v) EG indicated that the project is treating all wetlands as PSW and will also look if the 6-inch increase will impact wetland.
 - vi) Shahbaz Asif (SA) of MTO commented to confirm if we have used the updated model since CH is currently updating their model. SA said that MTO is also reviewing the developments upstream of Steeles Avenue. He sites the example of Culvert at Highway 401 near James Snow Parkway where they get into legal situation and gave caution that we should be using the latest model.
 - vii) AI (AECOM) said that they are using the WCC model from the Highway 401 Expansion which uses the flows from the old HEC-2 model, which was the same HEC-2 model also provided by CH in 2021.
 - viii) CH noted that they are updating the sub-watershed study north of Steeles Avenue. SA indicated that it should be okay as long as the flow is the same as the latest study. MTO to discuss offline the approach to this matter.
 - ix) AECOM said that we should know the timeline of the updated study and make sure that we use the most updated model. AECOM will send to CH the flows being used and CH to confirm if we are using the correct flows.
 - x) JK (AECOM) asked the contractual obligation if we use the WCC model. CH indicated that this can be discussed offline.
- b) Steels Avenue Crossing (SM_EL_SM_1_WC2.2) – The crossing will be relocated and upsized to accommodate future flow. This crossing is a design challenge due to cover constraint, low elevation at Steeles Avenue, requiring the crossing to be a longer span (8.5m x 0.90m hydraulic opening) in comparison with the upstream culvert.
 - i) CH indicated that there is new information upstream of Steeles Avenue. Upstream of SM_EL_SM_1_WC2.1 as potential wetland.
 - ii) EG (AECOM-ENV) stated that AECOM will investigate compensating wetland loss.
 - iii) CH would like to understand the timeline. EG said that filed investigation was done in 2020 and updated in 2022, Memo will be submitted soon.
 - iv) MTO will also require development upstream that they are not impacting highway crossings.
- c) Wetland Hazard and Pond 1 Relocation – Realignment of Highway 401 and 407 ETR ramp will impact almost one-half of the existing wetland hazard. This is a non-PSW wetland with a drainage area of ±3.6 ha. Approximately 2.1 ha drainage will be diverted to accommodate Pond 1 relocation. Compensation will be provided for wetland loss.
- d) Pond 6 Relocation – Two locations are being considered. The pond will also accommodate future flows and control flows to predevelopment condition. Design challenge, however, is that there is no existing information for this pond. AECOM assumed that this pond is only providing quality control and rating curve is based on existing surface.
 - i) CH indicated that they would look into existing information for Pond 6.
- e) Pond 3 Relocation and Modification - Ramp realignment will impact existing pond and 2 crossings. This is a grading challenge. AECOM is in the process of confirming if available area is sufficient.
- 8) BR discussed consultation, review process, summary, and other concerns:
 - a) CH is concerned with more culverts and wetlands. Updated information will be provided in January- February.
 - b) Design in 2022 is currently at 30%, in 2023 will be at 60%
 - c) No reporting has been done yet but requires feedback from CH. CH requested the PowerPoint presentation so that they can provide feed back.
 - d) AECOM will send flow used for Sixteen Mile Creek Culvert.
 - e) Other concerns:
 - i) Jacek Strakowski (JS) of CH expressed concerned with groundwater, significant recharge areas, and requested that all SWM pond will require liner.
 - ii) AECOM states that we are not yet into that level of detail but will be considered on the detail design.

Ref	Action	Responsible	Due by	Initial
01	Provide updated information (environmental and drainage/models) to AECOM	Conservation Halton		
02	Provide flow used in Sixteen Mile Creek HEC-RAS Model for CH confirmation that updated flows are used.	AECOM		
03	Existing Highway 407 ETR Pond 6 Information	CH		
04	CH Feedback to Presentation / Proposal	CH		

Meeting Reference Attachments

Presentation Slides

Minutes

Meeting name Drainage consultation meeting with Credit Valley Conservation, CVC, Consultants and MTO	Meeting date Dec 10, 2020	Attendees Jakub Kilis, CVC Rizwan Haq, CVC Lukasz Grobel, MTO Shahbaz Asif, MTO Felipe Sapaterio, AECOM Brian Richert, AECOM Rhonneke Van Riezen, AECOM Jenny Dai, AECOM
Time 9:00am	Location MS Teams	
Project name GTA West GWP 13 20001 Assignment Number 2013-E-0008	AECOM project number 60347240	
Prepared by B. Richert/J.Dai		

- 1) Brian Richert introduced project team and gave an overview of the project history, status and schedule, including:
 - a) Stage 2 of GTAWest Study started in 2014 and was suspended in December 2015. On June 19, 2019, the government announced that the GTA West Study will resume from its point of suspension in 2015.
 - b) Assessing and evaluating the shortlist of route alternatives have been completed and the preferred route and interchange locations were selected. Currently the design team is developing the preferred plan to a preliminary design level.
 - c) The new corridor is anticipated to be a 4 to 6-lane highway with a separate adjacent transitway. The highway corridor has a capacity for widening to 10 lanes ultimately.
- 2) Brian Richert gave an overview of study area and drainage features within limits of CVC and drainage scope, including
 - a) GTAWest corridor crosses three conservation authorities – Conservation Halton (CH), Credit Valley Conservation (CVC) and Toronto Region Conservation Authority (TRCA).
 - b) The preferred GTAW route intersects four sub-watersheds in CVC's jurisdiction – Mullet Creek, Levi Creek, Credit River, and Huttonville Creek.
 - c) Within CVC's jurisdiction, the preferred GTAW route extends approximately 12 km and new three interchanges are proposed – Winston Churchill Boulevard Interchange, Bovaird Drive Interchange, Mayfield Road Interchange.
 - d) Primary tasks of drainage work include but not limited to watercourse crossing design, stormwater management, and possible creek realignment. A major bridge crossing over Credit River will be designed.
 - e) Interchange drainage is an important feature. Channel realignment might be required at interchanges. Creek realignment has been considered as one of evaluation factors during the route section exercise.
- 3) Specific issues and design criteria discussion:
 - a) Mullet Creek Subwatershed: The study area crosses headwater of Mullet Creek. A numbers of minor watercourse crossings are required to remain existing drainage pattern.
 - b) Levi Creek Subwatershed: Minor creek realignment might be required for the tributaries of Levi Creek at/adjacent to the new Winston Churchill Boulevard Interchange.
 - c) Credit River Bridge Crossing:
 - i. Rhonneke indicates that 100-year erosion rate is determined based historical air photo review. The calculated 100-year erosion rate is approximately 20 m. The proposed piers will be located outside of 100-year erosion limits.
 - ii. Generally, CVC is looking for technical supporting documents for review. CVC indicated that Design team should follow relevant technical guidelines including CVC Technical Guidelines for

Watercourse Crossings and TRCA's Meander Belt Delineation. Meander belt width is recommended to be provided as part of the technical supporting document.

- iii. AECOM will provide a Technical Memo of Fluvial Geomorphology Assessment of Credit River to CVC for a review. Any drainage / fluvial submissions could be sent to Jakub Kilis (CVC) upon approval from MTO.
 - iv. Design Team noted that preliminary assessment based on CVC's HEC-RAS model (Stantec 2008) shows the proposed crossing will cause a minor increase on upstream Regulatory Flood Level (<5 cm) due to piers within floodplain. Design Team will provide technical document of hydraulics assessment for CVC review.
 - v. CVC indicated that there are no significant hydrology/hydraulics updates on Credit River recently. However, CVC will provide the up-to-date hydraulic model to the Design Team through data request.
- d) Tributaries of Credit River and Hutonville Creek Subwatershed (GTAWest corridor from Bovaird Drive Interchange to Mayfield Road Interchange).
- i. At many locations, the creek alignments overlap with GTAWest roadway platform and the footprint of new interchanges, certain level of creek realignments of Credit Creek tributaries and tributaries of Hutonville Creek might not be avoided. Design Team will further evaluate the potential impact and mitigation measures.
 - ii. Jakub Kilis pointed out that the City of Brampton is working on the Secondary Plan for Heritage Heights Community (stretching from Mayfield Road to the Credit River valley, and from Winston Churchill Boulevard to Mississauga Road). The development of Heritage Heights will change drainage nature of this area. Felipe Sapaterio indicated that Design Team had a meeting with the City and will continue to work with the City to integrate GTAWest design with Secondary Plan of Heritage Heights.
- e) CVC is not expecting a lot of efforts on water balance for the roadway expansion work. However, erosion control is more critical for CVC. The erosion threshold should be determined by fluvial geomorphologic investigation at a reach by reach basis. Heritage Heights Sub-watershed Study has already characterized the natural heritages and established water balance and erosion control criteria which could be referred by Design Team.
- f) Design Team will review source water protection documents which are published in CTC's website. For specific questions regarding source water protection, Design Team could contact Janet Ivey directly in CVC.

4) Data availability and request:

- a) The project team will proceed the data request process.
- b) Sub-watershed Characterization for Heritage Heights by Wood has been completed. The information available at the City's website could be used for GTAWest EA and Preliminary Study.
- c) CVC could provide the latest hydrologic / hydraulic models and floodplain maps. However, CVC doesn't own soil maps.
- d) Regarding applicable fluvial geomorphology reports, CVC could search up in their records if Design Team could highlight locations of interest.

5) Schedule and Consultation Protocol with CVC

- a) Draft drainage deliverables will be completed in summer/fall next year.
- b) The project team will set consultation meeting(s) shortly to establish design criteria and review key issues. Then another meeting might be required for conceptual design review.

Minutes

Meeting Reference Attachments

Presentation Slides

Minutes

Meeting name Hwy 413 - Consultation meeting with CVC	Subject Discussing the preliminary design with CVC	Attendees Brian Richert, AECOM Javeed Khan, AECOM Emily Cameron, AECOM Felipe Sapateiro, AECOM Tim Soroichinsky, AECOM Rhonneke Van Riezen, AECOM Gary Epp, AECOM Jakub Kilis, CVC Rizwan Haq, CVC Christine Wilson, CVC Hossein Hosseini, MTO Shahbaz Asif, MTO Curtis Beyer, MTO Jonathan McGarry, MTO Aamir Munir, WSP Jenny Enoae, WSP Josh Tong, WSP	Regrets Dragan Ilic, AECOM Jay Goldberg, WSP Mark Gimpoli, WSP Saif Ahmad, WSP Christa Beard, WSP
Meeting date December 12, 2022	Time 11:00		
Location Teams	Project name GTA West		
Project number 60315006	Prepared by E. Cameron		

Ref	Discussion / Action	Responsible	Due by
01	Introductions	INFO	
02	Safety moment – snow shovelling	INFO	
03	Agenda Overview	INFO	
04	Background Review	INFO	
05	Fish habitat summary – maps show where all direct or indirect fish habitat exists across the study area	INFO	
06	Channel realignment summary – there are a few watercourse realignments across the site, the most significant of which is at the Bovaird Dr. intersection	INFO	
07	The Heritage heights future development will be completed independent from the Highway design, but AECOM has been in communication with City of Brampton about it.	INFO	
08	Culvert sizing methodology & design criteria – Meet MTO design criteria (1m freeboard, no flooding impacts upstream, No overtopping), CVC Criteria (No increase in Regulatory flood upstream of ROW for regulated watercourses, or a maximum of 0.3m where increase is unavoidable). Regulated watercourse flows are based on HEC-RAS models plus additional for climate change, whereas flows at smaller crossings are determined based on Rational method or United Ontario Flow Method (UOFM) with OFAT flows as a reference.	INFO	
09	Other sizing considerations – Fluvial geomorphology and environment	INFO	
10	There are three main crossings within CVC jurisdiction – Credit River bridge (605m), Levi Creek north of Embleton (65m – 140m), south tributary of Levi Creek downstream of Winston Churchill (12m).	INFO	
11	Credit River Crossing – pier placement & 100yr erosion limit. Piers near watercourse – what are the chances of the watercourse shifting towards piers? How many years before that could occur? CVC is looking for pier locations designed so that if the watercourse comes in contact, the infrastructure is not threatened. The foundation may need to be deeper in these locations	CVC & Structural AECOM	

Ref	Discussion / Action	Responsible	Due by
	(deeper than scour depth). CVC will get back to us. Can we increase span of one set of piers at watercourse? Yes, that's a possible alternative, but more expensive. Should have a separate meeting about this with structural (Dragan). MECP has expectations for the project where environmental aspects may be a higher priority than cost – discussed in TRCA meeting last week. We need to think long term and have a thorough evaluation of alternatives. CVC will ask their geomorphologist to review the design and will complete a risk assessment and provide comments. More discussions will need to occur.		
12	Levi Crossing north of Embleton with redside dace criteria (30m offset + meander belt = 140m span). Different alternatives could minimize span. Could realign small section upstream to reduce span. Different pier configurations could minimize impacts. CVC can't comment on MECP regulations, however, it is CVC's preference not to alter the channel and to span the 100yr erosion rate of the watercourse. There is a private online pond connected upstream of proposed structure which impacts water levels, and realignment could include the removal of that connection – will need to discuss more in the future with all parties. Along Levi Creek we are more than spanning the wetlands, but more pier placement assessments could to minimize impacts.	All parties to discuss later	
13	Wetland impacts at Credit River crossing – constructability and short- and long-term impacts. The final pier configuration will account for this. We will mitigate impacts as much as possible and find optimal design and look for opportunities for enhancement if possible. MTO understands that criteria must be met and all factors be considered.	INFO	
14	AECOM will provide proposed drainage mosaic to CVC for review, showing culvert locations, ditch locations, ponds, watercourse realignments.	AECOM	
15	Next steps – what does CVC want to see? 30% design now, 60% next summer. What deliverables will AECOM have and in what format? TRCA wants all models, spreadsheets, all background files loaded on Sharepoint. CVC wants technical information, similar to TRCA. AECOM to provide folder template used for TRCA for CVC to review. Site-specific decision-making rationale should be included.	AECOM	ASAP
16	Ecology impacts – has this been reviewed? Environmental has input on potential impacts affected by span requirements. Ecological assessment of crossings will be part of impact assessment and will be submitted with the deliverables package.	INFO	
17	Check Levi Creek HEC-RAS flows – separate discussion between AECOM and CVC to confirm flows.	AECOM & CVC	ASAP
18	CVC recommends a 15% increase to flows to consider climate change. AECOM has assumed a 10% increase– AECOM and CVC will discuss.	AECOM & CVC	
19	If AECOM has any other questions / clarifications for CVC pass them along and meetings can be set up to discuss.	INFO	

Minutes

Meeting name Drainage consultation meeting with Toronto Region Conservation Authority, TRCA, Consultants and MTO	Meeting date October 06, 2020	Attendees Sharon Lingertat, TRCA Dan Hipple, TRCA Maria Parish TRCA Dilnesaw Chekol, TRCA Lukasz Grobel, MTO Shahbaz Asif, MTO Heather Templeton, WSP Jay Goldberg, WSP Brent Gotts, WSP Madhav Baral, WSP Tim Sorochinsky, AECOM Brian Richert, AECOM Rhonneke Van Riezen, AECOM Jenny Dai, AECOM
Time 9:00am	Location MS Teams	
Project name GTA West GWP 13 20001 Assignment Number 2013-E-0008	AECOM project number 60347240	
Prepared by B. Richert/J.Dai		

- 1) Brian Richert introduced project team and gave an overview of the project history, status and schedule, including:
 - a) Stage 2 of GTA West Study started in 2014 and was suspended in December 2015. On June 19, 2019, the government announced that the GTA West Study will resume from its point of suspension in 2015.
 - b) Assessing and evaluating the shortlist of route alternatives have been completed and the preferred route and interchange locations were selected. Currently the design team is developing the preferred plan to a preliminary design level.
 - c) The new corridor is anticipated to be a 4 to 6-lane highway with a separate adjacent transitway. The highway corridor has a capacity for widening to 10 lanes ultimately.
- 2) Brian Richert gave an overview of study area and drainage features within limits of TRCA and drainage scope, including
 - a) GTA West corridor crosses three conservation authorities and majority of study area is within TRCA jurisdiction.
 - b) The preferred GTA West route crosses headwater of Etobicoke Creek watershed and West Humber River Watershed with numerous small tributaries.
 - c) It is anticipated that several large crossings will be required, including crossings at West Humber River, Main Humber River and East Humber River.
 - d) Many new interchanges are proposed along the corridor including three freeway to freeway interchanges within TRCA jurisdiction (Highway 410 Interchange in West Humber watershed, Highway 427 Interchange in Main Humber watershed and Highway 400 Interchange in East Humber watershed).
 - e) Interchange drainage is an important feature. Channel realignment might be required at interchanges.
 - f) Primary tasks of drainage work include watercourse crossing design, stormwater management, and possible creek realignment.
- 3) Rhonneke Van Riezen indicated that the fluvial geomorphology team has completed field works to assess intermittent and permanent watercourses. Fluvial team will provide crossing size recommendations based TRCA guidelines, historical air photos, empirical equations and a high-level hydraulics analysis using HECRAS. In addition, meander belt and erosion rate assessment and preliminary inputs on watercourse realignment will be carried out. Maria Parish recommended that headwater drainage feature assessment should be carried out by using TRCA's headwater drainage feature assessment tool. The specific scope for headwater assessments will be discussed in a subsequent meeting with TRCA.

4) Key issues and design criteria discussion:

- a) Sharon Lingertat indicated that TRCA is looking for a formal response from project team to TRCA's recommendation letter in January. Heather Templeton will follow up with consultation team regarding the status.
- b) Maria Parish and Dan Hipple outlined general requirements from ecological and water resources perspectives, including:
 - i. Generally, the channel realignment is not supported by TRCA. If a channel realignment has to be proposed, the design team has to justify that there are no other reasonable alternatives.
 - ii. TRCA is looking for LID measures for infiltration and feeding the groundwater system.
 - iii. Feature-based water balance is required for wetlands (not only provincial significant wetland), where 4% of drainage area of the wetland is to be altered. Feature-based water balance guideline from TRCA should be followed for this evaluation. Three-year baseline data collection is required.
 - iv. For the feature-based water balance to the wetland, continuous simulation modelling is also required, which will include the storage function of the wetland and potentially a groundwater component (depending on the wetland characteristics).
 - v. Identification of wetland depends on project team 's evaluation. ELC mapping could be used as a basis.
 - vi. Valley crossing and stream crossing requirements have been provided in TRCA recommendation letter.
 - vii. Erosion sediment control should comply to TRCA's the most up-to-date Erosion Sediment Control guideline. TRCA will be expecting more attention to ESC than was provided in recent examples of 400-series highway construction.
 - viii. Normally salt and oil could not be treated efficiently by the stormwater management ponds. TRCA is looking for no impairment to the nature system including mitigation measures to the impact from salt and oil.
 - ix. Erosion control requires minimum 5 mm on-site retention. Ditching system of Highway would be a great opportunity for incorporating LID features. There was some discussion identifying the possible use of underground storage/infiltration systems in the ROW.
 - x. Stormwater management should be designed for ultimate condition (i.e. 10 lanes with closed median).
 - xi. As for quantity control, the release unit rate defined in TRCA SWM criteria should be achieved.
 - xii. For the watercourse crossings design, TRCA is looking for zero impact on the Regulatory water level beyond MTO right-of-way.
 - xiii. Preferably, the proposed crossing should span over 100 year erosion limits.
 - xiv. The SWM system should be designed for the ultimate 10-lane closed median condition.
 - xv. All drainage features should be identified / confirmed during field investigations, as some minor watercourses may not be in the TRCA database.
- c) Shahbaz Asif noted that linear feature of BMPs such as grass swale with permanent structures could be considered for water quality/quantity, especially for small drainage areas (less 5 ha).
- d) Dan Hipple indicated that climate change has not been included into TRCA's current watershed hydrologic model. TRCA's major concern is the Regional storm. However, the parameters in TRCA hydrologic models could used together with MTO's IDF curves with climate change considerations for peak flow estimation of return period storms.

5) Data availability and request:

- a) TRCA provided available data list and data share agreement last week. The project team will proceed the data request process.
- b) Design Team will follow up with TRCA regarding digital file of catchment discretization, technical reports of hydrology and hydraulics study and other required data if any.

6) Schedule and Consultation Protocol with TRCA

- a) Draft drainage deliverables will be completed in summer/fall next year.
- b) The project team will set consultation meeting(s) shortly to establish design criteria and review key issues. Then another meeting will be required for conceptual design review, early in the process.
- c) The drainage team will send a draft meeting list and proposed time frames after this meeting.

Ref	Action	Responsible	Due by	Initial
01	Coordinate TRCA with data request	AECOM/WSP	Oct 16	BRR/MB/JD
02	Draft meeting list and time frame	AECOM	Oct 16	BRR
03	Design team to develop project/study area specific design criteria and review with TRCA along with key issues – arrange design criteria meeting	AECOM/WSP	Oct 16	BRR/MB/JD

Meeting Reference Attachments

Presentation Slides

Minutes

Meeting name Drainage consultation meeting with Toronto Region Conservation Authority, TRCA, Consultants and MTO	Meeting date March 04, 2021	Attendees Dan Hipple, TRCA Maria Parish, TRCA Dilnesaw Chekol, TRCA Suzanne Bevan, TRCA Trina Seguin, TRCA Adam Dembe, TRCA Ali Shrazi, TRCA Harsimrat Pruthi, TRCA Jim Dowell, WSP Keith Cherneski, MTO Jenny Enoae, WSP Gary Epp, AECOM Shahbaz Asif, MTO Madhav Baral, WSP Brian Richert, AECOM Rhonneke Van Riezen, AECOM Jenny Dai, AECOM
Time 2:00pm	Location MS Teams	
Project name GTA West GWP 13 20001 Assignment Number 2013-E-0008	AECOM project number 60347240	
Prepared by B. Richert/J.Dai		

- 1) Agenda and Purposes of the Meeting: Attendees introduced themselves. Brian Richert reviewed agenda and purposes of this meeting, including
 - a) Reviewing of data/ modeling received;
 - b) Confirming design criteria regarding design storms and climate change consideration;
 - c) Giving some examples of stream realignment and get a sense of TRCA feedback; and
 - d) Confirming scope of wetland impact and headwater evaluations
- 2) Review the received information from TRCA:
 - a) Design Team presented findings of comparison among available topography data sources (MNRF LiDAR, MTO DTM within Corridor and TRCA 0.5m contours) and indicated that there is a better agreement between MTO DEM and TRCA 0.5 m contours. Design Team will use TRCA catchment delineation for the external drainage area and use MTO DEM for catchment delineation within MTO corridor.
 - b) The 'estimated' Hydraulic Models provided by TRCA has no structures, no defined top of bank and only one flow value. Dilnesaw Chekol (TRCA) also noted that the 'estimated' Hydraulic Models are based with coarse resolution topographic information and out-dated flows. Design Team will update TRCA 'estimated' model close to Highway crossings and also extend downstream reasonably to set up boundary condition.
 - c) Floodplain map of East Humber at Highway 400 Crossing is missing. Design Team will further request the missing information from TRCA.
- 3) Design Criteria – Design Storm and Climate Change.
 - a) Design Team indicated that MTO IDF (2021) produces $\pm 15\%$ higher rainfall depth than the design storms used in TRCA's watershed hydrology models and climate change (based on comparison of MTO 2096 IDF and 2021 IDF) will introduce another $\pm 15\%$ increase on total rainfall depth.
 - b) TRCA agreed that the design storm selection for watercourse crossing sizing could be based on MTO guidelines; For the stormwater management design, longer duration of design storms (at least 12-hour duration) should be used to determine storage requirement.
 - c) Shahbaz Asif recommended to have an off-line discussion within design team for design storm selection of this project.

4) Examples of Stream Realignment and TRCA's Feedbacks

a) Example 1: Airport Road Interchange (Salt Creek)

- i. Design Team reviewed background information of Salt Creek at Airport Road Interchange, and preliminary concepts of channel realignment and its benefits, including
 - o Salt Creek Main Channel and Tributary 4 cross GTA West/Airport Interchange at 12 locations
 - o Watercourse at the junction falls under "Contributing to Redside Dace Recovery Habitat".
 - o Tributary 4 is intermittent, warm water regime at u/s of junction. Main Channel from junction to Airport Road crossing north of corridor is permanent warm water
 - o Approximate drainage area of watercourse at junction is about 12 km², falls under the small watercourse per TRCA guideline
 - o The benefits of channel realignment include reducing number of crossings, reducing the number of enclosures, creating habitat more favourable to Redside Dace, easier implementation of SWM, etc.
- ii. TRCA recommendations:
 - o Maria Parish (TRCA) recommended that Design Team to provide supporting contours and grading limits, other natural heritages impacts such as wetland and tree removal. It would be beneficial to overlap channel realignment with air photos.
 - o Ali Shrazi (TRCA) pointed out that the potential engineering solutions for slope stability might be considered for the situation where significant grading is anticipated.
 - o Dan Hipple flagged out that Design Team should demonstrate the floodplain impact to adjacent properties and the level of property acquisition.

b) Example 2: Highway 427 Interchange – Robinson Creek Tributary 4

- i. Design Team reviewed the background information and preliminary concept of channel realignment, including
 - o Robinson Creek Tributary 4, running along the S-E/W connecting ramp of Highway 427 to GTA West, is required for realignment during a conflict with the future ramp;
 - o The ramp design has been optimized by considering many factors;
 - o The watercourse is intermittent and indirect fish habitat; and
 - o Main realignment portion is situated within agriculture land
- ii. TRCA recommendations:
 - o Maria Parish (TRCA) recommended that Design Team to provide grading impacts and natural feature impacts and present realignment options with air photos;
 - o Dan Hipple (TRCA) indicated that TRCA is looking for evaluation of floodplain impacts and also details of fluvial geomorphology.

c) Example 3: Highway 27 Interchange – East Humber Tributary 1_6 (Lower East Reaches)

- i. East Humber Tributary 1_6 conflicts with the future westbound lanes of GTAWest. Channel realignment is required; Design Team presented four options (preliminary concepts).
- ii. TRCA recommendations:
 - o Ali Shrazi pointed out that re-grading through the valley might trigger geotechnical issue.
 - o Options of "Enclosure" and "Bridge structures" spanning over the valley could be considered. TRCA suggested that Design Team to list all the possible options and a table of Cons/Pros of options could be helpful.

d) Example 4: Chinguacousy Interchange - Etobicoke Creek West Branch:

- i. Design Team reviewed background information and potential consolidation tributaries, including
 - o 5 tributaries of Etobicoke Creek West Branch (Intermittent Warm watercourse with indirect Fish Habitat) are intersecting the new interchange and its ramps

- o These tributaries are contributing PSWs with contributing catchments ranging from 42 ha to 345 ha.
 - o There is no mapped Regulatory floodline in this area
 - o Consolidation of tributaries could reduce numbers of crossings and provide more flexibility on implementation of stormwater management.
 - ii. TRCA Recommendations:
 - o Generally, TRCA doesn't support consolidating tributaries for the situation like this.
 - o Maria Parish (TRCA) noted that consolidating tributaries will cause erosion and impacts to natural habits on the downstream reaches.
 - o Feature-based water balance for wetland and continuous simulation for erosion assessment might be required due to consolidation of tributaries.
 - o Dan Hipple (TRCA) suggested the Design Team to use Wetland Risk Evaluation Tool to classify the risks. Wetland Risk Evaluation could provide guidance on feasibility of channel realignment and SWM discharges.
- e) Example 5: Mayfield /Highway 410 Interchange - Etobicoke Creek:
 - i. Design Team presented the background information and the needs of channel realignment, including
 - o New Highway 410 ramp is proposing to underpass the Highway 410 expansion and Mayfield Road.
 - o Channel realignment is required to accommodate the proposed geometry of Highway 410 ramp;
 - o Wetland (PSW) encroachment is anticipated.
 - o Channel realignment could provide opportunity to commentate the habit loss.
 - ii. TRCA Recommendation:
 - o TRCA recommended that design team to further confirm the entire drainage system function;
 - o TRCA recommended that design team to characterize wetland feature (groundwater feeding or surface water feeding) and confirm the water level at the wetland.
- f) Design Team presented other examples with potential tributary consolidation and channel realignment, including
 - o West Humber Tributary 1 between Airport Road and Innis Lake Road
 - o Rainbow Creek Tributary 1 at Coleraine Drive
 - o Robinson Creek Tributary Highway 50: Four branches of Robinson Creek

TRCA indicated that generally following evaluations are required to support channel realignment:

 - o Quantifying stream losing;
 - o Evaluating erosion risk at reach basis if any consolidation and channel realignment cause flow changes to the stream beyond MTO ROW
 - o Evaluating grading impacts
 - o Providing low flow channel design
- 5) Major Crossings at Humber River Main Channel and East Branch.
 - a) Brian Richert indicated that the bridge will span the valley, although it is too early to show details. Slope stability factor will be considered from the 100-year erosion limit to avoid slope failure while determining the span, and 100-year erosion limits to determine pier locations.
 - b) Rhonneke indicated that 100-year erosion rate is estimated based on historical air photos by following TRCA's Crossing Guideline.
 - c) TRCA pointed out that slope stability should be assessed, and meander belt width should be evaluated for major watercourse crossings.

- 6) Scope of wetland impact and headwater evaluations
 - a) TRCA indicated that Design Team should use Risk Evaluation tool to evaluate all the wetlands (not only PSWs).
 - b) MTO should follow TRCA's Compensation Protocol for any wetland loss.
 - c) For the headwater evaluation, Maria Parish (TRCA) noted that Design Team needs to follow Evaluation, Classification and Management of Headwater Drainage Features Guidelines to identify scope.
- 7) Borehole within TRCA's Regulatory Area:

Bevan Suzanne indicated that TRCA could provide clearance for borehole screening. Design Team should provide information including vegetation removal, soil disturbance, access and depth of borehole, etc.

Meeting Reference Attachments

Presentation Slides

Minutes

Meeting name Drainage consultation meeting with Conservation Halton, Conservation Halton, Consultants and MTO	Meeting date September 30, 2020	Attendees Leah Smith, CH Charles Priddle, CH Yelena Koshenkov, CH Yves Scholten, CH Jacek Strakowski, CH Shahbaz Asif, CH Brian Richert, AECOM Jenny Dai, AECOM Rhonneke Van Riezen, AECOM Felipe Sapaterio, AECOM
Time 9:00am	Location MS Teams	
Project name GTA West GWP 13 20001 Assignment Number 2013-E-0008	AECOM project number 60347240	
Prepared by B. Richert/J.Dai		

- 1) Brian Richert introduced project team and attendees introduced themselves; The PowerPoint presentation is attached to these minutes.
- 2) Brian Richert gave an overview of the project history, status and schedule, including
 - a) Stage 2 of GTAWest Study started in 2014 and was suspended in December 2015. On June 19, 2019, the government announced that the GTA West Study will resume from its point of suspension in 2015.
 - b) Assessing and evaluating the shortlist of route alternatives have been completed and the preferred route and interchange locations were selected. Currently the design team is developing the preferred plan to a preliminary design level.
 - c) The new corridor is anticipated to be a 4 to 6-lane highway with a separate adjacent transitway.
- 3) Brian Richert gave an overview of study area and drainage features within limits of Conservation Halton (vicinity of the 401/407ETR IC), including
 - a) Major existing drainage features associated with GTAW within Conservation Halton jurisdiction consists of one major watercourse (East Sixteen Mile Creek), several tributaries of East Branch Lisgar and six stormwater management ponds within 401/407ETR interchange;
 - b) Reconfiguration of 401/407ETR interchange is being proposed to provide freeway to freeway connection for GTAW corridor to Highway 401 and Highway 407;
 - c) New water crossings at the 401/407ETR within the limits of the interchange and impacts/modifications to the SWM ponds likely are required. Further extension of the Sixteen Mile Creek /Highway 401 culvert east of Trafalgar Interchange is likely required.
 - d) Highway 401 West Expansion (a separate MTO project) within the study area is under design and construction stage.
- 4) Data availability and request:
 - a) Jenny Dai indicated project team has received hydrology/hydraulics models and GIS layers from CH in 2014. Project team also downloaded open data recently from Conservation Halton's website.
 - b) Yelena Koshenkov suggested to request a new set of models to ensure design team using the up to date information.
 - c) More detailed GIS information could be provided through data request.
 - d) Yelena Koshenkov noted an ongoing Ninth Line Watershed study with City of Mississauga might be ready by the end of this year. The study includes hydrology/hydraulics analysis of Lisgar tributaries. This study covers the south of 401 but may not include the watercourses within the 401/407ETR interchanges.

- e) Yelena Koshenkov noted watershed study for Steeles Ave W (Premier Gateway Phase 2B) has started. The study includes information on future development along Steeles Ave. However the report and associated hydrology/hydraulic models have not been completed. GTAW project team needs to request this information through municipalities.
- f) Shahbaz Asif noted, based on the schedule of GTAW, the models associated with above two municipal studies may not be finished/included in time.
- g) Jacek Strakowski noted that Source Protection Report developed in 2014 should be helpful for the project team and could be provided by Conservation Halton.

5) Schedule and Consultation Protocol with Conservation Halton

- a) Draft drainage deliverables will be completed at least by the end of next year;
- b) The project team would like to have consultation meetings with Conservation Halton at key milestones;
- c) The project team will set an early consultation meeting to establish design criteria and review key issues.
- d) Other meetings could be set up once reaching to certain design levels (such as 60%).

Ref	Action	Responsible	Due by	Initial
01	Coordinate CH with data request on the most up to date models and GIS layers	AECOM	Oct 9	BRR/JD
02		AECOM	Oct 1	BRR
03		AECOM	Oct 1	BRR

Meeting Reference Attachments

Presentation Slides

December 19, 2023

Brian Richert, P.Eng.
Senior Water Resources Engineer, Water
Citi Plaza, 250 York St – Suite 410
London, ON N6A 6K2

BY E-MAIL ONLY (brian.richert@aecom.com)

To Brian Richert:

**Re: Draft Drainage and Stormwater Management Report – West Section Conservation Halton Area
Highway 413 Transportation Corridor Route Planning, Preliminary Design and Environmental Assessment
CH File Number(s): APPR-30**

Thank you for the opportunity to review and comment on the *Draft Drainage and Stormwater Management Report – West Section Conservation Halton Area*, prepared by AECOM and WSP dated September 2023. Conservation Halton (CH) staff acknowledge that Provincial Ministries are not bound by the *Conservation Authorities Act* and are not required to obtain CH permits. Therefore, CH staff has reviewed the report to provide recommendations based on our regulatory review expertise for development proposed in natural hazards and to comment on the risks related to natural hazards.

Proposal

The *Draft Drainage and Stormwater Management Report – West Section Conservation Halton Area* documents the drainage and stormwater management assessment for the proposed improvements at the west limit of the Highway 413 Transportation Corridor Route Planning, Preliminary Design and Environmental Assessment project including the proposed interchange with Highway 401 and Highway 407 within the West Section of the project area.

Background

CH previously provided comments (letter dated August 3, 2023) on the *Initial Project Description* which can be referred to for further background information.

Key Comment

The proposed extension of the Sixteen Mile Creek culvert under Highway 401 (Culvert SM_EB_SIM_0_WC1) shows a 0.15 metre increase in the upstream Regional Flood level. The increase may be due to storage losses as a result of a bend in the culvert's design to align with the downstream watercourse reach. CH staff suggest investigating whether straightening the bend in the culvert's design and realigning the downstream watercourse reach to meet the new outlet location would mitigate the upstream increase.

Recommendation

CH staff recommend that the above-referenced culvert design be investigated further to mitigate any potential upstream increase and would be pleased to meet with the consultant team to discuss further.

We trust the above is of assistance. Please contact the undersigned with any questions.

Sincerely,



Ola Panczyk
Senior Environmental Planner

Response to December 19, 2023 Conservation Halton Comments

The proposed increase in the upstream Regional Flood level for the proposed extension of the Sixteen Mile Creek Culvert under Highway 401 (Culvert SM_EB_SIM_0_WC1), as shown in the draft report dated September 2023, reflects a highly conservative estimate. AECOM investigated further the hydraulic loss resulting from the proposed culvert bend by modeling the culvert as a rectangular channel to allow additional cross-section at the bend location. This approach made it possible to input the loss coefficient at the bend in the HEC-RAS and calculate the increase in energy grade (EG) line at the upstream face of the culvert. Assuming a loss coefficient (K) of 0.1 (K for the culvert is only 0.085, 30 deg. bend), the estimated energy loss is 0.02 m. This loss was input in HEC-RAS and will be calculated as an additional EG. Results of the updated analysis indicated that the increase in Regional Flood level was reduced to 0.10 m from the 0.15m that was initially reported. Based on this analysis, straightening the bend in the culvert and realigning the downstream watercourse may not significantly reduce the upstream water level. The increase in the water level is attributed mainly to the culvert extension, and the rise in water level due to the bend is insignificant.

B

IDF Data



Active coordinate

43° 35' 15" N, 79° 48' 14" W (43.587500,-79.804167)

Retrieved: Fri, 05 Nov 2021 20:21:01 GMT



Location summary

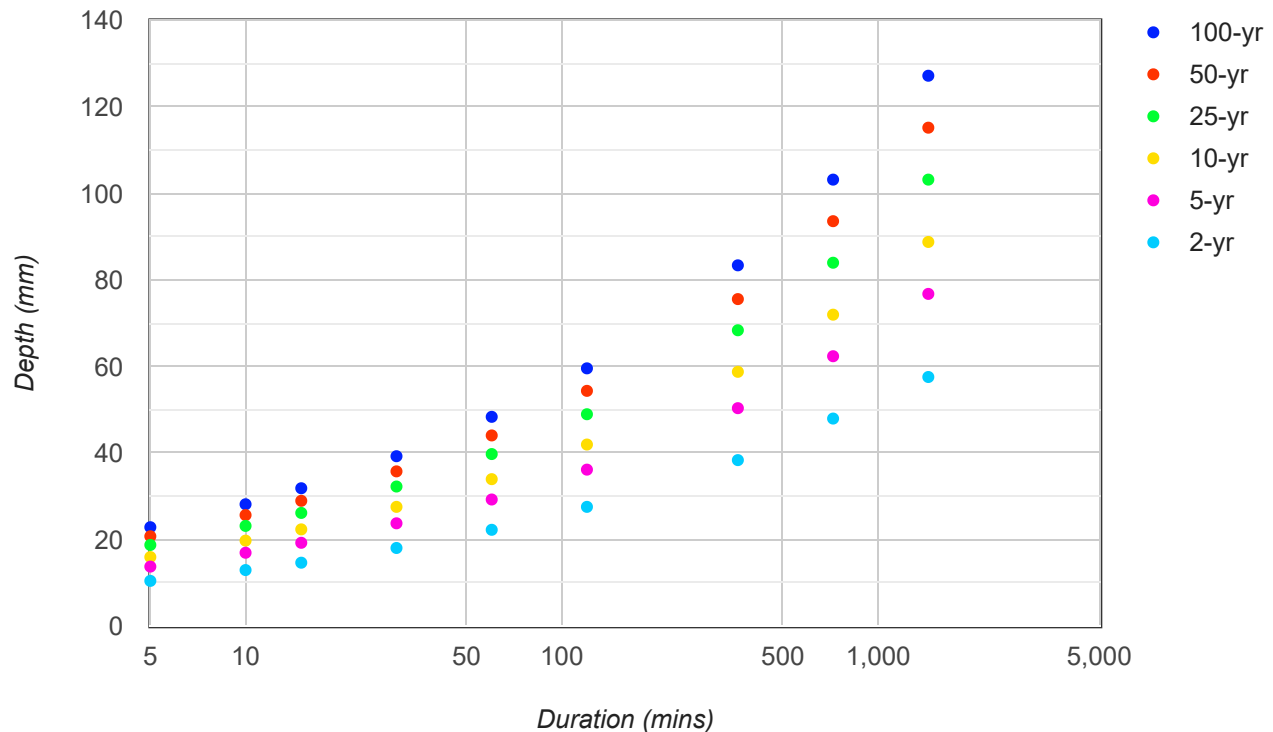
These are the locations in the selection.

IDF Curve: 43° 35' 15" N, 79° 48' 14" W (43.587500,-79.804167)

Results

An IDF curve was found.

Coordinate: 43.587500, -79.804167
IDF curve year: 2021



Coefficient summary**IDF Curve:** 43° 35' 15" N, 79° 48' 14" W (43.587500,-79.804167)

Retrieved: Fri, 05 Nov 2021 20:21:01 GMT

Data year: 2010**IDF curve year:** 2021**Statistics****Rainfall intensity (mm hr⁻¹)**

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	126.0	77.7	58.6	36.1	22.3	13.8	6.4	4.0	2.4
5-yr	165.8	102.2	77.0	47.5	29.3	18.1	8.4	5.2	3.2
10-yr	192.5	118.7	89.4	55.1	34.0	21.0	9.8	6.0	3.7
25-yr	225.4	138.9	104.7	64.6	39.8	24.5	11.4	7.0	4.3
50-yr	249.8	154.0	116.0	71.5	44.1	27.2	12.6	7.8	4.8
100-yr	274.3	169.0	127.4	78.5	48.4	29.8	13.9	8.6	5.3

Rainfall depth (mm)

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	10.5	13.0	14.7	18.1	22.3	27.6	38.4	48.0	57.6
5-yr	13.8	17.0	19.3	23.8	29.3	36.2	50.4	62.4	76.8
10-yr	16.0	19.8	22.4	27.6	34.0	42.0	58.8	72.0	88.8
25-yr	18.8	23.2	26.2	32.3	39.8	49.0	68.4	84.0	103.2
50-yr	20.8	25.7	29.0	35.8	44.1	54.4	75.6	93.6	115.2
100-yr	22.9	28.2	31.9	39.3	48.4	59.6	83.4	103.2	127.2

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Last Modified: September 2016

Active coordinate

43° 35' 15" N, 79° 48' 14" W (43.587500,-79.804167)

Retrieved: Fri, 05 Nov 2021 20:24:16 GMT



Location summary

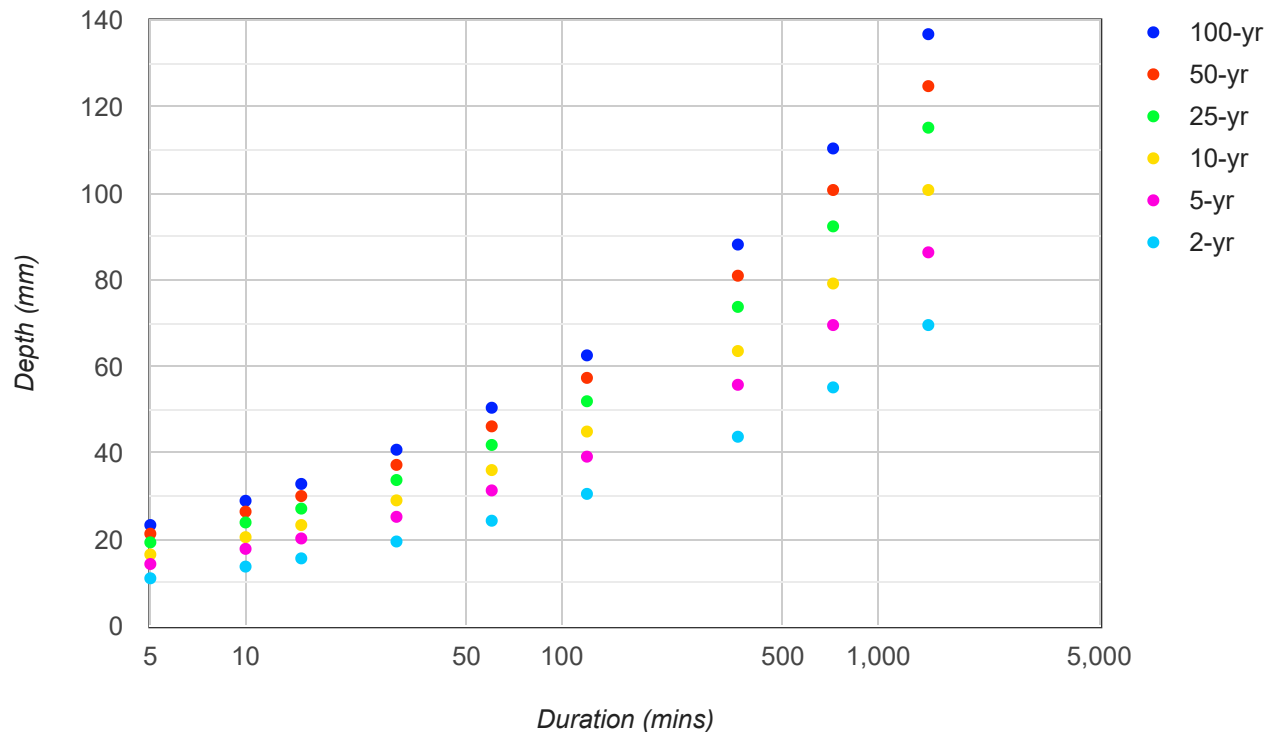
These are the locations in the selection.

IDF Curve: 43° 35' 15" N, 79° 48' 14" W (43.587500,-79.804167)

Results

An IDF curve was found.

Coordinate: 43.587500, -79.804167
IDF curve year: 2096



Coefficient summary**IDF Curve:** 43° 35' 15" N, 79° 48' 14" W (43.587500,-79.804167)

Retrieved: Fri, 05 Nov 2021 20:24:16 GMT

Data year: 2010**IDF curve year:** 2096**Statistics****Rainfall intensity (mm hr⁻¹)**

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	133.1	82.8	62.7	39.1	24.4	15.3	7.3	4.6	2.9
5-yr	172.9	107.3	81.2	50.5	31.4	19.6	9.3	5.8	3.6
10-yr	199.6	123.7	93.6	58.1	36.1	22.5	10.6	6.6	4.2
25-yr	232.5	144.0	108.9	67.5	41.9	26.0	12.3	7.7	4.8
50-yr	257.0	159.1	120.2	74.5	46.2	28.7	13.5	8.4	5.2
100-yr	281.4	174.1	131.5	81.5	50.5	31.3	14.7	9.2	5.7

Rainfall depth (mm)

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	11.1	13.8	15.7	19.6	24.4	30.6	43.8	55.2	69.6
5-yr	14.4	17.9	20.3	25.3	31.4	39.2	55.8	69.6	86.4
10-yr	16.6	20.6	23.4	29.1	36.1	45.0	63.6	79.2	100.8
25-yr	19.4	24.0	27.2	33.8	41.9	52.0	73.8	92.4	115.2
50-yr	21.4	26.5	30.1	37.3	46.2	57.4	81.0	100.8	124.8
100-yr	23.4	29.0	32.9	40.8	50.5	62.6	88.2	110.4	136.8

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Last Modified: September 2016

C

Hydrology – Existing Condition

- C.1 VO Schematics
- C.2 Input Parameters Calculation
- C.3 VO Output 2-year to 100-year
- C.4 VO Output Regional Storm
- C.5 VO Output – 50-year and 100-year 2096 IDF



C.1 VO Schematics





NasHyd - SM_EB_SIM_5_WC1.2
AREA [ha] - 37.570
TP [hr] - 10.583
PKFW [m³/s] - 4.397

12

Scenario: CROSSING-REG



StandHyd - HRP1- SM_EB_SIM_2_WC1
AREA [ha] - 10.340
TP [hr] - 12.000
PKFW [m³/s] - 0.955

100



StandHyd - HRP2
AREA [ha] - 21.810
TP [hr] - 12.000
PKFW [m³/s] - 1.967

101



AddHyd - HRP 2.1
AREA [ha] - 32.150
TP [hr] - 12.000
PKFW [m³/s] - 2.922

9



NasHyd - 1020
AREA [ha] - 24.220
TP [hr] - 12.417
PKFW [m³/s] - 0.707

1020



StandHyd - 120
AREA [ha] - 13.350
TP [hr] - 12.000
PKFW [m³/s] - 1.223

120



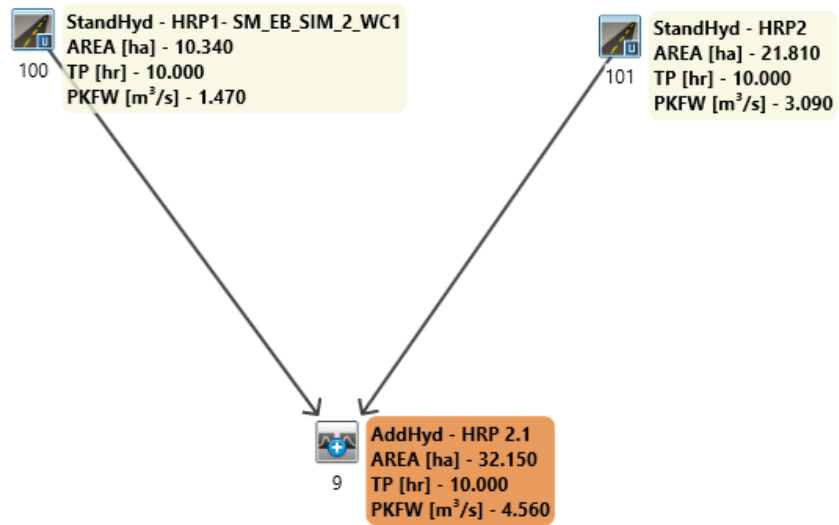
14



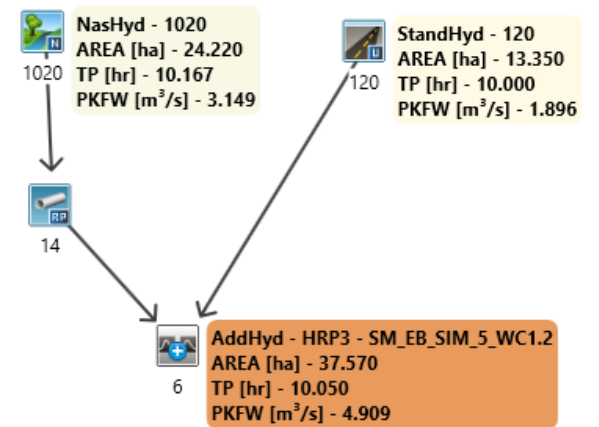
AddHyd - HRP3 - SM_EB_SIM_5_WC1.2
AREA [ha] - 37.570
TP [hr] - 12.000
PKFW [m³/s] - 1.507

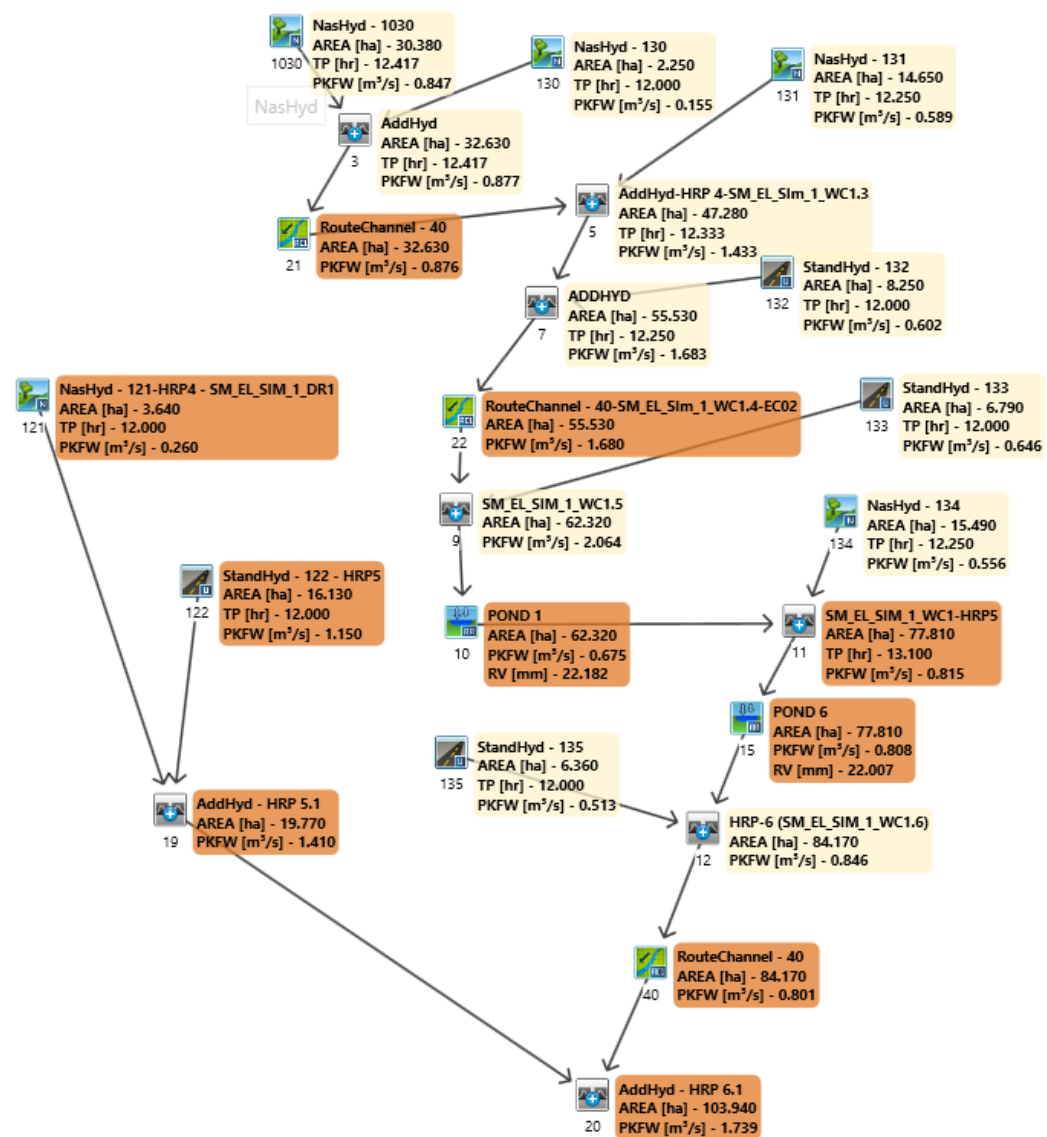
6

Scenario: HRP-1-3-EX

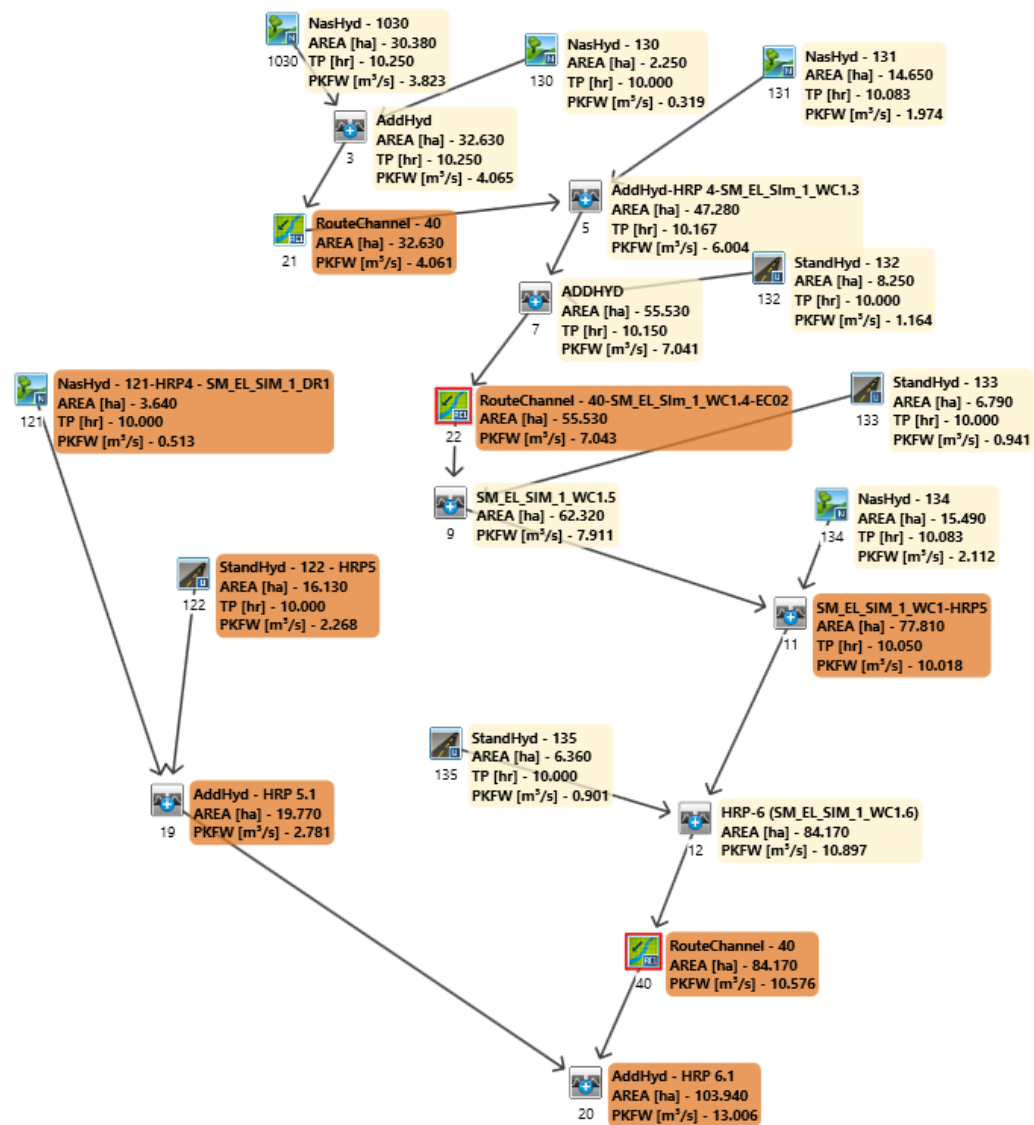


Scenario: HRP1-3-EX reg

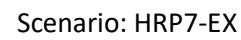


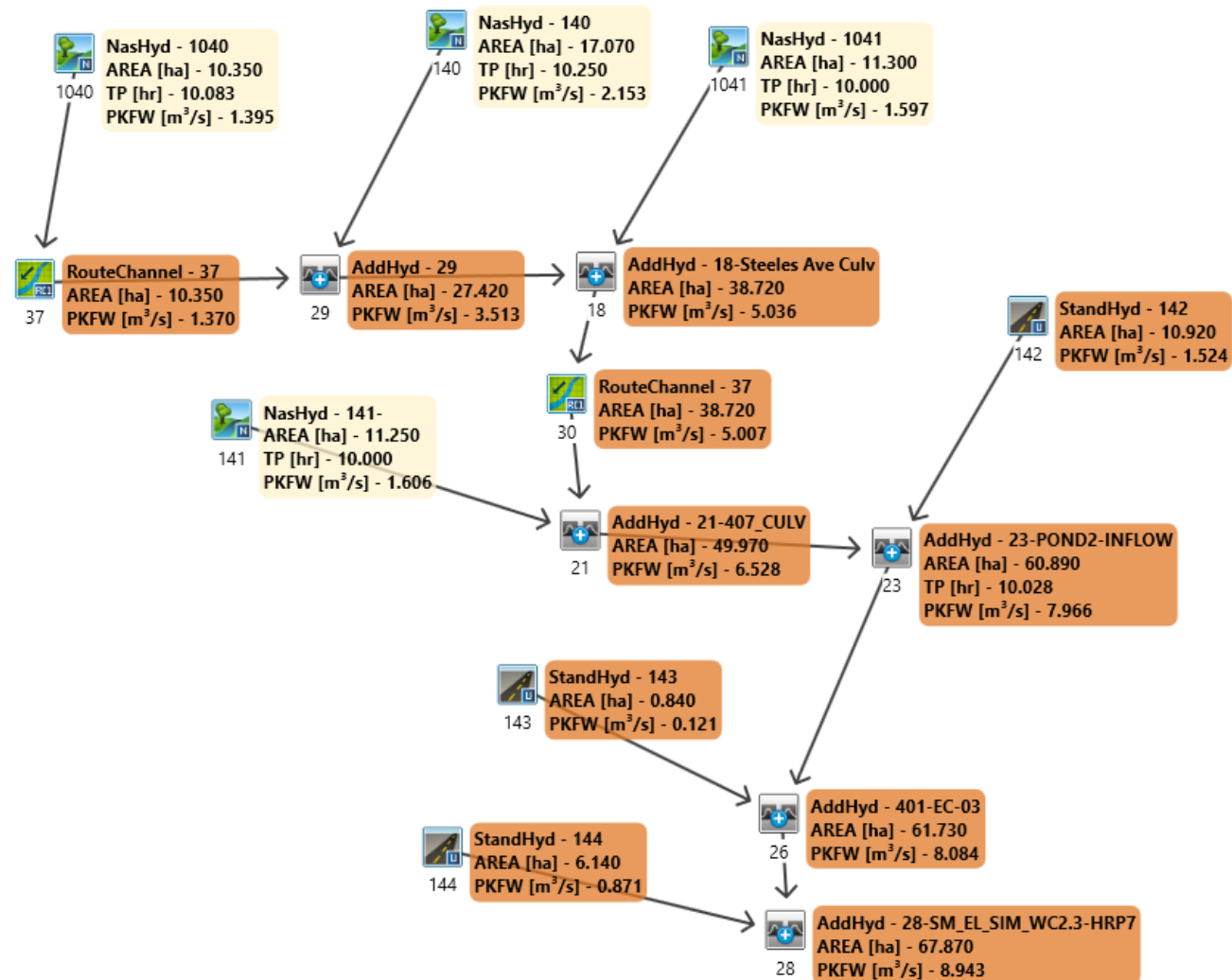


Scenario: HRP6.1-EX

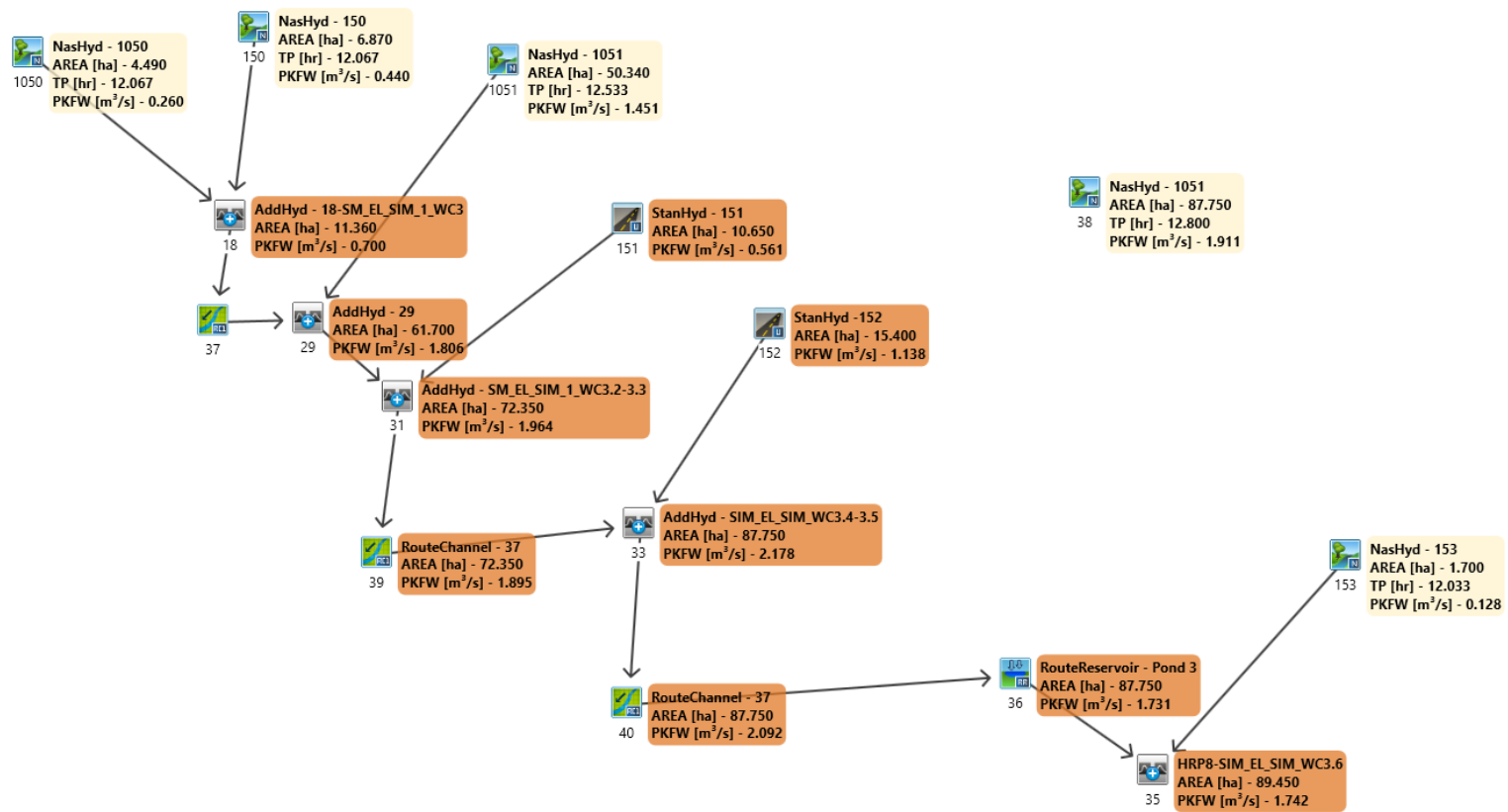


Scenario: HRP6.1-EX-REG



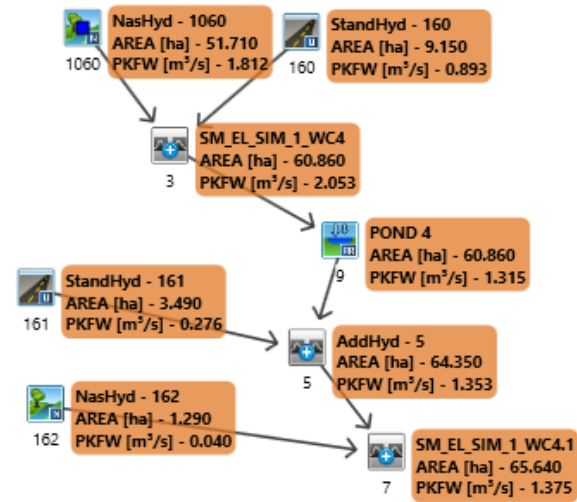


Scenario: HRP7-EX-REG

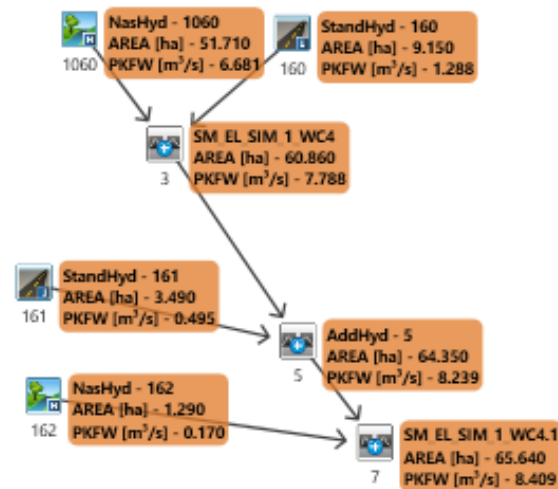


Scenario: HRP8-EX





Scenario: HRP9-EX



Scenario: HRP9-EX-REG

C.2 Input Parameters Calculation



Project: GTAW
Project No.: 60347240
Print Date: Wednesday, March 22, 2023
Modelled by: A.Ignacio

Date: Dec. 9, 2021
Last Revision: 6/23/2022

EXISTING CONDITIONS

Culvert ID	Catchment ID	Hydrograph Classification	T _p Method	Total Drainage Area (ha)	IA (mm)	Weighted Runoff Coeff.	Modified CN Value AMC II	Modified CN Value AMC III	Time to ¹ Peak, T _p (hr)	Percent Imperv. (%)
0	100	STANDHYD	-	10.34	1.50	0.62	72	87	-	45
0	101	STANDHYD	-	21.81	1.50	0.63	72	87	-	45
SM_EB_SIM_5_WC1.2	1020, 120	NASHYD	Bransby	37.57	5.00	0.56	82	92	0.684	19
SM_EB_SIM_5_WC1.2	1020	NASHYD	Bransby	24.22	5.00	0.53	79	91	0.527	5
0	120	STANDHYD	-	13.35	1.50	0.62	72	87	-	45
0	121	NASHYD	Bransby	3.64	5.00	0.48	77	90	0.112	0
0	122	STANDHYD	-	16.13	1.50	0.55	72	87	-	31
SM_EL_SIM_1_WC1.1	1030	NASHYD	Bransby	30.38	5.00	0.49	77	90	0.505	7
0	130	NASHYD	Bransby	2.25	5.00	0.49	77	90	0.122	17
0	131	NASHYD	Bransby	14.65	5.00	0.56	82	92	0.396	4
0	132	STANDHYD	-	8.25	1.50	0.56	72	87	-	31
0	133	STANDHYD	-	6.79	1.50	0.48	62	80	-	47
0	134	NASHYD	Bransby	15.49	5.00	0.46	77	90	0.353	16
0	135	STANDHYD	-	6.36	1.50	0.58	72	87	-	36
0	1040	NASHYD	Bransby	10.35	5.00	0.45	75	88	0.352	0
0	140	NASHYD	Bransby	17.07	5.00	0.46	77	90	0.501	10
SIM_EL_SIM_1_WC2.2	1041	NASHYD	Bransby	11.30	5.00	0.48	77	90	0.261	6
0	141	NASHYD	Bransby	11.25	5.00	0.54	79	91	0.241	7
0	142	STANDHYD	-	10.92	1.50	0.53	62	80	-	53
0	143	STANDHYD	-	0.84	1.50	0.67	72	87	-	55
0	144	STANDHYD	-	6.14	1.50	0.58	72	87	-	37
0	1050	NASHYD	Bransby	4.49	5.00	0.50	77	90	0.169	0
0	150	NASHYD	Bransby	6.87	5.00	0.55	82	92	0.195	0
0	1051	NASHYD	Bransby	50.34	5.00	0.56	82	92	0.628	5
0	151	STANDHYD	-	10.65	1.50	0.54	72	87	-	29
0	152	STANDHYD	-	15.40	1.50	0.58	69	84	-	43
0	153	NASHYD	Bransby	1.70	5.00	0.50	79	91	0.112	19
0	1060	NASHYD	Bransby	51.71	5.00	0.56	82	92	0.476	8
0	160	STANDHYD	-	9.15	1.50	0.59	69	84	-	48
0	161	STANDHYD	-	3.49	1.50	0.57	72	87	-	35
0	162	NASHYD	Airport	1.29	5.00	0.40	75	88	0.397	0

Note: 1 - Minimum T_c is 10 min. therefore, minimum T_p is 6.7 min.

Culvert ID	Catchment ID	Soil Group	Land Use Area (ha)							Instantaneous Unit Hydrograph	Weighted CN Based on Area and Land Use					Total Weighted CN	Total Weighted Runoff Coeff.	CN III	S	IA	Q	IA*	S*	CN*III	CN*
			Woodland	Pasture & Other Unimproved Land	Cultivated & other Improved Land	Lake/ Wetpond	Imperv. Area	Perv. Total	Total		Woodland	Pasture & Other Unimproved Land	Cultivated & other Improved Land	Lake/ Wetpond	Imperv. Area										
	100	C		5.72			4.62	5.72	10.34	STANDHYD	-	76.0	-	-	43.8	76	0.62	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	101	C		11.97			9.84	11.97	21.81	STANDHYD	-	76.0	-	-	44.2	76	0.63	89	31.4	6.3	96.0	1.5	38.9	86.7	72
SM_EB_SIM_5_WC1.2	1020, 120	C		13.58	16.79	0.00	7.20	30.37	37.57	NASHYD	-	27.5	36.6	0.0	18.8	83	0.56	92	22.1	4.4	104.1	5.0	21.3	92.3	82
SM_EB_SIM_5_WC1.2	1020	C		6.23	16.79		1.20	23.02	24.22	NASHYD	-	19.6	56.8	-	4.8	81	0.53	91	25.1	5.0	101.3	5.0	25.2	91.0	79
	120	C		7.35			6.00	7.35	13.35	STANDHYD	-	76.0	-	-	44.1	76	0.62	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	121	C		1.77	1.87		0.00	3.64	3.64	NASHYD	-	36.9	42.2	-	0.0	79	0.48	90	28.2	5.6	98.7	5.0	29.2	89.7	77
	122	C		11.18			4.95	11.18	16.13	STANDHYD	-	76.0	-	-	30.1	76	0.55	89	31.4	6.3	96.0	1.5	38.9	86.7	72
SM_EL_SIM_1_WC1.1	1030	C		18.37	9.75		2.25	28.12	30.38	NASHYD	-	46.0	26.3	-	7.3	80	0.49	90	28.2	5.6	98.7	5.0	29.2	89.7	77
	130	C		1.87			0.38	1.87	2.25	NASHYD	-	63.1	-	-	16.7	80	0.49	90	28.2	5.6	98.7	5.0	29.2	89.7	77
	131	C		0.86	13.20		0.60	14.06	14.65	NASHYD	-	4.4	73.9	-	4.0	82	0.56	92	22.1	4.4	104.1	5.0	21.3	92.3	82
	132	C		5.67			2.57	5.67	8.25	STANDHYD	-	76.0	-	-	30.6	76	0.56	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	133	C		3.57		1.23	2.00	4.80	6.79	STANDHYD	-	56.6	-	12.8	28.8	69	0.48	84	48.4	9.7	83.3	1.5	64.1	79.9	62
	134	C		13.08		0.30	2.11	13.38	15.49	NASHYD	-	64.2	-	1.0	13.3	78	0.46	90	28.2	5.6	98.7	5.0	29.2	89.7	77
	135	C		4.06			2.30	4.06	6.36	STANDHYD	-	76.0	-	-	35.4	76	0.58	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	1040	C		6.99	3.36		0.00	10.35	10.35	NASHYD	-	51.3	26.7	-	0.0	78	0.45	89	31.4	6.3	96.0	5.0	33.4	88.4	75
	140	C		14.07	1.21	0.08	1.71	15.36	17.07	NASHYD	-	62.6	5.8	0.2	9.8	79	0.46	90	28.2	5.6	98.7	5.0	29.2	89.7	77
SIM_EL_SIM_1_WC2.2	1041	C		7.12	3.47		0.71	10.59	11.30	NASHYD	-	47.9	25.2	-	6.2	79	0.48	90	28.2	5.6	98.7	5.0	29.2	89.7	77
	141	C		2.41	8.03		0.82	10.44	11.25	NASHYD	-	16.3	58.5	-	7.1	82	0.54	91	25.1	5.0	101.3	5.0	25.2	91.0	79
	142	C		5.17		1.70	4.05	6.87	10.92	STANDHYD	-	57.2	-	12.4	36.3	70	0.53	84	48.4	9.7	83.3	1.5	64.1	79.9	62
	143	C		0.38			0.46	0.38	0.84	STANDHYD	-	76.0	-	-	53.8	76	0.67	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	144	C		3.88			2.27	3.88	6.14	STANDHYD	-	76.0	-	-	36.2	76	0.58	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	1050	C	1.16		3.32		0.00	4.49	4.49	NASHYD	18.4	-	60.8	-	0.0	79	0.50	90	28.2	5.6	98.7	5.0	29.2	89.7	77
	150	C			6.87			6.87	6.87	NASHYD	-	-	82.0	-	-	82	0.55	92	22.1	4.4	104.1	5.0	21.3	92.3	82
	1051	C		3.09	44.70		2.55	47.79	50.34	NASHYD	-	4.7	72.8	-	5.0	82	0.56	92	22.1	4.4	104.1	5.0	21.3	92.3	82
	151	C		7.57			3.08	7.57	10.65	STANDHYD	-	76.0	-	-	28.3	76	0.54	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	152	C		8.75		0.74	5.91	9.49	15.40	STANDHYD	-	70.1	-	3.9	37.6	74	0.58	87	38.0	7.6	90.8	1.5	48.3	84.0	69
	153	C		1.37			0.32	1.37	1.70	NASHYD	-	61.5	-	-	18.7	80	0.50	91	25.1	5.0	101.3	5.0	25.2	91.0	79
	1060	C		5.56	42.06		4.08	47.63	51.71	NASHYD	-	8.2	66.7	-	7.7	83	0.56	92	22.1	4.4	104.1	5.0	21.3	92.3	82
	160	C		4.72		0.57	3.86	5.29	9.15	STANDHYD	-	67.7	-	5.4	41.3	73	0.59	87	38.0	7.6	90.8	1.5	48.3	84.0	69
	161	C		2.27			1.22	2.27	3.49	STANDHYD	-	76.0	-	-	34.1	76	0.57	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	162	C		1.29				1.29	1.29	NASHYD	-	76.0	-	-	-	76	0.40	89	31.4	6.3	96.0	5.0	33.4	88.4	75

Note:

*Table may be revised depending on the actual land use.

*Modified initial abstraction will be changed according to the hydrologic modeling application. (OTTHYMO 89: IA = 1.5 mm (NASHYD & STANDHYD); VO2: IA = 1.5 mm (STANDHYD) & IA = 5 mm (NASHYD))

MTO Drainage Management Manual - Design Chart 1.09: Soil Conservation Service Curve NumberMTO Drainage Management Manual - Design Chart 1.07: Runoff Coefficients

Soil Group	Land Use				
	Woodland	Pasture & Other Unimproved Land	Cultivated & other Improved Land	Lake/ Wetpond	Imperv. Area
A	50	58	66	50	98
AB	54	62	70	50	98
B	58	65	74	50	98
BC	65	71	78	50	98
C	71	76	82	50	98
CD	74	79	84	50	98
D	77	81	86	50	98

Soil Group	Runoff Coefficients*				
	Woodland	Pasture & Other Unimproved Land	Cultivated & other Improved Land	Lake/ Wetpond	Imperv. Area
A	0.08	0.1	0.22	0.05	0.9
AB	0.08	0.1	0.22	0.05	0.9
B	0.25	0.28	0.35	0.05	0.9
BC	0.25	0.28	0.35	0.05	0.9
C	0.35	0.4	0.55	0.05	0.9
CD	0.35	0.4	0.55	0.05	0.9
D	0.35	0.4	0.55	0.05	0.9

* Based on 'Flat' (Slope: 0-5%) Topography

Project: GTAW
Project No.: 60347240
Print Date: Wednesday, March 22, 2023
Modelled by: A.Ignacio

Date: Dec. 9, 2021
Last Revision: 6/22/2022

EXISTING CONDITIONS

EXISTING CONDITIONS

									Bransby Williams	Airport Equation
Catchment Number	Area (ha)	Length (m)	U/S Elev. (m)	D/S Elev (m)	Height (m)	Slope (%)	Log Slope (%)	Runoff Coefficient	Time to Peak (hr)	Time to Peak (hr)
100	10.34	505.0	209.6	201.8	7.8	1.5	0.2	0.623	0.238	0.345
1020, 120	37.57	1311.0	213.0	206.6	6.4	0.5	-0.3	0.563	0.684	0.915
1020	24.22	1104.0	217.2	206.8	10.4	0.9	0.0	0.529	0.527	0.719
121	3.64	187.0	210.4	208.2	2.2	1.2	0.1	0.477	0.103	0.300
1030	30.38	950.0	217.1	212.4	4.7	0.5	-0.3	0.485	0.505	0.888
130	2.25	200.0	216.2	214.4	1.8	0.9	0.0	0.485	0.122	0.334
131	14.65	765.0	216.5	210.3	6.2	0.8	-0.1	0.555	0.396	0.599
134	15.49	783.0	219.1	206.7	12.4	1.6	0.2	0.461	0.353	0.570
1040	10.35	505.0	217.5	216.4	1.1	0.2	-0.7	0.449	0.352	0.899
140	17.07	898.0	219.3	214.6	4.7	0.5	-0.3	0.459	0.501	0.886
1041	11.30	487.0	219.2	215.4	3.8	0.8	-0.1	0.478	0.261	0.554
141	11.25	477.0	216.4	211.4	5.0	1.0	0.0	0.543	0.241	0.445
1050	4.49	293.0	221.9	219.4	2.5	0.9	-0.1	0.498	0.169	0.403
150	6.87	357.0	221.8	218.6	3.2	0.9	0.0	0.550	0.195	0.400
1051	50.34	1322.0	221.1	212.2	8.9	0.7	-0.2	0.559	0.628	0.833
153	1.70	69.0	215.3	209.5	5.8	8.3	0.9	0.496	0.028	0.093
1060	51.71	1025.0	219.8	212.2	7.6	0.7	-0.1	0.561	0.476	0.707
162	1.29	335.0	216.9	211.1	5.8	1.7	0.2	0.400	0.190	0.397

Project: GTAW
Project No.: 60347240
Print Date: 3/22/2023
Modelled by: A.Ignacio

Date: Dec. 9, 2021
Last Revision: 6/22/2022

Impervious Area Calculations - Existing Conditions

Catchment ID	Total Drainage Area (ha)	Impervious Area (ha)	Pervious Area (ha)	Percent Imperv. (%)	Hydrograph Classification
100	10.34	4.62	5.72	44.68	STANDHYD
101	21.81	9.84	11.97	45.11	STANDHYD
1020, 120	37.57	7.20	30.37	19.16	NASHYD
1020	24.22	1.20	23.02	4.94	NASHYD
120	13.35	6.00	7.35	44.96	STANDHYD
121	3.64	0.00	3.64	0.00	NASHYD
122	16.13	4.95	11.18	30.72	STANDHYD
1030	30.38	2.25	28.12	7.41	NASHYD
130	2.25	0.38	1.87	17.02	NASHYD
131	14.65	0.60	14.06	4.07	NASHYD
132	8.25	2.57	5.67	31.19	STANDHYD
133	6.79	3.22	3.57	47.46	STANDHYD
134	15.49	2.41	13.08	15.57	NASHYD
135	6.36	2.30	4.06	36.11	STANDHYD
1040	10.35	0.00	10.35	0.00	NASHYD
140	17.07	1.79	15.28	10.46	NASHYD
1041	11.30	0.71	10.59	6.28	NASHYD
141	11.25	0.82	10.44	7.24	NASHYD
142	10.92	5.75	5.17	52.67	STANDHYD
143	0.84	0.46	0.38	54.89	STANDHYD
144	6.14	2.27	3.88	36.89	STANDHYD
1050	4.49	0.00	4.49	0.00	NASHYD
150	6.87	0.00	6.87	0.00	NASHYD
1051	50.34	2.55	47.79	5.07	NASHYD
151	10.65	3.08	7.57	28.90	STANDHYD
152	15.40	6.65	8.75	43.18	STANDHYD
153	1.70	0.32	1.37	19.12	NASHYD
1060	51.71	4.08	47.63	7.89	NASHYD
160	9.15	4.43	4.72	48.44	STANDHYD
161	3.49	1.22	2.27	34.84	STANDHYD
162	1.29	0.00	1.29	0.00	NASHYD

C.3 VO Output 2-year to 100-year



HRP1-3-EX_2-100 YEAR.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
V V I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4e4575d0-1470-4d31-9b03-8c4608f6b172\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4e4575d0-1470-4d31-9b03-8c4608f6b172\scenar

DATE: 03/24/2023 TIME: 09:22:48

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\ f00d97a2-30b2-4551-9bd1-e96749283cdb\571fbdef
Ptotal= 57.60 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69	
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69	
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69	
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69	
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69	
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69	
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69	
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69	
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69	
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69	
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69	
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69	
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69	
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69	
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69	
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69	
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69	
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69	
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69	
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69	
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69	
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69	
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69	
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69	
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69	
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69	
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69	
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69	
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69	
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69	
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69	
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69	
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69	
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69	
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69	
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69	
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69	
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69	

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 0.707 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 23.632
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.400

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ROUTEPIPE(0014) | PIPE Number = 1.00

HRP1-3-EX_2-100 YEAR.OUT
IN= 2----> OUT= 1 | Width (mm)=2400.00 Height (mm)= 900.00
DT= 5.0 min | Length (m)= 207.00
Slope (m/m)= 0.003
Manning n = 0.020

<----- TRAVEL TIME TABLE ----->						
DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME min		
0.05	.235E+02	0.0	0.35	9.87		
0.09	.471E+02	0.1	0.54	6.37		
0.14	.706E+02	0.2	0.69	4.98		
0.19	.941E+02	0.4	0.82	4.21		
0.24	.118E+03	0.5	0.93	3.71		
0.28	.141E+03	0.7	1.03	3.36		
0.33	.165E+03	0.9	1.12	3.09		
0.38	.188E+03	1.1	1.20	2.89		
0.43	.212E+03	1.3	1.27	2.72		
0.47	.235E+03	1.5	1.33	2.59		
0.52	.259E+03	1.7	1.40	2.47		
0.57	.282E+03	2.0	1.45	2.38		
0.62	.306E+03	2.2	1.51	2.29		
0.66	.329E+03	2.5	1.55	2.22		
0.71	.353E+03	2.7	1.60	2.16		
0.76	.377E+03	3.0	1.64	2.10		
0.81	.400E+03	3.3	1.68	2.05		
0.85	.424E+03	3.5	1.72	2.00		
0.90	.447E+03	3.8	1.76	1.96		
<---- hydrograph ----> <-pipe / channel-->						
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)	
INFLOW : ID= 2 (1020)	24.22	0.71	12.42	23.03	0.29	1.03
OUTFLOW: ID= 1 (0014)	24.22	0.70	12.42	23.03	0.28	1.03

STANDHYD (0120) | Area (ha)= 13.35
ID= 1 DT= 3.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	6.01	7.34
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	298.33	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		

HRP1-3-EX_2-100 YEAR.OUT									
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69		
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69		
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69		

HRP1-3-EX_2-100 YEAR.OUT

Max.Eff.Inten.(mm/hr)=	63.59	25.28
over (min)	6.00	18.00
Storage Coeff. (min)=	4.79 (ii)	17.02 (iii)
Unit Hyd. Tpeak (min)=	6.00	18.00
Unit Hyd. peak (cms)=	0.21	0.07
TOTALS		
PEAK FLOW (cms)=	1.02	0.29
TIME TO PEAK (hrs)=	12.00	12.15
RUNOFF VOLUME (mm)=	56.10	20.32
TOTAL RAINFALL (mm)=	57.60	57.60
RUNOFF COEFFICIENT =	0.97	0.35
		0.63

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0000)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0120):	13.35	1.223	12.00	36.42
+ ID2= 2 (0014):	24.22	0.704	12.42	23.03
=====				
ID = 3 (0006):	37.57	1.507	12.00	27.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0100)				
ID= 1 DT= 3.0 min				
	Area (ha)=	10.34		
	Total Imp(%)=	45.00	Dir. Conn.(%)=	45.00
=====				
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	4.65	5.69		
Dep. Storage (mm)=	1.50	1.50		
Average Slope (%)=	2.00	2.00		
Length (m)=	262.55	40.00		
Mannings n =	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		

HRP1-3-EX_2-100 YEAR.OUT							
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	63.59	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Storage Coeff. (min)= 4.44 (ii) 16.67 (ii)
Unit Hyd. Tpeak (min)= 6.00 18.00
Unit Hyd. peak (cms)= 0.22 0.07

TOTALS
PEAK FLOW (cms)= 0.79 0.22 0.955 (iii)
TIME TO PEAK (hrs)= 12.00 12.15 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 36.42
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.63

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0101)
ID= 1 DT= 4.0 min

Area (ha)= 21.81
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 9.81 12.00
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 381.31 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	0.58	6.067	1.15	12.067	8.30	18.07	1.04				
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04				
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04				
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04				
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04				
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04				
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04				
0.533	0.58	6.533	1.15	12.533	6.28	18.53	1.04				
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04				
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04				
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04				
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04				
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04				
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04				
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04				
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04				
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04				
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04				
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04				
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04				
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04				
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04				
1.533	0.58	7.533	1.15	13.533	2.76	19.53	1.04				
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04				
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04				
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04				
1.800	0.92	7.800	1.15	13.800	4.72	19.80	1.04				
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04				
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04				
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04				
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69				
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69				
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69				
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69				
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69				
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69				
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69				
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69				
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69				
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69				
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69				
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69				
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69				
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69				
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69				
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69				
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69				
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69				
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69				
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69				
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69				

HRP1-3-EX_2-100 YEAR.OUT											
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69				
3.533	0.75	9.533	1.96	15.533	1.73	21.53	0.69				
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69				
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69				
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69				
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69				
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69				
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69				
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69				
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69				
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69				
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69				
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69				
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69				
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69				
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69				
4.533	0.92	10.533	3.11	16.533	1.04	22.53	0.69				
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69				
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69				
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69				
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69				
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69				
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69				
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69				
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69				
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69				
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69				
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69				
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69				
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69				
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69				
5.533	0.92	11.533	14.74	17.533	1.04	23.53	0.69				
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69				
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69				
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69				
5.800	0.92	11.800	53.68	17.800	1.04	23.80	0.69				
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69				
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69				
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69				

Max.Eff.Inten.(mm/hr)= 63.59 24.18
over (min) 5.00 20.00
Storage Coeff. (min)= 5.55 (ii) 18.01 (ii)
Unit Hyd. Tpeak (min)= 4.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

TOTALS
PEAK FLOW (cms)= 1.65 0.45 1.967 (iii)
TIME TO PEAK (hrs)= 12.00 12.20 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 36.42
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.63

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0100): 10.34 0.955 12.00 36.42
+ ID2= 2 (0101): 21.81 1.967 12.00 36.42
=====

ID = 3 (0009): 32.15 2.922 12.00 36.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y Y M M 0 0
000 T T H H Y Y M M 000

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HRP1-3-EX_2-100 YEAR.OUT

1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	8.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.00	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333			

COMMENTS: _____

MASS STORM	Filename: C:\Users\Abira\AppData\Local\Temp\
Ptotal= 76.80 mm	f80d97a2-30b2-4551-9bd1-e96749283cdb\ff88e60ca
	Comments: Mass 24-Hour SCS Type II Design Storm

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.25	0.77	6.25	1.54	12.25	11.06	18.25	1.38	
0.50	0.77	6.50	1.54	12.50	11.06	18.50	1.38	
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38	
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38	
1.25	0.77	7.25	1.54	13.25	1.08	19.25	1.38	
1.50	0.77	7.50	1.54	13.50	1.08	19.50	1.38	
1.75	0.77	7.75	1.54	13.75	6.30	19.75	1.38	
2.00	1.38	8.00	1.54	14.00	6.30	20.00	1.38	
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92	
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92	
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92	
3.00	1.00	9.00	2.07	15.00	2.30	21.00	0.92	
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92	
3.50	1.00	9.50	2.46	15.50	2.30	21.50	0.92	
3.75	1.00	9.75	2.46	15.75	2.30	21.75	0.92	
4.00	1.00	10.00	2.76	16.00	2.30	22.00	0.92	
4.25	1.23	10.25	2.76	16.25	1.38	22.25	0.92	
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92	
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92	
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92	
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92	
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92	
5.75	1.23	11.75	31.99	17.75	2.75	23.75	0.92	
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92	

CALIB	Area (ha)=	24.22	Curve Number (CN)=	79.0
NASHYD (1020)	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID=1 DT=5.0 min	U.H. Tp(hrs)=	0.53		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYTEOGRAPH ---										
TIME	RAIN		RAIN		'		RAIN		TIME	RAIN
	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs		
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38			
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38			
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38			
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38			
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38			
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38			
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38			
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38			
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38			
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38			
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38			
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38			
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38			
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38			

Unit Hyd Qpeak (cms)= 1.755

```

PEAK FLOW      (cms)=    1.153 (i)
TIME TO PEAK   (hrs)=    12.417
RUNOFF VOLUME   (mm)=    37.002
TOTAL RAINFALL  (mm)=    76.800
RUNOFF COEFFICIENT =    0.482

```

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTEPIPE(0014)	PIPE Number	=	1.00	
IN= 2--> OUT= 1	Width (mm)	=	2400.00	Height (mm)= 900.00
DT= 5.0 min	Length (m)	=	207.00	
	Slope (m/m)	=	0.003	
	Manning n	=	0.020	

TRAVEL TIME TABLE				
DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV. TIME min
0.05	.235E+02	0.0	0.35	9.87
0.09	.471E+02	0.1	0.54	6.37
0.14	.706E+02	0.2	0.69	4.98
0.19	.941E+02	0.4	0.82	4.21
0.24	.118E+03	0.5	0.93	3.71
0.28	.141E+03	0.7	1.03	3.36
0.33	.165E+03	0.9	1.12	3.09

HRP1-3-EX_2-100 YEAR.OUT

0.38	.188E+03	1.1	1.20	2.89		
0.43	.212E+03	1.3	1.27	2.72		
0.47	.235E+03	1.5	1.33	2.59		
0.52	.259E+03	1.7	1.40	2.47		
0.57	.282E+03	2.0	1.45	2.38		
0.62	.306E+03	2.2	1.51	2.29		
0.66	.329E+03	2.5	1.55	2.22		
0.71	.353E+03	2.7	1.60	2.16		
0.76	.377E+03	3.0	1.64	2.10		
0.81	.400E+03	3.3	1.68	2.05		
0.85	.424E+03	3.5	1.72	2.00		
0.90	.447E+03	3.8	1.76	1.96		
<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (1020)	24.22	1.15	12.42	37.00	0.39	1.22
OUTFLOW: ID= 1 (0014)	24.22	1.15	12.42	37.00	0.39	1.22

HRP1-3-EX_2-100 YEAR.OUT

2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)=	84.79	42.25
over (min)	6.00	15.00
Storage Coeff. (min)=	4.27 (ii)	12.44 (ii)
Unit Hyd. Tpeak (min)=	6.00	15.00
Unit Hyd. peak (cms)=	0.23	0.08

PEAK FLOW (cms)=	1.37	0.55	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.10	1.820 (iii)
RUNOFF VOLUME (mm)=	75.30	32.57	12.00
TOTAL RAINFALL (mm)=	76.80	76.80	51.80
RUNOFF COEFFICIENT =	0.98	0.42	76.80

(i) ON PROCEDURE SELECTED FOR PVIOUS LOSSES:

CALIB	
STANDHYD (0120)	
ID= 1 DT= 3.0 min	

Area (ha)=	13.35
Total Imp(%)=	45.00
Dir. Conn.(%)=	45.00
IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	6.01 7.34
Dep. Storage (mm)=	1.50 1.50
Average Slope (%)=	2.00 2.00
Length (m)=	298.33 40.00
Mannings n =	0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	' hrs	mm/hr	' hrs	mm/hr
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.050	0.77	7.050	1.54	13.050	1.00	19.05	1.38		
1.100	0.77	7.100	1.54	13.100	1.00	19.10	1.38		
1.150	0.77	7.150	1.54	13.150	1.00	19.15	1.38		
1.200	0.77	7.200	1.54	13.200	1.00	19.20	1.38		
1.250	0.77	7.250	1.54	13.250	1.00	19.25	1.38		
1.300	0.77	7.300	1.54	13.300	1.00	19.30	1.38		
1.350	0.77	7.350	1.54	13.350	1.00	19.35	1.38		
1.400	0.77	7.400	1.54	13.400	1.00	19.40	1.38		
1.450	0.77	7.450	1.54	13.450	1.00	19.45	1.38		
1.500	0.77	7.500	1.54	13.500	1.00	19.50	1.38		
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38		
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38		
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38		
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38		
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38		
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38		
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38		
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38		
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92		
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92		
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92		
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92		
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		

CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP1-3-EX_2-100 YEAR.OUT

ADD HYD (0000)				
1	2	3		
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0120):	13.35	1.828	12.00	51.00
+ ID2= 2 (0014):	24.22	1.150	12.42	37.00

ID = 3 (0006):	37.57	2.333	12.00	42.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0100)			
ID= 1 DT= 3.0 min	Area (ha)=	10.34	
	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.65	5.69
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	262.55	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	6.950	1.54	12.050	11.06	18.05	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.050	0.77	7.050	1.54	13.050	1.00	19.05	1.38		
1.100	0.77	7.100	1.54	13.100	1.00	19.10	1.38		
1.150	0.77	7.150	1.54	13.150	1.00	19.15	1.38		
1.200	0.77	7.200	1.54	13.200	1.00	19.20	1.38		
1.250	0.77	7.250	1.54	13.250	1.00	19.25	1.38		
1.300	0.77	7.300	1.54	13.300	1.00	19.30	1.38		
1.350	0.77	7.350	1.54	13.350	1.00	19.35	1.38		
1.400	0.77	7.400	1.54	13.400	1.00	19.40	1.38		
1.450	0.77	7.450	1.54	13.450	1.00	19.45	1.38		
1.500	0.77	7.500	1.54	13.500	1.00	19.50	1.38		
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38		
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38		
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38		
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38		
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38		
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38		
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38		
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38		
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92		
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92		
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92		
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92		
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92		

HRP1-3-EX_2-100 YEAR.OUT

2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)=	84.79	42.25
	05.00	05.00
Storage Coeff. (min)=	3.96 (ii)	12.13 (ii)
Unit Hyd. Tpeak (min)=	6.00	15.00
Unit Hyd. peak (cms)=	0.24	0.09
TOTALS		
PEAK FLOW (cms)=	1.07	0.43
TIME TO PEAK (hrs)=	12.00	12.10
RUNOFF VOLUME (mm)=	75.30	32.57
TOTAL RAINFALL (mm)=	76.80	76.80
RUNOFF COEFFICIENT =	0.98	0.42
		0.67

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

		IMPERVIOUS	PERVIOUS (1)
Surface Area	(ha)=	9.81	12.00
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	381.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

4.467	1.23	18.467	3.53	16.467	1.38	22.47	0.92
4.533	1.23	18.533	4.15	16.533	1.38	22.53	0.92
4.600	1.23	18.600		16.600	1.38	22.60	0.92
4.667	1.23	18.667	4.76	16.667	1.38	22.67	0.92
4.733	1.23	18.733	5.38	16.733	1.38	22.73	0.92
4.800	1.23	18.800		16.800	1.38	22.80	0.92
4.867	1.23	18.867	4.76	16.867	1.38	22.87	0.92
4.933	1.23	18.933	4.76	16.933	1.38	22.93	0.92
5.000	1.23	18.900		17.000	1.38	23.00	0.92
5.067	1.23	18.967	7.37	17.067	1.38	23.07	0.92
5.133	1.23	19.033	7.99	17.133	1.38	23.13	0.92
5.200	1.23	19.200	7.37	17.200	1.38	23.20	0.92
5.267	1.23	19.267	7.37	17.267	1.38	23.27	0.92
5.333	1.23	19.333	7.37	17.333	1.38	23.33	0.92
5.400	1.23	19.400	7.37	17.400	1.38	23.40	0.92
5.467	1.23	19.467	7.37	17.467	1.38	23.47	0.92
5.533	1.23	19.533	7.37	17.533	1.38	23.53	0.92
5.600	1.23	19.600	31.95	17.600	1.38	23.60	0.92
5.667	1.23	19.667	31.95	17.667	1.38	23.67	0.92
5.733	1.23	19.733	31.95	17.733	1.38	23.73	0.92
5.800	1.23	19.800	71.57	17.800	1.38	23.80	0.92
5.867	1.23	19.867	84.79	17.867	1.38	23.87	0.92
5.933	1.23	19.933	84.79	17.933	1.38	23.93	0.92
6.000	1.23	19.900	84.79	18.000	1.38	24.00	0.92

Max. Eff. Inten. (mm/hr)=	84.79	42.25	
over (min)	5.00	16.00	
Storage Coeff. (min)=	4.95 (ii)	14.91 (ii)	
Unit Hyd. Tpeak (min)=	4.00	16.00	
Unit Hyd. peak (cms)=	0.24	0.07	
			TOTALS
PEAK FLOW (cms)=	2.24	0.83	2.989 (iii)
TIME TO PEAK (hrs)=	12.00	12.17	12.00
RUNOFF VOLUME (mm)=	76.80	31.63	51.80
TOTAL RAINFALL (mm)=	76.80	76.80	76.80
RUNOFF COEFFICIENT =	0.98	0.42	0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)	AREA	QPEAK	TPEAK	R. V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0100):	10.34	1.427	12.00	51.80
+ ID2= 2 (0101):	21.81	2.909	12.00	51.80
ID = 3 (0009):	32.15	4.336	12.00	51.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y M M 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M 000

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***** DETAILED OUTPUT *****

```
Input  filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\Abira\AppData\Local\Civica\H5\1b04a9f5-7c1b-43ad-8aec-1bb40ca06cfa\7abf76d3-503e-4552-8d72-3f5001ff0d11\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\H5\1b04a9f5-7c1b-43ad-8aec-1bb40ca06cfa\7abf76d3-503e-4552-8d72-3f5001ff0d11\scenar
```

DATE: 03/24/2023 TIME: 09:22:49

USER:

TIME	RAIN	--- TRANSFORMED HYETOGRAPH ---				TIME	RAIN		
		mm	hrs	mm/hr	' hrs				
0.067	0.77	6.067	1.54	12.067	11.07	18.07	1.38		
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38		
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38		
0.533	0.77	6.533	1.54	12.533	8.37	18.53	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38		
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38		
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38		
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38		
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38		
1.533	0.77	7.533	1.54	13.533	3.69	19.53	1.38		
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38		
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38		
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38		
1.800	1.23	7.800	1.54	13.800	6.30	19.80	1.38		
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38		
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38		
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38		
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92		
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92		
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92		
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92		
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92		
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92		
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92		
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92		
2.867	1.00	8.867	2.07	14.867	2.30	20.87	0.92		
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92		
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92		
3.067	1.00	9.067	2.46	15.067	2.30	21.07	0.92		
3.133	1.00	9.133	2.46	15.133	2.30	21.13	0.92</		

HRP1-3-EX_2-100 YEAR.OUT

COMMENTS: _____

 ** SIMULATION : Run 03 **

 | MASS STORM | Filename: C:\Users\AbirA\AppData
 | | ata\Local\Temp\
 | | f80d97a2-90b2-4551-9bdi-e96749283cdb\1913d010
 | Ptotal= 88.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

 Duration of storm = 24.00 hrs
 Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60	
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60	
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60	
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60	
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60	
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60	
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60	
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60	
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07	
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07	
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07	
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07	
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07	
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07	
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07	
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07	
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07	
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07	
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07	
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07	
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07	
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07	
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07	
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07	

 | CALIB |
 | NASHYD (1020) | Area (ha)= 24.22 Curve Number (CN)= 79.0
 | ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.53

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60	
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60	
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60	
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60	
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60	
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60	
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60	
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60	
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60	
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60	
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60	
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60	
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60	
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60	
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60	
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60	
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60	
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60	
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60	
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60	
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60	
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60	
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60	
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60	
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07	
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07	
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07	
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07	
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07	

HRP1-3-EX_2-100 YEAR.OUT

2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 1.454 (i)
 TIME TO PEAK (hrs)= 12.417
 RUNOFF VOLUME (mm)= 46.406
 TOTAL RAINFALL (mm)= 88.800
 RUNOFF COEFFICIENT = 0.523

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 | ROUTEPIPE(0014) | PIPE Number = 1.00
 | IN= 2----> OUT= 1 | Width (mm)=2400.00 Height (mm)= 900.00
 | DT= 5.0 min | Length (m)= 207.00
 | | Slope (m/m)= 0.003
 | | Manning n = 0.020

<----- TRAVEL TIME TABLE ----->

DEPTH	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(cu.m.)	(cms)	(m/s)	min
0.05	.235E+02	0.0	0.35	9.87
0.09	.471E+02	0.1	0.54	6.37
0.14	.706E+02	0.2	0.69	4.98
0.19	.941E+02	0.4	0.82	4.21
0.24	.118E+03	0.5	0.93	3.71
0.28	.141E+03	0.7	1.03	3.36
0.33	.165E+03	0.9	1.12	3.09
0.38	.188E+03	1.1	1.20	2.89
0.43	.212E+03	1.3	1.27	2.72
0.47	.235E+03	1.5	1.33	2.59
0.52	.259E+03	1.7	1.40	2.47
0.57	.282E+03	2.0	1.45	2.38
0.62	.306E+03	2.2	1.51	2.29
0.66	.329E+03	2.5	1.55	2.22
0.71	.353E+03	2.7	1.60	2.16
0.76	.377E+03	3.0	1.64	2.10
0.81	.400E+03	3.3	1.68	2.05
0.85	.424E+03	3.5	1.72	2.00
0.90	.447E+03	3.8	1.76	1.96

<---- hydrograph ----> <-pipe / channel->

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)

HRP1-3-EX_2-100 YEAR.OUT
INFLOW : ID= 2 (1020) 24.22 1.45 12.42 46.41 0.46 1.31
OUTFLOW: ID= 1 (0014) 24.22 1.45 12.42 46.41 0.46 1.31

CALIB
STANDHYD (0120)
ID= 1 DT= 3.0 min | Area (ha)= 13.35
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.81 7.34
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 290.33 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN			
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr			
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60				
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60				
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60				
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60				
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60				
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60				
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60				
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60				
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60				
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60				
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60				
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60				
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60				
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60				
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60				
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60				
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60				
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60				
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60				
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60				
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60				
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60				
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60				
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60				
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60				
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60				
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60				
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60				
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60				
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60				
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60				
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60				
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60				
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60				
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60				
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60				
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60				
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60				
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60				
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60				
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07				
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07				
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07				
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07				
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07				
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07				
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07				
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07				
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07				
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07				
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07				
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07				
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07				
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07				
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07				
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07				
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07				
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07				
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07				
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07				
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07				
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07				
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07				

HRP1-3-EX_2-100 YEAR.OUT											
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07				
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07				
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07				
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07				
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07				
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07				
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07				
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07				
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07				
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07				
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07				
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07				
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07				
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07				
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07				
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07				
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07				
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07				
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07				
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07				
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07				
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07				
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07				
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07				
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07				
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07				
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07				
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07				
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07				
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07				
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07				
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07				
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07				
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07				
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07				
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07				
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07				
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07				
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07				
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07				
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07				
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07				
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07				
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07				
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07				
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07				
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07				
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07				
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07				
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07				
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07				
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07				
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07				
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07				
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07				
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07				
6.000	1.42	12.000	97.19	18.000	1.60	24.00	1.07				

HRP1-3-EX_2-100 YEAR.OUT

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0100) |
ID= 1 DT= 3.0 min |

Area (ha)= 10.34
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.65 5.69
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 262.55 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07

HRP1-3-EX_2-100 YEAR.OUT

3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min) 6.00 12.00
Storage Coeff. (min)= 3.73 (ii) 11.44 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.10

TOTALS
PEAK FLOW (cms)= 1.24 0.57 1.766 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 87.30 40.96 61.81
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.70

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0101) |
ID= 1 DT= 4.0 min |

Area (ha)= 21.81
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 9.81 12.00
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 381.31 40.00
Mannings n = 0.013 0.250

HRP1-3-EX_2-100 YEAR.OUT
NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	0.89	6.067	1.78	12.067	12.80	18.07	1.60		
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60		
0.533	0.89	6.533	1.78	12.533	9.60	18.53	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.533	0.89	7.533	1.78	13.533	4.26	19.53	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.800	1.42	7.800	1.78	13.800	7.28	19.80	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07		
3.533	1.15	9.533	3.02	15.533	2.66	21.53	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07		
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07		
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07		
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07		
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07		
4.533	1.42	10.533	4.80	16.533	1.60	22.53	1.07		
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07		
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07		
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07		
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07		
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07		
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07		
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07		
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07		
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07		
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07		
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07		

HRP1-3-EX_2-100 YEAR.OUT									
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07		
5.533	1.42	11.533	22.73	17.533	1.60	23.53	1.07		
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07		
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07		
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07		
5.800	1.42	11.800	82.75	17.800	1.60	23.80	1.07		
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07		
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07		
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.06		

Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min)= 5.00 16.00
Storage Coeff. (min)= 4.67 (ii) 12.38 (ii)
Unit Hyd. Tpeak (min)= 4.00 16.00
Unit Hyd. peak (cms)= 0.24 0.08
PEAK FLOW (cms)= 2.60 1.12 3.534 (iii)
TIME TO PEAK (hrs)= 12.00 12.13 12.00
RUNOFF VOLUME (mm)= 87.30 40.96 61.81
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.70

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0000) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0100): 10.34 1.766 12.00 61.81
+ ID2= 2 (0101): 21.81 3.534 12.00 61.81
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

=====

V	V	I	SSSS	U	U	A	L		(v 6.1.2002)
V	V	I	SS	U	U	A	A	L	
V	V	I	SS	U	U	AAAA	L		
V	V	I	SS	U	U	A	A	L	
VV	I	SSSS	UUUU	A	A	LLLL			

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voind.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\51b3de48-561d-4025-b861-f5eab6d47cca\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\51b3de48-561d-4025-b861-f5eab6d47cca\scenar

DATE: 03/24/2023 TIME: 09:22:48

USER:

COMMENTS: _____

** SIMULATION : Run 04

| MASS STORM | Filename: C:\Users\AbirA\AppData
| | ata\Local\Temp\
| | f08d97a2-30b2-4551-9bd1-e96749283cdb\cdfb3d47
| Ptotal=103.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

HRP1-3-EX_2-100 YEAR.OUT

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86
2.00	1.06	8.00	2.06	14.00	8.46	20.00	1.86
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24

CALIB
NASHYD (1020) | Area (ha)= 24.22 Curve Number (CN)= 79.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.53

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86
1.917	1.06	7.917	2.06	13.917	8.46	19.92	1.86
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24

HRP1-3-EX_2-100 YEAR.OUT

3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 1.831 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 58.188
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.564

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTPIPE(0014) | PIPE Number = 1.00
IN= 2---> OUT= 1 | Width (mm)=2400.00 Height (mm)= 900.00
DT= 5.0 min | Length (m)= 207.00
Slope (m/m)= 0.003
Manning n = 0.020

DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME min
0.05	.235E+02	0.0	0.35	9.87
0.09	.471E+02	0.1	0.54	6.37
0.14	.706E+02	0.2	0.69	4.98
0.19	.941E+02	0.4	0.82	4.21
0.24	.118E+03	0.5	0.93	3.71
0.28	.141E+03	0.7	1.03	3.36
0.33	.165E+03	0.9	1.12	3.09
0.38	.188E+03	1.1	1.20	2.89
0.43	.212E+03	1.3	1.27	2.72
0.47	.235E+03	1.5	1.33	2.59
0.52	.259E+03	1.7	1.40	2.47
0.57	.282E+03	2.0	1.45	2.38
0.62	.306E+03	2.2	1.51	2.29
0.66	.329E+03	2.5	1.55	2.22
0.71	.353E+03	2.7	1.60	2.16
0.76	.377E+03	3.0	1.64	2.10
0.81	.400E+03	3.3	1.68	2.05
0.85	.424E+03	3.5	1.72	2.00
0.90	.447E+03	3.8	1.76	1.96

<--- hydrograph ---> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m/s)
INFLOW: ID= 2 (1020) 24.22 1.83 12.42 58.19 0.54 1.42
OUTFLOW: ID= 1 (0014) 24.22 1.83 12.42 58.19 0.54 1.42

CALIB
STANDHYD (0120) | Area (ha)= 13.35
ID= 1 DT= 3.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.01 7.34
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00

Length (m)= 298.33 40.00
Mannings n = 0.013 0.250

HRP1-3-EX_2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP1-3-EX_2-100 YEAR.OUT

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		

3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24

Max.Eff.Inten.(mm/hr)= 113.93 66.98
over (min) 6.00 12.00
Storage Coeff. (min)= 3.79 (ii) 11.05 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.24 0.10
TOTALS
PEAK FLOW (cms)= 1.86 0.94 2.733 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 101.70 51.59 74.14
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.50 0.72

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0120):	13.35	2.733	12.00	74.14
+ ID2= 2 (0014):	24.22	1.830	12.42	58.19
=====				
ID = 3 (0006):	37.57	3.594	12.00	63.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0100)	Area	(ha)=	10.34	
ID= 1 DT= 3.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)=	45.00
=====				
	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	4.65	5.69	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	262.55	40.00	
Mannings n	=	0.013	0.250	

HRP1-3-EX_2-100 YEAR.OUT
NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		

HRP1-3-EX_2-100 YEAR.OUT									
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.86	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)= 113.93 66.98
over (min) 6.00 12.00
Storage Coeff. (min)= 3.51 (ii) 10.77 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.10
PEAK FLOW (cms)= 1.45 0.74
TIME TO PEAK (hrs)= 12.00 12.05
RUNOFF VOLUME (mm)= 181.70 51.59
TOTAL RAINFALL (mm)= 183.20 183.20
RUNOFF COEFFICIENT = 0.99 0.50

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0101) | Area (ha)= 21.81
|ID= 1 DT= 4.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 9.81 12.00
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 381.31 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.067	1.03	6.067	2.06	12.067	14.87	18.07	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.533	1.03	6.533	2.06	12.533	11.25	18.53	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		

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0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.067	1.03	7.067	2.06	13.067	1.45	19.07	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.533	1.03	7.533	2.06	13.533	4.95	19.53	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.800	1.65	7.800	2.06	13.800	8.46	19.80	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24
3.533	1.34	9.533	3.51	15.533	3.10	21.53	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24
4.533	1.65	10.533	5.57	16.533	1.86	22.53	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24
5.533	1.65	11.533	26.42	17.533	1.86	23.53	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24
5.800	1.65	11.800	96.17	17.800	1.86	23.80	1.24
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Max.Eff.Inten.(mm/hr)= 113.93 66.99
over (min) 5.00 12.00
Storage Coeff. (min)= 4.40 (ii) 11.66 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.25 0.10

HRP1-3-EX_2-100 YEAR.OUT

TOTALS

PEAK FLOW	(cms)=	3.04	1.53	4.459 (iii)
TIME TO PEAK	(hrs)=	12.00	12.07	12.00
RUNOFF VOLUME	(mm)=	101.70	51.59	74.14
TOTAL RAINFALL	(mm)=	103.20	103.20	103.20
RUNOFF COEFFICIENT	=	0.99	0.50	0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)|

1	2	3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0100):	10.34	2.132	12.00	74.14		
+ ID2= 2 (0101):	21.81	4.459	12.00	74.14		
=====						
ID = 3 (0009):	32.15	6.590	12.00	74.24		

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\vo1n.dat
Output filename: C:\Users\Abir\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\3562df06-5f92-4634-98eb-9af8410edc15\scenar
Summary filename: C:\Users\Abir\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\3562df06-5f92-4634-98eb-9af8410edc15\scenar

DATE: 03/24/2023

TIME: 09:22:48

USER:

COMMENTS:

** SIMULATION : Run 05 **

MASS STORM | Filename: C:\Users\Abir\AppData
ata\Local\Temp\
f80d97a2-30b2-4551-9bd1-e96749283cdb\95accb52
| Ptotal=115.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07	
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07	
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07	
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07	
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07	
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07	
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07	
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07	
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38	
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38	

HRP1-3-EX_2-100 YEAR.OUT

2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38

CALIB
NASHYD (1020)
ID= 1 DT= 5.0 min
Area (ha)= 24.22
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.53
Curve Number (CN)= 79.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38

HRP1-3-EX_2-100 YEAR.OUT

5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 2.155 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 68.330
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.593

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTEPIPE(0014)
IN= 2----> OUT= 1
DT= 5.0 min
PIPE Number = 1.00
Width (mm)=2400.00
Length (m)= 207.00
Slope (m/m)= 0.003
Manning n = 0.020

TRAVEL TIME TABLE

DEPTH	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(cu.m.)	(cms)	(m/s)	min
0.05	.235E+02	0.0	0.35	9.07
0.09	.471E+02	0.1	0.54	6.37
0.14	.706E+02	0.2	0.69	4.98
0.19	.941E+02	0.4	0.82	4.21
0.24	.118E+03	0.5	0.93	3.71
0.28	.141E+03	0.7	1.03	3.36
0.33	.165E+03	0.9	1.12	3.09
0.38	.188E+03	1.1	1.20	2.89
0.43	.212E+03	1.3	1.27	2.72
0.47	.235E+03	1.5	1.33	2.59
0.52	.259E+03	1.7	1.40	2.47
0.57	.282E+03	2.0	1.45	2.38
0.62	.306E+03	2.2	1.51	2.29
0.66	.329E+03	2.5	1.55	2.22
0.71	.353E+03	2.7	1.60	2.16
0.76	.377E+03	3.0	1.64	2.10
0.81	.400E+03	3.3	1.68	2.05
0.85	.424E+03	3.5	1.72	2.00
0.90	.447E+03	3.8	1.76	1.96

AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (1020) 24.22 2.16 12.42 68.33 0.60 1.49
OUTFLOW: ID= 1 (0014) 24.22 2.16 12.42 68.33 0.60 1.49

CALIB
STANDHYD (0120)
ID= 1 DT= 3.0 min
Area (ha)= 13.35
Total Imp(%)= 45.00
Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.01 7.34
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 298.33 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07

HRP1-3-EX_2-100 YEAR.OUT									
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38		

HRP1-3-EX_2-100 YEAR.OUT									
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38		
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38		
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38		
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38		

Max.Eff.Inten.(mm/hr)=	127.18	78.96		
Storage Coeff. (min)=	3.63 (ii)	10.58 (ii)		
Unit Hyd. Tpeak (min)=	6.00	12.00		
Unit Hyd. peak (cms)=	0.25	0.10		
			TOTALS	
PEAK FLOW (cms)=	2.08	1.14	3.137 (iii)	
TIME TO PEAK (hrs)=	12.00	12.05	12.00	
RUNOFF VOLUME (mm)=	113.70	60.84	84.63	
TOTAL RAINFALL (mm)=	115.20	115.20	115.20	
RUNOFF COEFFICIENT =	0.99	0.53	0.73	

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0000)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0120):	13.35	3.137	12.00	84.63
+ ID2= 2 (0014):	24.22	2.155	12.42	68.33
=====				
ID = 3 (0006):	37.57	4.173	12.00	74.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (0100)			
ID= 1 DT= 3.0 min	Area (ha)=	10.34	
	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

		IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	4.65	5.69			
Dep. Storage (mm)=	1.50	1.50			
Average Slope (%)=	2.00	2.00			
Length (m)=	262.55	40.00			
Mannings n =	0.013	0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----	

HRP1-3-EX_2-100 YEAR.OUT

HRP1-3-EX_2-100 YEAR.OUT

HRP1-3-EX_2-100 YEAR.OUT									
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.800	1.84	7.800	2.30	13.800	9.45	19.80	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.533	1.50	9.533	3.92	15.533	3.46	21.53	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38		
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38		
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38		
4.533	1.84	10.533	6.22	16.533	2.07	22.53	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38		
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38		
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38		
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38		
5.533	1.84	11.533	29.49	17.533	2.07	23.53	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38		
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38		
5.800	1.84	11.800	107.36	17.800	2.07	23.80	1.38		
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38		
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38		
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38		
Max.Eff.Inten.(mm/hr)= 127.18 78.97									
over (min) 5.00 12.00									
Storage Coeff. (min)= 4.21 (ii) 11.15 (iii)									
Unit Hyd. Tpeak (min)= 4.00 12.00									
Unit Hyd. peak (cms)= 0.26 0.18									
TOTALS									
PEAK FLOW (cms)= 3.40 1.84 5.119 (iii)									
TIME TO PEAK (hrs)= 12.00 12.07 12.00									
RUNOFF VOLUME (mm)= 113.70 60.84 84.63									
TOTAL RAINFALL (mm)= 115.20 115.20 115.20									
RUNOFF COEFFICIENT = 0.99 0.53 0.73									
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL									
THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

HRP1-3-EX_2-100 YEAR.OUT

ADD HYD (0009)					
1 + 2 = 3					

		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)

ID1= 1 (0100): 10.34 2.446 12.00 84.63					
+ ID2= 2 (0101): 21.81 5.119 12.00 84.63					
=====					
ID = 3 (0009): 32.15 7.563 12.00 84.74					

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V	V	I	SSSS	U	U	A	L	(v 6.1.2002)
V	V	I	SS	U	U	A	L	
V	V	I	SS	U	U	AAAA	L	
V	V	I	SS	U	U	A	L	
VV	I	SSSS	UUUU	A	A	LLLL		

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y Y M M O O
000 T T H H Y Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voin.dat
Output filename: C:\Users\Abira\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\bc09ca03-446f-4372-9811-b431452d98dd\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\bc09ca03-446f-4372-9811-b431452d98dd\scenar

DATE: 03/24/2023 TIME: 09:22:49

USER:

COMMENTS: _____

** SIMULATION : Run 06 **

MASS STORM	Filename: C:\Users\Abira\AppData\Local\Temp\
	f80d97a2-30b2-4551-9bd1-e96749283cdb\2985551a
Ptotal=127.20 mm	Comments: Mass 24-Hour SCS Type II Design Storm

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29	
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29	
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29	
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29	
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29	
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29	
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29	
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29	
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53	
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53	
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53	
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53	
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53	
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53	
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53	
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53	
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53	
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53	
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53	
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53	
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53	
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53	
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53	
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53	

HRP1-3-EX_2-100 YEAR.OUT

CALIB
NASHYD (1020)
ID= 1 DT= 5.0 min
Area (ha)= 24.22 Curve Number (CN)= 79.0
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.53

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

HRP1-3-EX_2-100 YEAR.OUT

PEAK FLOW (cms)= 2.486 (l)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 78.787
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.619

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTEPIPE(0014) | PIPE Number = 1.00
ID= 2---> OUT= 1 | Width (mm)=2400.00 Height (mm)= 900.00
DT= 5.0 min | Length (m)= 207.00
Slope (m/m)= 0.003
Manning n = 0.020

----->
TRAVEL TIME TABLE
DEPTH VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (cu.m.) (cms) (m/s) min
0.05 .235E+02 0.0 0.35 9.87
0.09 .471E+02 0.1 0.54 6.37
0.14 .706E+02 0.2 0.69 4.98
0.19 .941E+02 0.4 0.82 4.21
0.24 .118E+03 0.5 0.93 3.71
0.28 .141E+03 0.7 1.03 3.36
0.33 .165E+03 0.9 1.12 3.09
0.38 .188E+03 1.1 1.20 2.89
0.43 .212E+03 1.3 1.27 2.72
0.47 .235E+03 1.5 1.33 2.59
0.52 .259E+03 1.7 1.40 2.47
0.57 .282E+03 2.0 1.45 2.38
0.62 .306E+03 2.2 1.51 2.29
0.66 .329E+03 2.5 1.55 2.22
0.71 .353E+03 2.7 1.60 2.16
0.76 .377E+03 3.0 1.64 2.10
0.81 .400E+03 3.3 1.68 2.05
0.85 .424E+03 3.5 1.72 2.00
0.90 .447E+03 3.8 1.76 1.96
<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (1020) 24.22 2.49 12.42 78.71 0.67 1.56
OUTFLOW: ID= 1 (0014) 24.22 2.49 12.42 78.71 0.67 1.56

CALIB
STANDHYD (0120) |
ID= 1 DT= 3.0 min
Area (ha)= 13.35
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (l)
Surface Area (ha)= 6.81 7.34
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 290.33 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----->
TRANSFORMED HYETOGRAPH
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN |
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.050 1.27 | 6.050 2.54 | 12.050 18.32 | 18.05 2.29
0.100 1.27 | 6.100 2.54 | 12.100 18.32 | 18.10 2.29
0.150 1.27 | 6.150 2.54 | 12.150 18.32 | 18.15 2.29
0.200 1.27 | 6.200 2.54 | 12.200 18.32 | 18.20 2.29
0.250 1.27 | 6.250 2.54 | 12.250 18.32 | 18.25 2.29
0.300 1.27 | 6.300 2.54 | 12.300 18.32 | 18.30 2.29
0.350 1.27 | 6.350 2.54 | 12.350 18.32 | 18.35 2.29
0.400 1.27 | 6.400 2.54 | 12.400 18.32 | 18.40 2.29
0.450 1.27 | 6.450 2.54 | 12.450 18.32 | 18.45 2.29
0.500 1.27 | 6.500 2.54 | 12.500 18.31 | 18.50 2.29
0.550 1.27 | 6.550 2.54 | 12.550 9.41 | 18.55 2.29
0.600 1.27 | 6.600 2.54 | 12.600 9.41 | 18.60 2.29
0.650 1.27 | 6.650 2.54 | 12.650 9.41 | 18.65 2.29
0.700 1.27 | 6.700 2.54 | 12.700 9.41 | 18.70 2.29
0.750 1.27 | 6.750 2.54 | 12.750 9.41 | 18.75 2.29
0.800 1.27 | 6.800 2.54 | 12.800 9.41 | 18.80 2.29
0.850 1.27 | 6.850 2.54 | 12.850 9.41 | 18.85 2.29
0.900 1.27 | 6.900 2.54 | 12.900 9.41 | 18.90 2.29
0.950 1.27 | 6.950 2.54 | 12.950 9.41 | 18.95 2.29
1.000 1.27 | 7.000 2.54 | 13.000 9.41 | 19.00 2.29
1.050 1.27 | 7.050 2.54 | 13.050 1.78 | 19.05 2.29

Unit Hyd Qpeak (cms)= 1.755

HRP1-3-EX_2-100 YEAR.OUT									
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53		
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		

HRP1-3-EX_2-100 YEAR.OUT							
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53
Max.Eff.Inten.(mm/hr)=							
over (min)			140.43	91.28			
			6.00	12.00			
Storage Coeff. (min)=			3.49 (ii)	10.17 (ii)			
Unit Hyd. Tpeak (min)=			6.00	12.00			
Unit Hyd. peak (cms)=			0.25	0.10			
TOTALS							
PEAK FLOW (cms)=			2.31	1.34		3.550 (iii)	
TIME TO PEAK (hrs)=			12.00	12.05		12.00	
RUNOFF VOLUME (mm)=			125.70	70.30		95.28	
TOTAL RAINFALL (mm)=			127.20	127.20		127.20	
RUNOFF COEFFICIENT =			0.99	0.55		0.75	

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN TIME STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0120):		13.35	3.550	12.00	95.28
+ ID2= 2 (0014):		24.22	2.488	12.42	78.71
=====					
ID = 3 (0006):		37.57	4.767	12.00	84.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0100)				
ID= 1 DT= 3.0 min		Area (ha)=	10.34	
		Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	4.65	5.69	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	262.55	40.00	
Mannings n	=	0.013	0.250	

HRP1-3-EX_2-100 YEAR.OUT									
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53		
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53		
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53		
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53		

HRP1-3-EX_2-100 YEAR.OUT									
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53		
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53		
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53		
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53		
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53		
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53		
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53		
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53		
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53		
Max.Eff.Inten.(mm/hr)=		140.43		91.28					
over (min)=		6.00		12.00					
Storage Coeff. (min)=		3.23 (ii)		9.91 (ii)					
Unit Hyd. Tpeak (min)=		6.00		12.00					
Unit Hyd. peak (cms)=		0.26		0.11					
									TOTALS
PEAK FLOW (cms)=	1.79			1.04					2.767 (iii)
TIME TO PEAK (hrs)=	12.00			12.05					12.00
RUNOFF VOLUME (mm)=	125.70			70.39					196.09
TOTAL RAINFALL (mm)=	127.20			127.20					127.20
RUNOFF COEFFICIENT =	0.99			0.55					0.75
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL									
THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

CALIB									
STANDHYD (0101)	Area (ha)=	21.81							
ID= 1 DT= 4.0 min	Total Imp(%)=	45.00		Dir. Conn.(%)=	45.00				

Surface Area (ha)=	9.81	12.00							
Dep. Storage (mm)=	1.50	1.50							
Average Slope (%)=	2.00	2.00							
Length (m)=	381.31	40.00							
Mannings n =	0.013	0.250							
NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.									

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.067	1.27	6.067	2.54	12.067	18.33	18.07	2.29		
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29		
0.533	1.27	6.533	2.54	12.533	13.87	18.53	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29		
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29		
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29		
1.533	1.27	7.533	2.54	13.533	6.18	19.53	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29		
1.800	2.04	7.800	2.54	13.800	10.43	19.80	2.29		
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29		
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53		
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53		
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		

HRP1-3-EX_2-100 YEAR.OUT									
2.667	1.65		8.667	3.43		14.667	3.82		20.67
2.733	1.65		8.733	3.43		14.733	3.82		20.73
2.800	1.65		8.800	3.43		14.800	3.82		20.80
2.867	1.65		8.867	3.43		14.867	3.82		20.87
2.933	1.65		8.933	3.43		14.933	3.82		20.93
3.000	1.65		9.000	3.43		15.000	3.82		21.00
3.067	1.65		9.067	4.07		15.067	3.82		21.07
3.133	1.65		9.133	4.07		15.133	3.82		21.13
3.200	1.65		9.200	4.07		15.200	3.82		21.20
3.267	1.65		9.267	4.07		15.267	3.82		21.27
3.333	1.65		9.333	4.07		15.333	3.82		21.33
3.400	1.65		9.400	4.07		15.400	3.82		21.40
3.467	1.65		9.467	4.07		15.467	3.82		21.47
3.533	1.65		9.533	4.32		15.533	3.82		21.53
3.600	1.65		9.600	4.58		15.600	3.82		21.60
3.667	1.65		9.667	4.58		15.667	3.82		21.67
3.733	1.65		9.733	4.58		15.733	3.82		21.73
3.800	1.65		9.800	4.58		15.800	3.82		21.80
3.867	1.65		9.867	4.58		15.867	3.82		21.87
3.933	1.65		9.933	4.58		15.933	3.82		21.93
4.000	1.65		10.000	4.58		16.000	3.82		22.00
4.067	2.04		10.067	5.85		16.067	2.29		22.07
4.133	2.04		10.133	5.85		16.133	2.29		22.13
4.200	2.04		10.200	5.85		16.200	2.29		22.20
4.267	2.04		10.267	5.85		16.267	2.29		22.27
4.333	2.04		10.333	5.85		16.333	2.29		22.33
4.400	2.04		10.400	5.85		16.400	2.29		22.40
4.467	2.04		10.467	5.85		16.467	2.29		22.47
4.533	2.04		10.533	6.87		16.533	2.29		22.53
4.600	2.04		10.600	7.89		16.600	2.29		22.60
4.667	2.04		10.667	7.89		16.667	2.29		22.67
4.733	2.04		10.733	7.89		16.733	2.29		22.73
4.800	2.04		10.800	7.89		16.800	2.29		22.80
4.867	2.04		10.867	7.89		16.867	2.29		22.87
4.933	2.04		10.933	7.89		16.933	2.29		22.93
5.000	2.04		11.000	7.89		17.000	2.29		23.00
5.067	2.04		11.067	12.21		17.067	2.29		23.07
5.133	2.04		11.133	12.21		17.133	2.29		23.13
5.200	2.04		11.200	12.21		17.200	2.29		23.20
5.267	2.04		11.267	12.21		17.267	2.29		23.27
5.333	2.04		11.333	12.21		17.333	2.29		23.33
5.400	2.04		11.400	12.21		17.400	2.29		23.40
5.467	2.04		11.467	12.21		17.467	2.29		23.47
5.533	2.04		11.533	32.56		17.533	2.29		23.53
5.600	2.04		11.600	52.92		17.600	2.29		23.60
5.667	2.04		11.667	52.92		17.667	2.29		23.67
5.733	2.04		11.733	52.92		17.733	2.29		23.73
5.800	2.04		11.800	118.54		17.800	2.29		23.80
5.867	2.04		11.867	140.43		17.867	2.29		23.87
5.933	2.04		11.933	140.43		17.933	2.29		23.93
6.000	2.04		12.000	140.43		18.000	2.29		24.00
Max.Eff.Inten.(mm/hr)=				140.43	91.29				
over (min)				5.00	12.00				
Storage Coeff. (min)=				4.04 (ii)	10.72 (ii)				
Unit Hyd. Tpeak (min)=				4.00	12.00				
Unit Hyd. peak (cms)=				0.27	0.10				
TOTALS									
PEAK FLOW (cms)=				3.76	2.16		5.793 (iii)		
TIME TO PEAK (hrs)=				12.00	12.07		12.00		
RUNOFF VOLUME (mm)=				125.70	70.39		95.28		
TOTAL RAINFALL (mm)=				127.20	127.20		127.20		
RUNOFF COEFFICIENT =				0.99	0.55		0.75		
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL									
THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0009)									
1 + 2 = 3									
AREA QPEAK TPEAK R.V.									
(ha) (cms) (hrs) (mm)									
ID1= 1 (0100):	10.34	2.767	12.00	95.28					
+ ID2= 2 (0101):	21.81	5.793	12.00	95.28					
=====									
ID = 3 (0009):	32.15	8.559	12.00	95.40					
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

FINISH									
=====									

HRP1-3-EX_2-100 YEAR.OUT

HRP6.1-EX_2-100 YEAR.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
V V I SSSS UUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\c8d145a9-0dd5-47b7-b15c-5d9ead535244\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\c8d145a9-0dd5-47b7-b15c-5d9ead535244\scenar

DATE: 03/24/2023 TIME: 10:06:54

USER:

COMMENTS: _____

** SIMULATION : Run 01

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\fd1c3467-cc8b-4992-b09d-61f2685b8f6a\571fbdef
| Ptotal= 57.60 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

| CALIB |
| NASHYD (1030) | Area (ha)= 30.38 Curve Number (CN)= 77.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69	
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69	
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69	
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69	
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69	
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69	
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69	
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69	
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69	
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69	
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69	
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69	
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69	
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69	
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69	
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69	
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69	
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69	
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69	
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69	
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69	
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69	
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69	
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69	
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69	
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69	
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69	
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69	
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69	
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69	
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69	
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69	
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69	
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69	
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69	
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69	
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69	
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69	

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 0.847 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 21.535
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.374

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |

HRP6.1-EX_2-100 YEAR.OUT
NASHYD (0130)| Area (ha)= 2.25 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min| Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.12

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs	mm/hr	
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04		
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04		
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04		
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04		
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69		
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69		
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69		
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69		

Unit Hyd Qpeak (cms)= 0.704

PEAK FLOW (cms)= 0.155 (1)
TIME TO PEAK (hrs)= 12.000

HRP6.1-EX_2-100 YEAR.OUT
RUNOFF VOLUME (mm)= 21.266
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.369

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID= 1 (1030):	30.38	0.847	12.42	21.54
+ ID2= 2 (0130):	2.25	0.155	12.00	21.27
ID = 3 (0003):	32.63	0.877	12.42	21.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0021)		Routing Time step (min)'= 4.00			
IN= 2--> OUT= 1					
<----- DATA FOR SECTION (1.1) ----->					
Distance	Elevation	Manning			
0.00	101.00	0.0000			
1.00	100.67	0.0000			
2.00	100.33	0.0000 /0.0350	Main Channel		
3.00	100.00	0.0350	Main Channel		
4.00	100.00	0.0350	Main Channel		
5.00	100.33	0.0350 /0.0000	Main Channel		
6.00	100.67	0.0000			
7.00	101.00	0.0000			
<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.185E+02	0.0	0.34	16.76
0.09	100.09	.417E+02	0.1	0.51	11.21
0.14	100.14	.695E+02	0.1	0.64	8.95
0.19	100.19	.102E+03	0.2	0.75	7.64
0.24	100.24	.139E+03	0.3	0.85	6.77
0.28	100.28	.181E+03	0.5	0.94	6.13
0.33	100.33	.227E+03	0.7	1.02	5.64
0.39	100.39	.288E+03	1.0	1.17	4.90
0.44	100.44	.355E+03	1.3	1.30	4.42
0.50	100.50	.428E+03	1.7	1.40	4.09
0.55	100.55	.508E+03	2.2	1.49	3.85
0.61	100.61	.594E+03	2.7	1.57	3.66
0.66	100.66	.686E+03	3.3	1.63	3.51
0.72	100.72	.785E+03	3.9	1.69	3.38
0.78	100.78	.890E+03	4.5	1.75	3.28
0.83	100.83	.100E+04	5.2	1.80	3.19
0.89	100.89	.112E+04	6.0	1.84	3.12
0.94	100.94	.124E+04	6.8	1.88	3.05
1.00	101.00	.138E+04	7.7	1.92	2.99

<---- hydrograph ---->				
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)
INFLOW : ID= 2 (0003)	32.63	0.88	12.42	0.37
OUTFLOW: ID= 1 (0021)	32.63	0.88	12.42	0.37

CALIB
NASHYD (0131)| Area (ha)= 14.65 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min| Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.40

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs	mm/hr	
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		

HRP6.1-EX_2-100 YEAR.OUT

0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	0.58	7.833	1.15	13.833	4.72	19.83	1.04
1.917	0.58	7.917	1.15	13.917	4.72	19.92	1.04
2.000	0.58	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 1.413

PEAK FLOW (cms)= 0.589 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 25.531
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.443

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-EX_2-100 YEAR.OUT

CALIB			
STANDHYD (0132)	Area (ha)=	8.25	
ID= 1 DT= 3.0 min	Total Imp(%)=	31.00	Dir. Conn.(%)= 31.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	2.56	5.69
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	234.52	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	0.84	7.800	1.15	13.800	4.72	19.80	1.04
1.850	0.84	7.850	1.15	13.850	4.72	19.85	1.04
1.900	0.84	7.900	1.15	13.900	4.72	19.90	1.04
1.950	0.84	7.950	1.15	13.950	4.72	19.95	1.04
2.000	0.84	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69

HRP6.1-EX_2-100 YEAR.OUT

HRP6.1-EX_2-100 YEAR.OUT

3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 25.28
over (min) 6.00 18.00
Storage Coeff. (min)= 4.15 (ii) 16.38 (ii)
Unit Hyd. Tpeak (min)= 6.00 18.00
Unit Hyd. peak (cms)= 0.23 0.07

TOTALS
PEAK FLOW (cms)= 0.44 0.23 0.602 (iii)
TIME TO PEAK (hrs)= 12.00 12.15 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 31.41
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.55

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0132):	8.25	0.602	12.00	31.41
+ ID2= 2 (0005):	47.28	1.433	12.33	22.76
ID = 3 (0007):	55.53	1.683	12.25	24.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2---> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 /0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 /0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

<---- hydrograph ---->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0007)	55.53	1.68	12.25	24.05	0.49	1.38
OUTFLOW: ID= 1 (0022)	55.53	1.68	12.28	24.04	0.49	1.38

CALIB
STANDHYD (0133)
ID= 1 DT= 3.0 min
Area (ha)= 6.79
Total Imp(%)= 47.00
Dir. Conn.(%)= 47.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.19	3.60
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	212.76	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04

HRP6.1-EX_2-100 YEAR.OUT

1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69

HRP6.1-EX_2-100 YEAR.OUT

5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 18.99
over (min) 6.00 15.00
Storage Coeff. (min)= 3.91 (ii) 12.79 (iii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

TOTALS
PEAK FLOW (cms)= 0.55 0.12 0.646 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 56.10 14.86 34.24
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.26 0.59

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0009) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0133): 6.79 0.646 12.00 34.24
+ ID2= 2 (0022): 55.53 1.680 12.28 24.04
=====

ID = 3 (0009): 62.32 2.064 12.05 25.15

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0010) | OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
DT= 5.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 0.0000 1.2220
0.0000 0.0000 | 3.9640 1.4400
0.0040 0.1320 | 5.1940 1.6250
0.0280 0.2670 | 6.2920 1.8150
0.0390 0.4050 | 6.6170 2.0100
0.3670 0.7010 | 8.3440 2.2100
1.0220 0.8510 | 9.3610 2.4150
1.7620 1.0040 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0009) 62.320 2.064 12.05 25.15
OUTFLOW: ID= 1 (0010) 62.320 0.675 13.23 22.18

PEAK FLOW REDUCTION [Qout/ Qin](%)= 32.72
TIME SHIFT OF PEAK FLOW (min)= 70.50
MAXIMUM STORAGE USED (ha.m.)= 0.7716

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

| CALIB |
| NASHYD (0134) | Area (ha)= 15.49 Curve Number (CN)= 77.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	0.58	6.003	1.15	12.003	8.39	18.00	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04

HRP6.1-EX_2-100 YEAR.OUT

0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	0.58	7.833	1.15	13.833	4.72	19.83	1.04
1.917	0.58	7.917	1.15	13.917	4.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 1.676

PEAK FLOW (cms)= 0.556 (l)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 21.532
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(ha.m.)
ID1= 1 (0010):	62.32	0.675	13.23	22.18
+ ID2= 2 (0134):	15.49	0.556	12.25	21.53
ID = 3 (0011):	77.81	0.815	13.10	22.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP6.1-EX_2-100 YEAR.OUT

RESERVOIR(0015)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	9.4690	0.3520
	0.4100	0.1040	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0011)	77.810	0.815	13.10	22.05
OUTFLOW: ID= 1 (0015)	77.810	0.808	13.18	22.01

PEAK FLOW REDUCTION [Qout/Qin](%)= 99.13
TIME SHIFT OF PEAK FLOW (min)= 4.50
MAXIMUM STORAGE USED (ha.m.)= 0.1149

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB	Area (ha)=	6.36
STANDHYD(0135)	Total Imp(%)=	36.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	36.00

	IMPERVIOUS	PERVIOUS (l)
Surface Area (ha)=	2.29	4.07
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	205.91	40.00
Mannings n	=	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		

HRP6.1-EX_2-100 YEAR.OUT											
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69				
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69				
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69				
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69				
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69				
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69				
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69				
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69				
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69				
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69				
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69				
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69				
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69				
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69				
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69				
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69				
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69				
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69				
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69				
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69				
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69				
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69				
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69				
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69				
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69				
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69				
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69				
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69				
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69				
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69				
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69				
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69				
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69				
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69				
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69				
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69				
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69				
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69				
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69				
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69				
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69				
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69				
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69				
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69				
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69				
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69				
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69				
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69				
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69				
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69				
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69				
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69				
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69				
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69				
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69				
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69				
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69				
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69				
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69				
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69				
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69				
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69				
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69				
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69				
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69				
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69				
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69				
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69				
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69				
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69				

Max.Eff.Inten.(mm/hr)= 63.59 25.28
over (min) 6.00 18.00
Storage Coeff. (min)= 3.84 (ii) 16.07 (iii)
Unit Hyd. Tpeak (min)= 6.00 18.00
Unit Hyd. peak (cms)= 0.24 0.07

TOTALS
PEAK FLOW (cms)= 0.40 0.16 0.513 (iii)
TIME TO PEAK (hrs)= 12.00 12.15 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 33.20
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.58

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

HRP6.1-EX_2-100 YEAR.OUT
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0012) |
1 + 2 = 3
ID1= 1 (0135): AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
+ ID2= 2 (0015): 6.36 0.513 12.00 33.20
77.81 0.808 13.18 22.01

ID = 3 (0012): 84.17 0.846 13.07 22.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0040) |
IN= 2--> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0800
1.00 100.67 0.0800
2.00 100.33 0.0800 /0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 /0.0800 Main Channel
6.00 100.67 0.0800
7.00 101.00 0.0800

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .590E+02 0.0 0.34 53.36
0.09 100.09 .133E+03 0.1 0.51 35.70
0.14 100.14 .221E+03 0.1 0.64 28.48
0.19 100.19 .324E+03 0.2 0.75 24.33
0.24 100.24 .442E+03 0.3 0.85 21.55
0.28 100.28 .575E+03 0.5 0.94 19.51
0.33 100.33 .723E+03 0.7 1.02 17.94
0.39 100.39 .916E+03 1.0 1.17 15.58
0.44 100.44 .113E+04 1.3 1.30 14.08
0.50 100.50 .136E+04 1.7 1.40 13.03
0.55 100.55 .162E+04 2.2 1.49 12.25
0.61 100.61 .189E+04 2.7 1.57 11.65
0.66 100.66 .218E+04 3.3 1.63 11.17
0.72 100.72 .250E+04 3.9 1.69 10.77
0.78 100.78 .283E+04 4.5 1.75 10.45
0.83 100.83 .319E+04 5.2 1.80 10.17
0.89 100.89 .357E+04 6.0 1.84 9.92
0.94 100.94 .396E+04 6.8 1.88 9.71
1.00 101.00 .438E+04 7.7 1.92 9.52

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0012) 84.17 0.85 13.07 22.85 0.36 1.10
OUTFLOW: ID= 1 (0040) 84.17 0.80 13.30 22.80 0.35 1.07

| CALIB |
| NASHYD (0121) | Area (ha)= 3.64 Curve Number (CN)= 77.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.11

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.083 0.58 | 6.083 1.15 | 12.083 8.30 | 18.08 1.04
0.167 0.58 | 6.167 1.15 | 12.167 8.29 | 18.17 1.04
0.250 0.58 | 6.250 1.15 | 12.250 8.29 | 18.25 1.04
0.333 0.58 | 6.333 1.15 | 12.333 8.29 | 18.33 1.04
0.417 0.58 | 6.417 1.15 | 12.417 8.29 | 18.42 1.04
0.500 0.58 | 6.500 1.15 | 12.500 8.29 | 18.50 1.04
0.583 0.58 | 6.583 1.15 | 12.583 4.26 | 18.58 1.04
0.667 0.58 | 6.667 1.15 | 12.667 4.26 | 18.67 1.04
0.750 0.58 | 6.750 1.15 | 12.750 4.26 | 18.75 1.04
0.833 0.58 | 6.833 1.15 | 12.833 4.26 | 18.83 1.04
0.917 0.58 | 6.917 1.15 | 12.917 4.26 | 18.92 1.04
1.000 0.58 | 7.000 1.15 | 13.000 4.26 | 19.00 1.04

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1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 1.241

PEAK FLOW (cms)= 0.260 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 21.165
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.367

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0122)	Area (ha)= 16.13
ID= 1 DT= 3.0 min	Total Imp(%)= 31.00 Dir. Conn.(%)= 31.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.00	11.13
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	327.92	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP6.1-EX_2-100 YEAR.OUT

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN		TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr		hrs	mm/hr	hrs	mm/hr	
0.050	0.58	6.950	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69		
4.000	0.92	10.000	2.65	16.000	1.73	22.00	0.69		
4.050	0.92	10.050	2.65	16.050	1.84	22.05	0.69		
4.100	0.92	10.100	2.65	16.100	1.84	22.10	0.69		
4.150	0.92	10.150	2.65	16.150	1.84	22.15	0.69		
4.200	0.92	10.200	2.65	16.200	1.84	22.20	0.69		

HRP6.1-EX_2-100 YEAR.OUT									
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69		
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69		
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69		
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69		

Max.Eff.Inten.(mm/hr)= 63.59 25.28
over (min) 6.00 18.00
Storage Coeff. (min)= 5.07 (ii) 17.30 (ii)
Unit Hyd. Tpeak (min)= 6.00 18.00
Unit Hyd. peak (cms)= 0.21 0.06

TOTALS
PEAK FLOW (cms)= 0.84 0.43 1.150 (iii)
TIME TO PEAK (hrs)= 12.00 12.15 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 31.41
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.55

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0121):	3.64	0.260	12.00	21.17
+ ID2= 2 (0122):	16.13	1.150	12.00	31.41
=====				
ID = 3 (0019):	19.77	1.410	12.00	29.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0019):	19.77	1.410	12.00	29.53
+ ID2= 2 (0040):	84.17	0.801	13.30	22.80
=====				
ID = 3 (0020):	103.94	1.739	12.00	24.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAA L
V V I SS U U A A L

HRP6.1-EX_2-100 YEAR.OUT
VV I SSSS UUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y Y M M 0 0
000 T T H H Y Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYM0 6.1\VO2\voin.dat
Output filename: C:\Users\Abira\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ao3019a6-8188-463d-939b-7898d5ffd302\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ao3019a6-8188-463d-939b-7898d5ffd302\scenar

DATE: 03/24/2023 TIME: 10:06:56

USER:

COMMENTS: _____

** SIMULATION : Run 02 **

MASS STORM
Filename: C:\Users\Abira\AppData\Local\Temp\fd1c3467-cc8b-4992-b09d-61f2685b8f6a\fb8e60ca
Ptotal= 76.00 mm
Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.77	6.25	1.54	12.25	11.06	18.25	1.38	
0.50	0.77	6.50	1.54	12.50	11.06	18.50	1.38	
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38	
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38	
1.25	0.77	7.25	1.54	13.25	1.08	19.25	1.38	
1.50	0.77	7.50	1.54	13.50	1.08	19.50	1.38	
1.75	0.77	7.75	1.54	13.75	6.30	19.75	1.38	
2.00	1.38	8.00	1.54	14.00	6.30	20.00	1.38	
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92	
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92	
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92	
3.00	1.00	9.00	2.07	15.00	2.30	21.00	0.92	
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92	
3.50	1.00	9.50	2.46	15.50	2.30	21.50	0.92	
3.75	1.00	9.75	2.76	15.75	2.30	21.75	0.92	
4.00	1.00	10.00	2.76	16.00	2.30	22.00	0.92	
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92	
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92	
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92	
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92	
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92	
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92	
5.75	1.23	11.75	31.95	17.75	1.38	23.75	0.92	
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92	

CALIB
NASHYD (1030)
ID= 1 DT= 5.0 min
Area (ha)= 30.38 Curve Number (CN)= 77.0
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38	
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38	
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38	
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38	
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38	

HRP6.1-EX_2-100 YEAR.OUT

0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 1.394 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 34.909
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.455

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| NASHYD (0130) | Area (ha)= 2.25 Curve Number (CN)= 77.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

| U.H. Tp(hrs)= 0.12

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

HRP6.1-EX_2-100 YEAR.OUT

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.704

PEAK FLOW (cms)= 0.253 (1)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 34.472
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.449

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-EX_2-100 YEAR.OUT

ADD HYD (0003)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (1030):	30.38	1.394	12.42	34.91	
+ ID2= 2 (0130):	2.25	0.253	12.00	34.47	
=====					
ID = 3 (0003):	32.63	1.446	12.33	34.88	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0021)	Routing time step (min)'= 4.00
IN= 2--> OUT= 1	

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 /0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 /0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.185E+02	0.0	0.34	16.76
0.09	100.09	.417E+02	0.1	0.51	11.21
0.14	100.14	.695E+02	0.1	0.64	8.95
0.19	100.19	.102E+03	0.2	0.75	7.64
0.24	100.24	.139E+03	0.3	0.85	6.77
0.28	100.28	.181E+03	0.5	0.94	6.13
0.33	100.33	.227E+03	0.7	1.02	5.64
0.39	100.39	.280E+03	1.0	1.17	4.90
0.44	100.44	.355E+03	1.3	1.30	4.42
0.50	100.50	.428E+03	1.7	1.40	4.09
0.55	100.55	.508E+03	2.2	1.49	3.85
0.61	100.61	.594E+03	2.7	1.57	3.66
0.66	100.66	.686E+03	3.3	1.63	3.51
0.72	100.72	.785E+03	3.9	1.69	3.38
0.78	100.78	.890E+03	4.5	1.75	3.28
0.83	100.83	.100E+04	5.2	1.80	3.19
0.89	100.89	.112E+04	6.0	1.84	3.12
0.94	100.94	.124E+04	6.8	1.88	3.05
1.00	101.00	.138E+04	7.7	1.92	2.99

	<---- hydrograph ---->				<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0003)	32.63	1.45	12.33	34.88	0.46	1.32
OUTFLOW: ID= 1 (0021)	32.63	1.44	12.42	34.88	0.46	1.32

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38

HRP6.1-EX_2-100 YEAR.OUT

1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 1.413

PEAK FLOW	(cms)= 0.945 (1)
TIME TO PEAK	(hrs)= 12.250
RUNOFF VOLUME	(mm)= 40.410
TOTAL RAINFALL	(mm)= 76.800
RUNOFF COEFFICIENT	= 0.526

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0131):	14.65	0.945	12.25	40.41	
+ ID2= 2 (0021):	32.63	1.443	12.42	34.88	
=====					
ID = 3 (0005):	47.28	2.345	12.33	36.59	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (0132)	Area (ha)= 8.25
ID= 1 DT= 3.0 min	Total Imp(%)= 31.00 Dir. Conn.(%)= 31.00

IMPERVIOUS PERVIOUS (1)

Surface Area (ha)= 2.56 5.69
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 234.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	0.050	1.54	12.050	11.06	18.05	1.38		
0.100	0.77	0.100	1.54	12.100	11.06	18.10	1.38		
0.150	0.77	0.150	1.54	12.150	11.06	18.15	1.38		
0.200	0.77	0.200	1.54	12.200	11.06	18.20	1.38		
0.250	0.77	0.250	1.54	12.250	11.06	18.25	1.38		
0.300	0.77	0.300	1.54	12.300	11.06	18.30	1.38		
0.350	0.77	0.350	1.54	12.350	11.06	18.35	1.38		
0.400	0.77	0.400	1.54	12.400	11.06	18.40	1.38		
0.450	0.77	0.450	1.54	12.450	11.06	18.45	1.38		
0.500	0.77	0.500	1.54	12.500	11.06	18.50	1.38		
0.550	0.77	0.550	1.54	12.550	5.68	18.55	1.38		
0.600	0.77	0.600	1.54	12.600	5.68	18.60	1.38		
0.650	0.77	0.650	1.54	12.650	5.68	18.65	1.38		
0.700	0.77	0.700	1.54	12.700	5.68	18.70	1.38		
0.750	0.77	0.750	1.54	12.750	5.68	18.75	1.38		
0.800	0.77	0.800	1.54	12.800	5.68	18.80	1.38		
0.850	0.77	0.850	1.54	12.850	5.68	18.85	1.38		
0.900	0.77	0.900	1.54	12.900	5.68	18.90	1.38		
0.950	0.77	0.950	1.54	12.950	5.68	18.95	1.38		
1.000	0.77	0.900	1.54	13.000	5.68	19.00	1.38		
1.050	0.77	0.950	1.54	13.050	1.08	19.05	1.38		
1.100	0.77	0.900	1.54	13.100	1.08	19.10	1.38		
1.150	0.77	0.950	1.54	13.150	1.08	19.15	1.38		
1.200	0.77	0.900	1.54	13.200	1.08	19.20	1.38		
1.250	0.77	0.950	1.54	13.250	1.08	19.25	1.38		
1.300	0.77	0.900	1.54	13.300	1.08	19.30	1.38		
1.350	0.77	0.950	1.54	13.350	1.08	19.35	1.38		
1.400	0.77	0.900	1.54	13.400	1.08	19.40	1.38		
1.450	0.77	0.950	1.54	13.450	1.08	19.45	1.38		
1.500	0.77	0.900	1.54	13.500	1.08	19.50	1.38		
1.550	0.77	0.950	1.54	13.550	6.30	19.55	1.38		
1.600	0.77	0.900	1.54	13.600	6.30	19.60	1.38		
1.650	0.77	0.950	1.54	13.650	6.30	19.65	1.38		
1.700	0.77	0.900	1.54	13.700	6.30	19.70	1.38		
1.750	0.77	0.950	1.54	13.750	6.30	19.75	1.38		
1.800	1.38	0.900	1.54	13.800	6.30	19.80	1.38		
1.850	1.38	0.950	1.54	13.850	6.30	19.85	1.38		
1.900	1.38	0.900	1.54	13.900	6.30	19.90	1.38		
1.950	1.38	0.950	1.54	13.950	6.30	19.95	1.38		
2.000	1.38	0.900	1.54	14.000	6.29	20.00	1.38		
2.050	1.00	0.850	2.07	14.050	2.30	20.05	0.92		
2.100	1.00	0.800	2.07	14.100	2.30	20.10	0.92		
2.150	1.00	0.750	2.07	14.150	2.30	20.15	0.92		
2.200	1.00	0.700	2.07	14.200	2.30	20.20	0.92		
2.250	1.00	0.650	2.07	14.250	2.30	20.25	0.92		
2.300	1.00	0.600	2.07	14.300	2.30	20.30	0.92		
2.350	1.00	0.550	2.07	14.350	2.30	20.35	0.92		
2.400	1.00	0.500	2.07	14.400	2.30	20.40	0.92		
2.450	1.00	0.450	2.07	14.450	2.30	20.45	0.92		
2.500	1.00	0.400	2.07	14.500	2.30	20.50	0.92		
2.550	1.00	0.350	2.07	14.550	2.30	20.55	0.92		
2.600	1.00	0.300	2.07	14.600	2.30	20.60	0.92		
2.650	1.00	0.250	2.07	14.650	2.30	20.65	0.92		
2.700	1.00	0.200	2.07	14.700	2.30	20.70	0.92		
2.750	1.00	0.150	2.07	14.750	2.30	20.75	0.92		
2.800	1.00	0.100	2.07	14.800	2.30	20.80	0.92		
2.850	1.00	0.050	2.07	14.850	2.30	20.85	0.92		
2.900	1.00	0.000	2.07	14.900	2.30	20.90	0.92		
2.950	1.00	0.000	2.07	14.950	2.30	20.95	0.92		
3.000	1.00	0.000	2.07	15.000	2.30	21.00	0.92		
3.050	1.00	0.000	2.46	15.050	2.30	21.05	0.92		
3.100	1.00	0.000	2.46	15.100	2.30	21.10	0.92		
3.150	1.00	0.000	2.46	15.150	2.30	21.15	0.92		
3.200	1.00	0.000	2.46	15.200	2.30	21.20	0.92		
3.250	1.00	0.000	2.46	15.250	2.30	21.25	0.92		
3.300	1.00	0.000	2.46	15.300	2.30	21.30	0.92		
3.350	1.00	0.000	2.46	15.350	2.30	21.35	0.92		
3.400	1.00	0.000	2.46	15.400	2.30	21.40	0.92		
3.450	1.00	0.000	2.46	15.450	2.30	21.45	0.92		
3.500	1.00	0.000	2.46	15.500	2.30	21.50	0.92		
3.550	1.00	0.000	2.76	15.550	2.30	21.55	0.92		
3.600	1.00	0.000	2.76	15.600	2.30	21.60	0.92		
3.650	1.00	0.000	2.76	15.650	2.30	21.65	0.92		
3.700	1.00	0.000	2.76	15.700	2.30	21.70	0.92		
3.750	1.00	0.000	2.76	15.750	2.30	21.75	0.92		

HRP6.1-EX_2-100 YEAR.OUT									
3.800	1.00	0.800	2.76	15.800	2.30	21.80	0.92		
3.850	1.00	0.850	2.76	15.850	2.30	21.85	0.92		
3.900	1.00	0.900	2.76	15.900	2.30	21.90	0.92		
3.950	1.00	0.950	2.76	15.950	2.30	21.95	0.92		
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92		
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92		
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92		
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92		
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92		
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92		
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92		
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92		
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92		
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92		
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92		
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92		
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92		
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92		
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92		
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92		
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92		
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92		
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92		
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92		
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92		
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92		
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92		
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92		
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92		
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92		
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92		
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92		
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92		
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92		
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92		
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92		
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92		
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92		
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92		
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92		
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92		
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92		
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92		
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92		
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92		

Max.Eff.Inten.(mm/hr)=	84.79	42.25	
over (min)	6.00	15.00	
Storage Coeff. (min)=	3.70 (ii)	13.66 (ii)	
Unit Hyd. Tpeak (min)=	6.00	15.00	
Unit Hyd. peak (cms)=	0.25	0.08	
			TOTALS
PEAK FLOW (cms)=	0.59	0.41	0.929 (iii)
TIME TO PEAK (hrs)=	12.00	12.10	12.00
RUNOFF VOLUME (mm)=	75.30	32.57	45.82
TOTAL RAINFALL (mm)=	76.80	76.80	76.80
RUNOFF COEFFICIENT =	0.98	0.42	0.60

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0132):	8.25	0.929	12.00	45.82
+ ID2= 2 (0005):	47.28	2.345	12.33	36.59
=====				
ID = 3 (0007):	55.53	2.724	12.25	37.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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HRP6.1-EX_2-100 YEAR.OUT			
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 /0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98
<----- hydrograph -----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m) (m/s)
INFLOW : ID= 2 (0007)	55.53	2.72	12.25	37.96	0.61 1.57
OUTFLOW: ID= 1 (0022)	55.53	2.72	12.25	37.96	0.61 1.57

CALIB	Area (ha)=	6.79
STANDHYD (0133)	Total Imp(%)=	47.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	47.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.19	3.60
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	212.76	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77 6.050	1.54 12.050	11.06 18.05	1.38			
0.100	0.77 6.100	1.54 12.100	11.06 18.10	1.38			
0.150	0.77 6.150	1.54 12.150	11.06 18.15	1.38			
0.200	0.77 6.200	1.54 12.200	11.06 18.20	1.38			
0.250	0.77 6.250	1.54 12.250	11.06 18.25	1.38			
0.300	0.77 6.300	1.54 12.300	11.06 18.30	1.38			
0.350	0.77 6.350	1.54 12.350	11.06 18.35	1.38			
0.400	0.77 6.400	1.54 12.400	11.06 18.40	1.38			
0.450	0.77 6.450	1.54 12.450	11.06 18.45	1.38			
0.500	0.77 6.500	1.54 12.500	11.06 18.50	1.38			
0.550	0.77 6.550	1.54 12.550	5.68 18.55	1.38			
0.600	0.77 6.600	1.54 12.600	5.68 18.60	1.38			
0.650	0.77 6.650	1.54 12.650	5.68 18.65	1.38			
0.700	0.77 6.700	1.54 12.700	5.68 18.70	1.38			
0.750	0.77 6.750	1.54 12.750	5.68 18.75	1.38			
0.800	0.77 6.800	1.54 12.800	5.68 18.80	1.38			
0.850	0.77 6.850	1.54 12.850	5.68 18.85	1.38			
0.900	0.77 6.900	1.54 12.900	5.68 18.90	1.38			
0.950	0.77 6.950	1.54 12.950	5.68 18.95	1.38			
1.000	0.77 7.000	1.54 13.000	5.68 19.00	1.38			
1.050	0.77 7.050	1.54 13.050	1.08 19.05	1.38			
1.100	0.77 7.100	1.54 13.100	1.08 19.10	1.38			
1.150	0.77 7.150	1.54 13.150	1.08 19.15	1.38			
1.200	0.77 7.200	1.54 13.200	1.08 19.20	1.38			
1.250	0.77 7.250	1.54 13.250	1.08 19.25	1.38			
1.300	0.77 7.300	1.54 13.300	1.08 19.30	1.38			
1.350	0.77 7.350	1.54 13.350	1.08 19.35	1.38			
1.400	0.77 7.400	1.54 13.400	1.08 19.40	1.38			
1.450	0.77 7.450	1.54 13.450	1.08 19.45	1.38			
1.500	0.77 7.500	1.54 13.500	1.08 19.50	1.38			
1.550	0.77 7.550	1.54 13.550	6.38 19.55	1.38			

HRP6.1-EX_2-100 YEAR.OUT							
1.600	0.77 7.600	1.54 13.600	6.38 19.60	1.38			
1.650	0.77 7.650	1.54 13.650	6.38 19.65	1.38			
1.700	0.77 7.700	1.54 13.700	6.38 19.70	1.38			
1.750	0.77 7.750	1.54 13.750	6.38 19.75	1.38			
1.800	1.38 7.800	1.54 13.800	6.38 19.80	1.38			
1.850	1.38 7.850	1.54 13.850	6.38 19.85	1.38			
1.900	1.38 7.900	1.54 13.900	6.38 19.90	1.38			
1.950	1.38 7.950	1.54 13.950	6.38 19.95	1.38			
2.000	1.38 8.000	1.54 14.000	6.29 20.00	1.38			
2.050	1.00 8.050	2.07 14.050	2.30 20.05	0.92			
2.100	1.00 8.100	2.07 14.100	2.30 20.10	0.92			
2.150	1.00 8.150	2.07 14.150	2.30 20.15	0.92			
2.200	1.00 8.200	2.07 14.200	2.30 20.20	0.92			
2.250	1.00 8.250	2.07 14.250	2.30 20.25	0.92			
2.300	1.00 8.300	2.07 14.300	2.30 20.30	0.92			
2.350	1.00 8.350	2.07 14.350	2.30 20.35	0.92			
2.400	1.00 8.400	2.07 14.400	2.30 20.40	0.92			
2.450	1.00 8.450	2.07 14.450	2.30 20.45	0.92			
2.500	1.00 8.500	2.07 14.500	2.30 20.50	0.92			
2.550	1.00 8.550	2.07 14.550	2.30 20.55	0.92			
2.600	1.00 8.600	2.07 14.600	2.30 20.60	0.92			
2.650	1.00 8.650	2.07 14.650	2.30 20.65	0.92			
2.700	1.00 8.700	2.07 14.700	2.30 20.70	0.92			
2.750	1.00 8.750	2.07 14.750	2.30 20.75	0.92			
2.800	1.00 8.800	2.07 14.800	2.30 20.80	0.92			
2.850	1.00 8.850	2.07 14.850	2.30 20.85	0.92			
2.900	1.00 8.900	2.07 14.900	2.30 20.90	0.92			
2.950	1.00 8.950	2.07 14.950	2.30 20.95	0.92			
3.000	1.00 9.000	2.07 15.000	2.30 21.00	0.92			
3.050	1.00 9.050	2.46 15.050	2.30 21.05	0.92			
3.100	1.00 9.100	2.46 15.100	2.30 21.10	0.92			
3.150	1.00 9.150	2.46 15.150	2.30 21.15	0.92			
3.200	1.00 9.200	2.46 15.200	2.30 21.20	0.92			
3.250	1.00 9.250	2.46 15.250	2.30 21.25	0.92			
3.300	1.00 9.300	2.46 15.300	2.30 21.30	0.92			
3.350	1.00 9.350	2.46 15.350	2.30 21.35	0.92			
3.400	1.00 9.400	2.46 15.400	2.30 21.40	0.92			
3.450	1.00 9.450	2.46 15.450	2.30 21.45	0.92			
3.500	1.00 9.500	2.46 15.500	2.30 21.50	0.92			
3.550	1.00 9.550	2.76 15.550	2.30 21.55	0.92			
3.600	1.00 9.600	2.76 15.600	2.30 21.60	0.92			
3.650	1.00 9.650	2.76 15.650	2.30 21.65	0.92			
3.700	1.00 9.700	2.76 15.700	2.30 21.70	0.92			
3.750	1.00 9.750	2.76 15.750	2.30 21.75	0.92			
3.800	1.00 9.800	2.76 15.800	2.30 21.80	0.92			
3.850	1.00 9.850	2.76 15.850	2.30 21.85	0.92			
3.900	1.00 9.900	2.76 15.900	2.30 21.90	0.92			
3.950	1.00 9.950	2.76 15.950	2.30 21.95	0.92			
4.000	1.00 10.000	2.77 16.000	2.30 22.00	0.92			
4.050	1.23 10.050	3.53 16.050	1.38 22.05	0.92			
4.100	1.23 10.100	3.53 16.100	1.38 22.10	0.92			
4.150	1.23 10.150	3.53 16.150	1.38 22.15	0.92			
4.200	1.23 10.200	3.53 16.200	1.38 22.20	0.92			
4.250	1.23 10.250	3.53 16.250	1.38 22.25	0.92			
4.300	1.23 10.300	3.53 16.300	1.38 22.30	0.92			
4.350	1.23 10.350	3.53 16.350	1.38 22.35	0.92			
4.400	1.23 10.400	3.53 16.400	1.38 22.40	0.92			
4.450	1.23 10.450	3.53 16.450	1.38 22.45	0.92			
4.500	1.23 10.500	3.53 16.500	1.38 22.50	0.92			
4.550	1.23 10.550	4.76 16.550	1.38 22.55	0.92			
4.600	1.23 10.600	4.76 16.600	1.38 22.60	0.92			
4.650	1.23 10.650	4.76 16.650	1.38 22.65	0.92			
4.700	1.23 10.700	4.76 16.700	1.38 22.70	0.92			
4.750	1.23 10.750	4.76 16.750	1.38 22.75	0.92			
4.800	1.23 10.800	4.76 16.800	1.38 22.80	0.92			
4.850	1.23 10.850	4.76 16.850	1.38 22.85	0.92			
4.900	1.23 10.900	4.76 16.900	1.38 22.90	0.92			
4.950	1.23 10.950	4.76 16.950	1.38 22.95	0.92			
5.000	1.23 11.000	4.76 17.000	1.38 23.00	0.92			
5.050	1.23 11.050	7.37 17.050	1.38 23.05	0.92			
5.100	1.23 11.100	7.37 17.100	1.38 23.10	0.92			
5.150	1.23 11.150	7.37 17.150	1.38 23.15	0.92			
5.200	1.23 11.200	7.37 17.200	1.38 23.20	0.92			
5.250	1.23 11.250	7.37 17.250	1.38 23.25	0.92			
5.300	1.23 11.300	7.37 17.300	1.38 23.30	0.92			
5.350	1.23 11.350	7.37 17.350	1.38 23.35	0.92			
5.400	1.23 11.400	7.37 17.400	1.38 23.40	0.92			
5.450	1.23 11.450	7.37 17.450	1.38 23.45	0.92			
5.500	1.23 11.500	7.39 17.500	1.38 23.50	0.92			
5.550	1.23 11.550	31.95 17.550	1.38 23.55	0.92			
5.600	1.23 11.600	31.95 17.600	1.38 23.60	0.92			
5.650	1.23 11.650	31.95 17.650	1.38 23.65	0.92			
5.700	1.23 11.700	31.95 17.700	1.38 23.70	0.92			
5.750	1.23 11.750	31.95 17.750	1.38 23.75	0.92			
5.800	1.23 11.800	84.79 17.800	1.38 23.80	0.92			
5.850	1.23 11.850	84.79 17.850	1.38 23.85	0.92			
5.900	1.23 11.900	84.79 17.900	1.38 23.90	0.92			

HRP6.1-EX.2-100 YEAR.OUT
5.950 1.23 |11.950 84.79 |17.950 1.38 | 23.95 0.92
6.000 1.23 |12.000 84.75 |18.000 1.38 | 24.00 0.92
Max.Eff.Inten.(mm/hr)= 84.79 31.53
over (min) 6.00 12.00
Storage Coeff. (min)= 3.49 (ii) 11.40 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.10
TOTALS
PEAK FLOW (cms)= 0.74 0.21 0.932 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 75.30 24.55 48.40
TOTAL RAINFALL (mm)= 76.80 76.00 76.80
RUNOFF COEFFICIENT = 0.98 0.32 0.63
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0009)|
1 + 2 = 3
ID1= 1 (0133): 6.79 0.932 12.00 48.40
+ ID2= 2 (0022): 55.53 2.720 12.25 37.96

ID = 3 (0009): 62.32 3.295 12.05 39.10
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010) OVERFLOW IS OFF
DT= 5.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 3.1610 1.2220
0.0000 0.0000 | 3.9640 1.4400
0.0040 0.1320 | 5.1940 1.6250
0.0280 0.2670 | 6.2920 1.8150
0.0390 0.4050 | 6.6170 2.0100
0.3670 0.7010 | 8.3440 2.2100
1.0220 0.8510 | 9.3610 2.4150
1.7620 1.0040 | 0.0000 0.0000
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0009) 62.320 3.295 12.05 39.10
OUTFLOW: ID= 1 (0010) 62.320 1.668 12.93 36.05
PEAK FLOW REDUCTION [Qout/Qin](%)= 50.62
TIME SHIFT OF PEAK FLOW (min)= 52.50
MAXIMUM STORAGE USED (ha.m.)= 0.9846

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

| CALIB
| NASHYD (0134) | Area (ha)= 15.49 Curve Number (CN)= 77.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35
NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr
0.083 0.77 | 6.083 1.54 | 12.083 11.07 | 18.08 1.38
0.167 0.77 | 6.167 1.54 | 12.167 11.06 | 18.17 1.38
0.250 0.77 | 6.250 1.54 | 12.250 11.06 | 18.25 1.38
0.333 0.77 | 6.333 1.54 | 12.333 11.06 | 18.33 1.38
0.417 0.77 | 6.417 1.54 | 12.417 11.06 | 18.42 1.38
0.500 0.77 | 6.500 1.54 | 12.500 11.06 | 18.50 1.38
0.583 0.77 | 6.583 1.54 | 12.583 5.60 | 18.58 1.38
0.667 0.77 | 6.667 1.54 | 12.667 5.60 | 18.67 1.38
0.750 0.77 | 6.750 1.54 | 12.750 5.60 | 18.75 1.38
0.833 0.77 | 6.833 1.54 | 12.833 5.60 | 18.83 1.38
0.917 0.77 | 6.917 1.54 | 12.917 5.60 | 18.92 1.38
1.000 0.77 | 7.000 1.54 | 13.000 5.60 | 19.00 1.38
1.083 0.77 | 7.083 1.54 | 13.083 1.00 | 19.08 1.38
1.167 0.77 | 7.167 1.54 | 13.167 1.00 | 19.17 1.38
1.250 0.77 | 7.250 1.54 | 13.250 1.00 | 19.25 1.38

HRP6.1-EX.2-100 YEAR.OUT
1.333 0.77 | 7.333 1.54 |13.333 1.00 |19.33 1.38
1.417 0.77 | 7.417 1.54 |13.417 1.00 |19.42 1.38
1.500 0.77 | 7.500 1.54 |13.500 1.00 |19.50 1.38
1.583 0.77 | 7.583 1.54 |13.583 6.30 |19.58 1.38
1.667 0.77 | 7.667 1.54 |13.667 6.30 |19.67 1.38
1.750 0.77 | 7.750 1.54 |13.750 6.30 |19.75 1.38
1.833 1.38 | 7.833 1.54 |13.833 6.30 |19.83 1.38
1.917 1.38 | 7.917 1.54 |13.917 6.30 |19.92 1.38
2.000 1.38 | 8.000 1.54 |14.000 6.30 |20.00 1.38
2.083 1.00 | 8.083 2.07 |14.083 2.30 |20.08 0.92
2.167 1.00 | 8.167 2.07 |14.167 2.30 |20.17 0.92
2.250 1.00 | 8.250 2.07 |14.250 2.30 |20.25 0.92
2.333 1.00 | 8.333 2.07 |14.333 2.30 |20.33 0.92
2.417 1.00 | 8.417 2.07 |14.417 2.30 |20.42 0.92
2.500 1.00 | 8.500 2.07 |14.500 2.30 |20.50 0.92
2.583 1.00 | 8.583 2.07 |14.583 2.30 |20.58 0.92
2.667 1.00 | 8.667 2.07 |14.667 2.30 |20.67 0.92
2.750 1.00 | 8.750 2.07 |14.750 2.30 |20.75 0.92
2.833 1.00 | 8.833 2.07 |14.833 2.30 |20.83 0.92
2.917 1.00 | 8.917 2.07 |14.917 2.30 |20.92 0.92
3.000 1.00 | 9.000 2.07 |15.000 2.30 |21.00 0.92
3.083 1.00 | 9.083 2.46 |15.083 2.30 |21.08 0.92
3.167 1.00 | 9.167 2.46 |15.167 2.30 |21.17 0.92
3.250 1.00 | 9.250 2.46 |15.250 2.30 |21.25 0.92
3.333 1.00 | 9.333 2.46 |15.333 2.30 |21.33 0.92
3.417 1.00 | 9.417 2.46 |15.417 2.30 |21.42 0.92
3.500 1.00 | 9.500 2.46 |15.500 2.30 |21.50 0.92
3.583 1.00 | 9.583 2.76 |15.583 2.30 |21.58 0.92
3.667 1.00 | 9.667 2.76 |15.667 2.30 |21.67 0.92
3.750 1.00 | 9.750 2.76 |15.750 2.30 |21.75 0.92
3.833 1.00 | 9.833 2.76 |15.833 2.30 |21.83 0.92
3.917 1.00 | 9.917 2.76 |15.917 2.30 |21.92 0.92
4.000 1.00 |10.000 2.76 |16.000 2.30 |22.00 0.92
4.083 1.23 |10.083 3.53 |16.083 1.38 |22.08 0.92
4.167 1.23 |10.167 3.53 |16.167 1.38 |22.17 0.92
4.250 1.23 |10.250 3.53 |16.250 1.38 |22.25 0.92
4.333 1.23 |10.333 3.53 |16.333 1.38 |22.33 0.92
4.417 1.23 |10.417 3.53 |16.417 1.38 |22.42 0.92
4.500 1.23 |10.500 3.53 |16.500 1.38 |22.50 0.92
4.583 1.23 |10.583 4.76 |16.583 1.38 |22.58 0.92
4.667 1.23 |10.667 4.76 |16.667 1.38 |22.67 0.92
4.750 1.23 |10.750 4.76 |16.750 1.38 |22.75 0.92
4.833 1.23 |10.833 4.76 |16.833 1.38 |22.83 0.92
4.917 1.23 |10.917 4.76 |16.917 1.38 |22.92 0.92
5.000 1.23 |11.000 4.76 |17.000 1.38 |23.00 0.92
5.083 1.23 |11.083 7.37 |17.083 1.38 |23.08 0.92
5.167 1.23 |11.167 7.37 |17.167 1.38 |23.17 0.92
5.250 1.23 |11.250 7.37 |17.250 1.38 |23.25 0.92
5.333 1.23 |11.333 7.37 |17.333 1.38 |23.33 0.92
5.417 1.23 |11.417 7.37 |17.417 1.38 |23.42 0.92
5.500 1.23 |11.500 7.37 |17.500 1.38 |23.50 0.92
5.583 1.23 |11.583 31.95 |17.583 1.38 |23.58 0.92
5.667 1.23 |11.667 31.95 |17.667 1.38 |23.67 0.92
5.750 1.23 |11.750 31.95 |17.750 1.38 |23.75 0.92
5.833 1.23 |11.833 84.78 |17.833 1.38 |23.83 0.92
5.917 1.23 |11.917 84.79 |17.917 1.38 |23.92 0.92
6.000 1.23 |12.000 84.79 |18.000 1.38 |24.00 0.92

Unit Hyd Qpeak (cms)= 1.676
PEAK FLOW (cms)= 0.913 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 34.903
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.454
(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0011)|
1 + 2 = 3
ID1= 1 (0010): 62.32 1.668 12.93 36.05
+ ID2= 2 (0134): 15.49 0.913 12.25 34.90

ID = 3 (0011): 77.81 2.070 12.73 35.82
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0015)|
| IN= 2----> OUT= 1 |
DT= 5.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 9.4690 0.3520

HRP6.1-EX_2-100 YEAR.OUT

0.4100 0.1040 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

INFLOW : ID= 2 (0011) 77.810 2.070 12.73 35.02

OUTFLOW: ID= 1 (0015) 77.810 2.054 12.80 35.78

PEAK FLOW REDUCTION [qout/qin](%)= 99.24

TIME SHIFT OF PEAK FLOW (min)= 4.50

MAXIMUM STORAGE USED (ha.m.)= 0.1490

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB
STANDHYD (0135)
ID= 1 DT= 3.0 min

Area (ha)= 6.36

Total Imp(%)= 36.00 Dir. Conn.(%)= 36.00

IMPERVIOUS PERVIOUS (l)

Surface Area (ha)= 2.29 4.07

Dep. Storage (mm)= 1.50 1.50

Average Slope (%)= 2.00 2.00

Length (m)= 205.91 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92

HRP6.1-EX_2-100 YEAR.OUT

2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 42.25

over (min) 6.00 15.00

Storage Coeff. (min)= 3.42 (ii) 13.38 (ii)

Unit Hyd. Tpeak (min)= 6.00 15.00

Unit Hyd. peak (cms)= 0.26 0.08

PEAK FLOW (cms)= 0.53 0.29

TIME TO PEAK (hrs)= 12.00 12.10

RUNOFF VOLUME (mm)= 75.30 32.57

TOTAL RAINFALL (mm)= 76.80 76.80

RUNOFF COEFFICIENT = 0.98 0.42

TOTALS

0.77 (iii)

(i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:

CN = 72.0 In = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-EX_2-100 YEAR.OUT

ADD HYD (0012)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0135):	6.36	0.776	12.00	47.95
+ ID2= 2 (0015):	77.81	2.054	12.00	35.78
ID = 3 (0012):	84.17	2.159	12.78	36.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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ROUTE CHN( 0040)
| IN= 2--> OUT= 1
-----
<----- DATA FOR SECTION ( 1.1) ----->
Distance      Elevation      Manning
0.00          101.00        0.0000
1.00          100.67        0.0000
2.00          100.33        0.0000 / 0.0350  Main Channel
3.00          100.00        0.0350          Main Channel
4.00          100.00        0.0350          Main Channel
5.00          100.33        0.0350 / 0.0000  Main Channel
6.00          100.67        0.0000
7.00          101.00        0.0000

```

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.590E+02	0.0	0.34	53.30
0.09	100.09	.130E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.130E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

<---- hydrograph ---->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0012)	84.17	2.16	12.78	36.70	0.55
OUTFLOW: ID= 1 (0040)	84.17	2.08	12.98	36.64	0.54

CALIB	
NASHYD (0121)	Area (ha)= 3.64
ID= 1 DT= 5.0 min	Curve Number (CN)= 77.0
	Ia (mm)= 5.00
	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.11

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

HRP6.1-EX_2-100 YEAR.OUT

1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 1.241

PEAK FLOW	(cms)= 0.423 (i)
TIME TO PEAK	(hrs)= 12.000
RUNOFF VOLUME	(mm)= 34.309
TOTAL RAINFALL	(mm)= 76.800
RUNOFF COEFFICIENT	= 0.447

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0122)	Area (ha)=	16.13	
ID= 1 DT= 3.0 min	Total Imp(%)=	31.00	Dir. Conn.(%)= 31.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	5.00	11.13
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	327.92	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38

HRP6.1-EX_2-100 YEAR.OUT									
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38		
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38		
1.550	0.77	7.550	1.54	13.550	6.38	19.55	1.38		
1.600	0.77	7.600	1.54	13.600	6.38	19.60	1.38		
1.650	0.77	7.650	1.54	13.650	6.38	19.65	1.38		
1.700	0.77	7.700	1.54	13.700	6.38	19.70	1.38		
1.750	0.77	7.750	1.54	13.750	6.38	19.75	1.38		
1.800	1.38	7.800	1.54	13.800	6.38	19.80	1.38		
1.850	1.38	7.850	1.54	13.850	6.38	19.85	1.38		
1.900	1.38	7.900	1.54	13.900	6.38	19.90	1.38		
1.950	1.38	7.950	1.54	13.950	6.38	19.95	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92		
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92		
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92		
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92		
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92		
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92		
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92		
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92		
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92		
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92		
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92		
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92		
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92		
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92		
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92		
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92		
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92		
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92		
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92		
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92		
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92		
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92		
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92		
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92		
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92		
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92		
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92		
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92		
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92		
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92		
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92		
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92		
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92		
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92		
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92		
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92		
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92		
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92		
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92		
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92		
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92		
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92		
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92		
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92		

HRP6.1-EX_2-100 YEAR.OUT									
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92		
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92		
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92		
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92		
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92		
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92		
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92		
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92		
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92		
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92		
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92		
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92		
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92		
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92		
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92		
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92		
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92		
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92		
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92		
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92		
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92		
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92		
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92		
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92		
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92		
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92		
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92		
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92		
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92		
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92		

Max.Eff.Inten.(mm/hr)=	84.79	42.25	
over (min)	6.00	15.00	
Storage Coeff. (min)=	4.52 (ii)	14.48 (ii)	
Unit Hyd. Tpeak (min)=	6.00	15.00	
Unit Hyd. peak (cms)=	0.22	0.08	
PEAK FLOW (cms)=	1.14	0.78	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.10	1.778 (iii)
RUNOFF VOLUME (mm)=	75.30	32.57	45.82
TOTAL RAINFALL (mm)=	76.80	76.80	76.80
RUNOFF COEFFICIENT =	0.98	0.42	0.60

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0121):	3.64	0.423	12.00	34.31
+ ID2= 2 (0122):	16.13	1.778	12.00	45.82
=====				
ID = 3 (0019):	19.77	2.201	12.00	43.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0019):	19.77	2.201	12.00	43.70
+ ID2= 2 (0040):	84.17	2.078	12.98	36.64
=====				
ID = 3 (0020):	103.94	2.751	12.00	37.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

=====

V	V	I	SSSS	U	U	A	L	(v 6.1.2002)
V	V							

HRP6.1-EX_2-100 YEAR.OUT

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\vo.in.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\8e591246-0e00-4899-912a-702ea03db0f2\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\8e591246-0e00-4899-912a-702ea03db0f2\scenar

DATE: 03/24/2023 TIME: 10:06:55

USER:

COMMENTS: _____

** SIMULATION : Run 03 **

| MASS STORM | Filename: C:\Users\AbirA\AppData
| ata\Local\Temp
| fd1c3467-cc8b-4992-b09d-61f2685b8f6a\1913d010
| Ptotal= 88.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60	
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60	
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60	
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60	
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60	
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60	
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60	
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60	
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07	
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07	
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07	
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07	
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07	
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07	
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07	
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07	
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07	
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07	
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07	
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07	
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07	
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07	
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07	
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07	

| CALIB | Area (ha)= 30.38 Curve Number (CN)= 77.0
| NASHYD (1030) | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| ID= 1 DT= 5.0 min | U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60	
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60	
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60	
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60	
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60	
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60	
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60	
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60	
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60	
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60	
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60	

HRP6.1-EX_2-100 YEAR.OUT

1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60	
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60	
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60	
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60	
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60	
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60	
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60	
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60	
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60	
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60	
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60	
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60	
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60	
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07	
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07	
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07	
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07	
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07	
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07	
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07	
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07	
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07	
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07	
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07	
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07	
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07	
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07	
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07	
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07	
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07	
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07	
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07	
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07	
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07	
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07	
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07	
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07	
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07	
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07	
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07	
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07	
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07	
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07	
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07	
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07	
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07	
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07	
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07	
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07	
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07	
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07	
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07	
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07	
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07	
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07	
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07	
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07	
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07	
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07	
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07	
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07	

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 1.766 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 43.979
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.495

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB | Area (ha)= 2.25 Curve Number (CN)= 77.0
| NASHYD (0130) | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| ID= 1 DT= 5.0 min | U.H. Tp(hrs)= 0.12

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60	
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60	

HRP6.1-EX_2-100 YEAR.OUT

HRP6.1-EX_2-100 YEAR.OUT

0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 0.784

PEAK FLOW (cms)= 0.319 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 43.429
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.489

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ID1= 1 (1030): 30.38 1.766 12.42 43.98
+ ID2= 2 (0130): 2.25 0.319 12.00 43.43
=====

ID = 3 (0003): 32.63 1.834 12.33 43.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0021)|
| IN= 2---> OUT= 1 | Routing time step (min)'= 4.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0000	
1.00	100.67	0.0000	
2.00	100.33	0.0000 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0000	Main Channel
6.00	100.67	0.0000	
7.00	101.00	0.0000	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.185E+02	0.0	0.34	16.76
0.09	100.09	.417E+02	0.1	0.51	11.21
0.14	100.14	.695E+02	0.1	0.64	8.95
0.19	100.19	.102E+03	0.2	0.75	7.64
0.24	100.24	.130E+03	0.3	0.85	6.77
0.28	100.28	.181E+03	0.5	0.94	6.13
0.33	100.33	.227E+03	0.7	1.02	5.64
0.39	100.39	.288E+03	1.0	1.17	4.90
0.44	100.44	.355E+03	1.3	1.30	4.42
0.50	100.50	.428E+03	1.7	1.40	4.09
0.55	100.55	.508E+03	2.2	1.49	3.85
0.61	100.61	.594E+03	2.7	1.57	3.66
0.66	100.66	.680E+03	3.3	1.63	3.51
0.72	100.72	.785E+03	3.9	1.69	3.38
0.78	100.78	.890E+03	4.5	1.75	3.28
0.83	100.83	.100E+04	5.2	1.80	3.19
0.89	100.89	.112E+04	6.0	1.84	3.12
0.94	100.94	.124E+04	6.8	1.88	3.05
1.00	101.00	.138E+04	7.7	1.92	2.99

<---- hydrograph ---->				<-pipe / channel->	
INFLOW : ID= 2 (0003)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)
OUTFLOW: ID= 1 (0021)	32.63	1.83	12.33	43.94	0.51
	32.63	1.83	12.42	43.94	0.51

| CALIB |
| NASHYD (0131)| Area (ha)= 14.65 Curve Number (CN)= 82.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.40

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60		
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60		
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60		
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60		
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60		
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		

HRP6.1-EX_2-100 YEAR.OUT

1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.413

PEAK FLOW (cms)= 1.182 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 50.313
TOTAL RAINFALL (mm)= 88.000
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)					
1 + 2 = 3					

	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0131):	14.65	1.182	12.25	50.31	
+ ID2= 2 (0021):	32.63	1.829	12.42	43.94	
=====					
ID = 3 (0005):	47.28	2.959	12.33	45.92	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB						
STANDHYD (0132)						
ID= 1 DT= 3.0 min						

	IMPERVIOUS	PERVIOUS (i)				
Surface Area	(ha)= 2.56	5.69				
Dep. Storage	(mm)= 1.50	1.50				
Average Slope	(%)= 2.00	2.00				
Length	(m)= 234.52	40.00				
Mannings n	= 0.013	0.250				

HRP6.1-EX_2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	hrs	mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07		</

HRP6.1-EX_2-100 YEAR.OUT

4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min) 6.00 15.00
Storage Coeff. (min)= 3.49 (ii) 12.57 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08

TOTALS
PEAK FLOW (cms)= 0.69 0.53
TIME TO PEAK (hrs)= 12.00 12.00
RUNOFF VOLUME (mm)= 87.30 40.96
TOTAL RAINFALL (mm)= 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0132):	8.25	1.132	12.00	55.32
+ ID2= 2 (0005):	47.28	2.959	12.33	45.92
=====				
ID = 3 (0007):	55.53	3.429	12.25	47.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2--> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

HRP6.1-EX_2-100 YEAR.OUT

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.05	100.05	.689E+01	0.0	0.34	5.51	
0.09	100.09	.1307E+02	0.1	0.51	3.68	
0.14	100.14	.228E+02	0.1	0.64	2.94	
0.19	100.19	.335E+02	0.2	0.75	2.51	
0.24	100.24	.457E+02	0.3	0.85	2.22	
0.28	100.28	.594E+02	0.5	0.94	2.01	
0.33	100.33	.746E+02	0.7	1.02	1.85	
0.39	100.39	.945E+02	1.0	1.17	1.61	
0.44	100.44	.117E+03	1.3	1.30	1.45	
0.50	100.50	.141E+03	1.7	1.40	1.34	
0.55	100.55	.167E+03	2.2	1.49	1.26	
0.61	100.61	.195E+03	2.7	1.57	1.20	
0.66	100.66	.225E+03	3.3	1.63	1.15	
0.72	100.72	.258E+03	3.9	1.69	1.11	
0.78	100.78	.292E+03	4.5	1.75	1.08	
0.83	100.83	.329E+03	5.2	1.80	1.05	
0.89	100.89	.368E+03	6.0	1.84	1.02	
0.94	100.94	.409E+03	6.8	1.88	1.00	
1.00	101.00	.452E+03	7.7	1.92	0.98	
<---- hydrograph ---->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0007)	55.53	3.43	12.25	47.31	0.68	1.65
OUTFLOW: ID= 1 (0022)	55.53	3.43	12.25	47.31	0.68	1.65

CALIB
STANDHYD (0133)
ID= 1 DT= 3.0 min
Area (ha)= 6.79
Total Imp(%)= 47.00
Dir. Conn.(%)= 47.00

Surface Area		(ha)=	3.19	3.60
Dep. Storage		(mm)=	1.50	1.50
Average Slope		(%)=	2.00	2.00
Length		(m)=	212.76	40.00
Mannings n		=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		

HRP6.1-EX_2-100 YEAR.OUT

HRP6.1-EX_2-100 YEAR.OUT

PEAK FLOW REDUCTION [Qout/Qin](%)= 99.05
TIME SHIFT OF PEAK FLOW (min)= 4.50
MAXIMUM STORAGE USED (ha.m.)= 0.1748

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB
STANDHYD (0135)
ID= 1 DT= 3.0 min

Area (ha)= 6.36
Total Imp(%)= 36.00 Dir. Conn.(%)= 36.00

IMPERVIOUS PERVIOUS (l)
Surface Area (ha)= 2.29 4.07
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 205.91 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07

Unit Hyd Qpeak (cms)= 1.676

PEAK FLOW (cms)= 1.158 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 43.972
TOTAL RAINFALL (mm)= 88.000
RUNOFF COEFFICIENT = 0.495

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0010):	62.32	2.414	12.80	45.36
+ ID2= 2 (0134):	15.49	1.158	12.17	43.97
ID = 3 (0011):	77.81	3.025	12.65	45.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR (0015)
IN= 2--> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (ha.m.)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	9.4690	0.3520
0.4100	0.1040	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0011)	77.810	3.025	12.65	45.08
OUTFLOW: ID= 1 (0015)	77.810	2.996	12.73	45.03

HRP6.1-EX_2-100 YEAR.OUT

HRP6.1-EX_2-100 YEAR.OUT

ID = 3 (0012): 84.17 3.136 12.70 45.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0040)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0000
1.00 100.67 0.0000
2.00 100.33 0.0000 /0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 /0.0000 Main Channel
6.00 100.67 0.0000
7.00 101.00 0.0000

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .590E+02 0.0 0.34 53.36
0.09 100.09 .133E+03 0.1 0.51 35.70
0.14 100.14 .221E+03 0.1 0.64 28.48
0.19 100.19 .324E+03 0.2 0.75 24.33
0.24 100.24 .442E+03 0.3 0.85 21.55
0.28 100.28 .575E+03 0.5 0.94 19.51
0.33 100.33 .723E+03 0.7 1.02 17.94
0.39 100.39 .916E+03 1.0 1.17 15.58
0.44 100.44 .113E+04 1.3 1.30 14.08
0.50 100.50 .136E+04 1.7 1.40 13.03
0.55 100.55 .162E+04 2.2 1.49 12.25
0.61 100.61 .189E+04 2.7 1.57 11.65
0.66 100.66 .218E+04 3.3 1.63 11.17
0.72 100.72 .250E+04 3.9 1.69 10.77
0.78 100.78 .283E+04 4.5 1.75 10.45
0.83 100.83 .319E+04 5.2 1.80 10.17
0.89 100.89 .357E+04 6.0 1.84 9.92
0.94 100.94 .396E+04 6.8 1.88 9.71
1.00 101.00 .438E+04 7.7 1.92 9.52

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0012) 84.17 3.14 12.70 45.98 0.65 1.62
OUTFLOW: ID= 1 (0040) 84.17 3.02 12.88 45.92 0.64 1.60

CALIB
NASHYD (0121) | Area (ha)= 3.64 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.11

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min) 6.00 15.00
Storage Coeff. (min)= 3.23 (ii) 12.18 (iii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.26 0.09

PEAK FLOW (cms)= 0.62 0.39 0.941 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 87.30 40.96 57.64
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.65

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0012)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0135): 6.36 0.941 12.00 57.64
+ ID2= 2 (0015): 77.81 2.996 12.73 45.03

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr
0.003 0.89 | 6.083 1.78 | 12.083 12.80 | 18.08 1.60
0.167 0.89 | 6.167 1.78 | 12.167 12.79 | 18.17 1.60
0.250 0.89 | 6.250 1.78 | 12.250 12.79 | 18.25 1.60
0.333 0.89 | 6.333 1.78 | 12.333 12.79 | 18.33 1.60
0.417 0.89 | 6.417 1.78 | 12.417 12.79 | 18.42 1.60
0.500 0.89 | 6.500 1.78 | 12.500 12.79 | 18.50 1.60
0.583 0.89 | 6.583 1.78 | 12.583 6.57 | 18.58 1.60
0.667 0.89 | 6.667 1.78 | 12.667 6.57 | 18.67 1.60
0.750 0.89 | 6.750 1.78 | 12.750 6.57 | 18.75 1.60
0.833 0.89 | 6.833 1.78 | 12.833 6.57 | 18.83 1.60
0.917 0.89 | 6.917 1.78 | 12.917 6.57 | 18.92 1.60
1.000 0.89 | 7.000 1.78 | 13.000 6.57 | 19.00 1.60
1.083 0.89 | 7.083 1.78 | 13.083 1.24 | 19.08 1.60
1.167 0.89 | 7.167 1.78 | 13.167 1.24 | 19.17 1.60
1.250 0.89 | 7.250 1.78 | 13.250 1.24 | 19.25 1.60
1.333 0.89 | 7.333 1.78 | 13.333 1.24 | 19.33 1.60
1.417 0.89 | 7.417 1.78 | 13.417 1.24 | 19.42 1.60
1.500 0.89 | 7.500 1.78 | 13.500 1.24 | 19.50 1.60
1.583 0.89 | 7.583 1.78 | 13.583 7.28 | 19.58 1.60
1.667 0.89 | 7.667 1.78 | 13.667 7.28 | 19.67 1.60
1.750 0.89 | 7.750 1.78 | 13.750 7.28 | 19.75 1.60
1.833 1.60 | 7.833 1.78 | 13.833 7.28 | 19.83 1.60
1.917 1.60 | 7.917 1.78 | 13.917 7.28 | 19.92 1.60
2.000 1.60 | 8.000 1.78 | 14.000 7.28 | 20.00 1.60

HRP6.1-EX_2-100 YEAR.OUT

2.083	1.15		8.083	2.40		14.083	2.66		20.08	1.07
2.167	1.15		8.167	2.40		14.167	2.66		20.17	1.07
2.250	1.15		8.250	2.40		14.250	2.66		20.25	1.07
2.333	1.15		8.333	2.40		14.333	2.66		20.33	1.07
2.417	1.15		8.417	2.40		14.417	2.66		20.42	1.07
2.500	1.15		8.500	2.40		14.500	2.66		20.50	1.07
2.583	1.15		8.583	2.40		14.583	2.66		20.58	1.07
2.667	1.15		8.667	2.40		14.667	2.66		20.67	1.07
2.750	1.15		8.750	2.40		14.750	2.66		20.75	1.07
2.833	1.15		8.833	2.40		14.833	2.66		20.83	1.07
2.917	1.15		8.917	2.40		14.917	2.66		20.92	1.07
3.000	1.15		9.000	2.40		15.000	2.66		21.00	1.07
3.083	1.15		9.083	2.64		15.083	2.66		21.08	1.07
3.167	1.15		9.167	2.84		15.167	2.66		21.17	1.07
3.250	1.15		9.250	2.84		15.250	2.66		21.25	1.07
3.333	1.15		9.333	2.84		15.333	2.66		21.33	1.07
3.417	1.15		9.417	2.84		15.417	2.66		21.42	1.07
3.500	1.15		9.500	2.84		15.500	2.66		21.50	1.07
3.583	1.15		9.583	3.20		15.583	2.66		21.58	1.07
3.667	1.15		9.667	3.20		15.667	2.66		21.67	1.07
3.750	1.15		9.750	3.20		15.750	2.66		21.75	1.07
3.833	1.15		9.833	3.20		15.833	2.66		21.83	1.07
3.917	1.15		9.917	3.20		15.917	2.66		21.92	1.07
4.000	1.15		10.000	3.20		16.000	2.66		22.00	1.07
4.083	1.42		10.083	4.08		16.083	1.60		22.08	1.07
4.167	1.42		10.167	4.08		16.167	1.60		22.17	1.07
4.250	1.42		10.250	4.08		16.250	1.60		22.25	1.07
4.333	1.42		10.333	4.08		16.333	1.60		22.33	1.07
4.417	1.42		10.417	4.08		16.417	1.60		22.42	1.07
4.500	1.42		10.500	4.08		16.500	1.60		22.50	1.07
4.583	1.42		10.583	5.51		16.583	1.60		22.58	1.07
4.667	1.42		10.667	5.51		16.667	1.60		22.67	1.07
4.750	1.42		10.750	5.51		16.750	1.60		22.75	1.07
4.833	1.42		10.833	5.51		16.833	1.60		22.83	1.07
4.917	1.42		10.917	5.51		16.917	1.60		22.92	1.07
5.000	1.42		11.000	5.51		17.000	1.60		23.00	1.07
5.083	1.42		11.083	8.52		17.083	1.60		23.08	1.07
5.167	1.42		11.167	8.52		17.167	1.60		23.17	1.07
5.250	1.42		11.250	8.52		17.250	1.60		23.25	1.07
5.333	1.42		11.333	8.52		17.333	1.60		23.33	1.07
5.417	1.42		11.417	8.52		17.417	1.60		23.42	1.07
5.500	1.42		11.500	8.52		17.500	1.60		23.50	1.07
5.583	1.42		11.583	36.94		17.583	1.60		23.58	1.07
5.667	1.42		11.667	36.94		17.667	1.60		23.67	1.07
5.750	1.42		11.750	36.94		17.750	1.60		23.75	1.07
5.833	1.42		11.833	98.03		17.833	1.60		23.83	1.07
5.917	1.42		11.917	98.04		17.917	1.60		23.92	1.07
6.000	1.42		12.000	98.04		18.000	1.60		24.00	1.07

Unit Hyd Qpeak (cms)= 1.241

PEAK FLOW (cms)= 0.533 (1)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 43.223
TOTAL RAINFALL (mm)= 88.000
RUNOFF COEFFICIENT = 0.487

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)= 16.13
STANDHYD (0122)	Total Imp(%)= 31.00 Dir. Conn.(%)= 31.00
ID= 1 DT= 3.0 min	

	IMPERVIOUS	PERVIOUS (1)
Surface Area (ha)=	5.00	11.13
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	327.92	40.00
Mannings n	=	0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----										
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	
0.050	0.89		6.950	1.78		12.050	12.79		18.05	1.60
0.100	0.89		6.100	1.78		12.100	12.79		18.10	1.60
0.150	0.89		6.150	1.78		12.150	12.79		18.15	1.60
0.200	0.89		6.200	1.78		12.200	12.79		18.20	1.60
0.250	0.89		6.250	1.78		12.250	12.79		18.25	1.60
0.300	0.89		6.300	1.78		12.300	12.79		18.30	1.60
0.350	0.89		6.350	1.78		12.350	12.79		18.35	1.60
0.400	0.89		6.400	1.78		12.400	12.79		18.40	1.60
0.450	0.89		6.450	1.78		12.450	12.79		18.45	1.60

HRP6.1-EX_2-100 YEAR.OUT

0.500	0.89		6.500	1.78		12.500	12.78		18.50	1.60
0.550	0.89		6.550	1.78		12.550	6.57		18.55	1.60
0.600	0.89		6.600	1.78		12.600	6.57		18.60	1.60
0.650	0.89		6.650	1.78		12.650	6.57		18.65	1.60
0.700	0.89		6.700	1.78		12.700	6.57		18.70	1.60
0.750	0.89		6.750	1.78		12.750	6.57		18.75	1.60
0.800	0.89		6.800	1.78		12.800	6.57		18.80	1.60
0.850	0.89		6.850	1.78		12.850	6.57		18.85	1.60
0.900	0.89		6.900	1.78		12.900	6.57		18.90	1.60
0.950	0.89		6.950	1.78		12.950	6.57		18.95	1.60
1.000	0.89		7.000	1.78		13.000	6.57		19.00	1.60
1.050	0.89		7.050	1.78		13.050	1.24		19.05	1.60
1.100	0.89		7.100	1.78		13.100	1.24		19.10	1.60
1.150	0.89		7.150	1.78		13.150	1.24		19.15	1.60
1.200	0.89		7.200	1.78		13.200	1.24		19.20	1.60
1.250	0.89		7.250	1.78		13.250	1.24		19.25	1.60
1.300	0.89		7.300	1.78		13.300	1.24		19.30	1.60
1.350	0.89		7.350	1.78		13.350	1.24		19.35	1.60
1.400	0.89		7.400	1.78		13.400	1.24		19.40	1.60
1.450	0.89		7.450	1.78		13.450	1.24		19.45	1.60
1.500	0.89		7.500	1.78		13.500	1.25		19.50	1.60
1.550	0.89		7.550	1.78		13.550	7.28		19.55	1.60
1.600	0.89		7.600	1.78		13.600	7.28		19.60	1.60
1.650	0.89		7.650	1.78		13.650	7.28		19.65	1.60
1.700	0.89		7.700	1.78		13.700	7.28		19.70	1.60
1.750	0.89		7.750	1.78		13.750	7.28		19.75	1.60
1.800	1.60		7.800	1.78		13.800	7.28		19.80	1.60
1.850	1.60		7.850	1.78		13.850	7.28		19.85	1.60
1.900	1.60		7.900	1.78		13.900	7.28		19.90	1.60
1.950	1.60		7.950	1.78		13.950	7.28		19.95	1.60
2.000	1.60		8.000	1.78		14.000	7.28		20.00	1.60
2.050	1.15		8.050	2.40		14.050	2.66		20.05	1.07
2.100	1.15		8.100	2.40		14.100	2.66		20.10	1.07
2.150	1.15		8.150	2.40		14.150	2.66		20.15	1.07
2.200	1.15		8.200	2.40		14.200	2.66		20.20	1.07
2.250	1.15		8.250	2.40		14.250	2.66		20.25	1.07
2.300	1.15		8.300	2.40		14.300	2.66		20.30	1.07
2.350	1.15		8.350	2.40		14.350	2.66		20.35	1.07
2.400	1.15		8.400	2.40		14.400	2.66		20.40	1.07
2.450	1.15		8.450	2.40		14.450	2.66		20.45	1.07
2.500	1.15		8.500	2.40		14.500	2.66		20.50	1.07
2.550	1.15		8.550	2.40		14.550	2.66		20.55	1.07
2.600	1.15		8.600	2.40		14.600	2.66		20.60	1.07
2.650	1.15		8.650	2.40		14.650	2.66		20.65	1.07
2.700	1.15		8.700	2.40		14.700	2.66		20.70	1.07
2.750	1.15		8.750	2.40		14.750	2.66		20.75	1.07
2.800	1.15		8.800	2.40		14.800	2.66		20.80	1.07
2.850	1.15		8.850	2.40		14.850	2.66		20.85	1.07
2.900	1.15		8.900	2.40		14.900	2.66		20.90	1.07
2.950	1.15		8.950	2.40		14.950	2.66		20.95	1.07
3.000	1.15		9.000	2.40		15.000	2.66		21.00	1.07
3.050	1.15		9.050	2.84		15.050	2.66		21.05	1.07
3.100	1.15		9.100	2.84		15.100	2.66		21.10	1.07
3.150	1.15		9.150	2.84		15.150	2.66		21.15	1.07
3.200	1.15		9.200	2.84		15.200	2.66		21.20	1.07
3.250	1.15		9.250	2.84		15.250	2.66		21.25	1.07
3.300	1.15		9.300	2.84		15.300	2.66		21.30	1.07
3.350	1.15		9.350	2.84		15.350	2.66		21.35	1.07
3.400	1.15		9.400	2.84		15.400	2.66		21.40	1.07
3.450	1.15		9.450	2.84		15.450	2.66		21.45	1.07
3.500	1.15		9.500	2.84		15.500	2.66		21.50	1.07</

HRP6.1-EX_2-100 YEAR.OUT									
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07		
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07		
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07		
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07		
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07		
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07		
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07		
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07		
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07		
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07		
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07		
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07		
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07		
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07		
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07		
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07		
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07		
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07		
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07		
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07		
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07		
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07		

Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min) 6.00 15.00
Storage Coeff. (min)= 4.27 (ii) 13.35 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

PEAK FLOW (cms)= 1.32 1.02 2.170 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 87.30 40.96 55.32
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.62

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):	3.64	0.533	12.00	43.22
+ ID2= 2 (0122):	16.13	2.170	12.00	55.32
=====				
ID = 3 (0019):	19.77	2.703	12.00	53.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0019):	19.77	2.703	12.00	53.10
+ ID2= 2 (0040):	84.17	3.016	12.00	45.92
=====				
ID = 3 (0020):	103.94	3.408	12.00	47.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

=====

V	V	I	SSSSS	U	U	A	L	(v 6.1.2002)
V	V	I	SS	U	U	A	A	L
V	V	I	SS	U	U	AAAAA	L	
V	V	I	SS	U	U	A	A	L
VV	I	SSSSS	UUUUU	A	A	LLLLL		
000	TTTTT	TTTTT	H	H	Y	Y	M	M
0	0	T	T	H	H	Y	Y	MM
0	0	T	T	H	H	Y	M	M
000	T	T	H	H	Y	M	M	000

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***** D E T A I L E D O U T P U T *****

HRP6.1-EX_2-100 YEAR.OUT

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\CVica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\8bb5769f-af2e-480f-b347-9bd4fd0e5ac2\scenar
Summary filename: C:\Users\AbirA\AppData\Local\CVica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\8bb5769f-af2e-480f-b347-9bd4fd0e5ac2\scenar

DATE: 03/24/2023 TIME: 10:06:55

USER:

COMMENTS: _____

** SIMULATION : Run 04 **

MASS STORM		Filename: C:\Users\AbirA\AppData\Local\Temp\fd1c3467-cc8b-4992-b09d-61f2685b8f6a\cdbf3d47
Ptotal=103.20 mm		Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86
2.00	1.86	8.00	2.06	14.00	8.46	20.00	1.86
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24

CALIB		Area (ha)= 30.38	Curve Number (CN)= 77.0
NASHYD (1030)		Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min		U.H. Tp(hrs)= 0.50	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.003	1.03	6.003	2.06	12.003	14.87	18.00	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86

HRP6.1-EX_2-100 YEAR.OUT

1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86
1.917	1.06	7.917	2.06	13.917	8.46	19.92	1.86
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 2.237 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 55.396
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.537

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-EX_2-100 YEAR.OUT

0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86
1.917	1.06	7.917	2.06	13.917	8.46	19.92	1.86
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 0.704

PEAK FLOW (cms)= 0.402 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 54.703
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.530

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0130):	30.38	2.237	12.33	55.40
+ ID2= 2 (0130):	2.25	0.402	12.00	54.70
ID = 3 (0003):	32.63	2.323	12.33	55.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0130)	Area	(ha)=	2.25	Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.12		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	1.03	6.003	2.06	12.003	14.87	18.00	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86

HRP6.1-EX_2-100 YEAR.OUT

ROUTE CHN(0021)
IN= 2--> OUT= 1 |

Routing time step (min)'= 4.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 /0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 /0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.185E+02	0.0	0.34	16.76
0.09	100.09	.417E+02	0.1	0.51	11.21
0.14	100.14	.695E+02	0.1	0.64	8.95
0.19	100.19	.102E+03	0.2	0.75	7.64
0.24	100.24	.139E+03	0.3	0.85	6.77
0.28	100.28	.181E+03	0.5	0.94	6.13
0.33	100.33	.227E+03	0.7	1.02	5.64
0.39	100.39	.288E+03	1.0	1.17	4.90
0.44	100.44	.355E+03	1.3	1.30	4.42
0.50	100.50	.428E+03	1.7	1.40	4.09
0.55	100.55	.500E+03	2.2	1.49	3.85
0.61	100.61	.594E+03	2.7	1.57	3.66
0.66	100.66	.686E+03	3.3	1.63	3.51
0.72	100.72	.785E+03	3.9	1.69	3.38
0.78	100.78	.890E+03	4.5	1.75	3.28
0.83	100.83	.100E+04	5.2	1.80	3.19
0.89	100.89	.112E+04	6.0	1.84	3.12
0.94	100.94	.124E+04	6.8	1.88	3.05
1.00	101.00	.138E+04	7.7	1.92	2.99

<---- hydrograph ---->				<-pipe / channel->		
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0003)	32.63	2.32	12.33	55.35	0.57	1.51
OUTFLOW: ID= 1 (0021)	32.63	2.32	12.42	55.35	0.57	1.51

CALIB
NASHYD (0131)
ID= 1 DT= 5.0 min
Area (ha)= 14.65
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.40
Curve Number (CN)= 82.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24

HRP6.1-EX_2-100 YEAR.OUT

2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 1.413

PEAK FLOW (cms)= 1.475 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 62.628
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.607

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)				
1	2	3		
			AREA	QPEAK
			(ha)	(cms)
			TPEAK	R.V.
			(hrs)	(mm)
			ID1= 1 (0131):	14.65 1.475 12.25 62.63
			+ ID2= 2 (0021):	32.63 2.316 12.42 55.35
			=====	
			ID = 3 (0005):	47.28 3.727 12.33 57.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0132)
ID= 1 DT= 3.0 min
Area (ha)= 8.25
Total Imp(%)= 31.00
Dir. Conn.(%)= 31.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.56	5.69
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	234.52	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs

HRP6.1-EX_2-100 YEAR.OUT

HRP6.1-EX_2-100 YEAR.OUT

TOTALS

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0132):	8.25	1.462	12.00	67.12
+ ID2= 2 (0005):	47.28	3.727	12.33	57.60

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-----
| IN= 2----> OUT= 1 |      Routing time step (min)'=  2.00
-----
<----- DATA FOR SECTION ( 1.1) ----->
Distance      Elevation      Manning

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DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68

HRP6.1-EX_2-100 YEAR.OUT					
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98
<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0007)	55.53	4.25	12.25	59.62	0.75
OUTFLOW: ID= 1 (0022)	55.53	4.25	12.25	59.62	0.75
					1.73
					1.72

CALIB					
STANDHYD (0133)	Area (ha)=	6.79			
ID= 1 DT= 3.0 min	Total Imp(%)=	47.00	Dir. Conn.(%)=	47.00	

	IMPERVIOUS	PERVIOUS (i)			
Surface Area	(ha)=	3.19	3.60		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	212.76	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		

HRP6.1-EX_2-100 YEAR.OUT									
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		
Max.Eff.Inten.(mm/hr)=		113.93		51.85					
over (min)		6.00		12.00					
Storage Coeff. (min)=		3.10 (ii)		10.13 (ii)					
Unit Hyd. Tpeak (min)=		6.00		12.00					
Unit Hyd. peak (cms)=		0.27		0.10					
PEAK FLOW (cms)=		1.00		0.37		1.337 (iii)			
TIME TO PEAK (hrs)=		12.00		12.05		12.00			
RUNOFF VOLUME (mm)=		101.70		40.18		69.10			

TOTAL RAINFALL (mm)= 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.39 0.67

HRP6.1-EX_2-100 YEAR.OUT

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0133): 6.79 1.337 12.00 69.10
+ ID2= 2 (0022): 55.53 4.251 12.25 59.02
ID = 3 (0009): 62.32 5.209 12.05 60.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)
IN= 2---> OUT= 1
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW (cms) STORAGE (ha.m.)
0.0000 0.0000 3.1618 1.2228
0.0000 0.0000 3.9640 1.4400
0.0040 0.1320 5.1940 1.6250
0.0280 0.2670 6.2920 1.8150
0.0390 0.4050 6.6170 2.0100
0.3670 0.7010 8.3440 2.2100
1.0220 0.8510 9.3610 2.4150
1.7620 1.0040 0.0000 0.0000
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
INFLOW : ID= 2 (0009) 62.320 5.209 12.05 60.11
OUTFLOW: ID= 1 (0010) 62.320 3.251 12.73 57.00

PEAK FLOW REDUCTION [Qout/Qin](%)= 62.42
TIME SHIFT OF PEAK FLOW (min)= 40.50
MAXIMUM STORAGE USED (ha.m.)= 1.2467

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB
NASHYD (0134)
ID= 1 DT= 5.0 min
Area (ha)= 15.49 Curve Number (CN)= 77.0
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 1.03 6.083 2.06 12.083 14.87 18.08 1.86
0.167 1.03 6.167 2.06 12.167 14.86 18.17 1.86
0.250 1.03 6.250 2.06 12.250 14.86 18.25 1.86
0.333 1.03 6.333 2.06 12.333 14.86 18.33 1.86
0.417 1.03 6.417 2.06 12.417 14.86 18.42 1.86
0.500 1.03 6.500 2.06 12.500 14.86 18.50 1.86
0.583 1.03 6.583 2.06 12.583 7.64 18.58 1.86
0.667 1.03 6.667 2.06 12.667 7.64 18.67 1.86
0.750 1.03 6.750 2.06 12.750 7.64 18.75 1.86
0.833 1.03 6.833 2.06 12.833 7.64 18.83 1.86
0.917 1.03 6.917 2.06 12.917 7.64 18.92 1.86
1.000 1.03 7.000 2.06 13.000 7.64 19.00 1.86
1.083 1.03 7.083 2.06 13.083 1.45 19.08 1.86
1.167 1.03 7.167 2.06 13.167 1.44 19.17 1.86
1.250 1.03 7.250 2.06 13.250 1.44 19.25 1.86
1.333 1.03 7.333 2.06 13.333 1.44 19.33 1.86
1.417 1.03 7.417 2.06 13.417 1.44 19.42 1.86
1.500 1.03 7.500 2.06 13.500 1.44 19.50 1.86
1.583 1.03 7.583 2.06 13.583 8.46 19.58 1.86
1.667 1.03 7.667 2.06 13.667 8.46 19.67 1.86
1.750 1.03 7.750 2.06 13.750 8.46 19.75 1.86
1.833 1.86 7.833 2.06 13.833 8.46 19.83 1.86
1.917 1.86 7.917 2.06 13.917 8.46 19.92 1.86
2.000 1.86 8.000 2.06 14.000 8.46 20.00 1.86
2.083 1.34 8.083 2.79 14.083 3.10 20.08 1.24
2.167 1.34 8.167 2.79 14.167 3.10 20.17 1.24
2.250 1.34 8.250 2.79 14.250 3.10 20.25 1.24

HRP6.1-EX_2-100 YEAR.OUT
2.333 1.34 8.333 2.79 14.333 3.10 20.33 1.24
2.417 1.34 8.417 2.79 14.417 3.10 20.42 1.24
2.500 1.34 8.500 2.79 14.500 3.10 20.50 1.24
2.583 1.34 8.583 2.79 14.583 3.10 20.58 1.24
2.667 1.34 8.667 2.79 14.667 3.10 20.67 1.24
2.750 1.34 8.750 2.79 14.750 3.10 20.75 1.24
2.833 1.34 8.833 2.79 14.833 3.10 20.83 1.24
2.917 1.34 8.917 2.79 14.917 3.10 20.92 1.24
3.000 1.34 9.000 2.79 15.000 3.10 21.00 1.24
3.083 1.34 9.083 3.30 15.083 3.10 21.08 1.24
3.167 1.34 9.167 3.30 15.167 3.10 21.17 1.24
3.250 1.34 9.250 3.30 15.250 3.10 21.25 1.24
3.333 1.34 9.333 3.30 15.333 3.10 21.33 1.24
3.417 1.34 9.417 3.30 15.417 3.10 21.42 1.24
3.500 1.34 9.500 3.30 15.500 3.10 21.50 1.24
3.583 1.34 9.583 3.72 15.583 3.10 21.58 1.24
3.667 1.34 9.667 3.72 15.667 3.10 21.67 1.24
3.750 1.34 9.750 3.72 15.750 3.10 21.75 1.24
3.833 1.34 9.833 3.72 15.833 3.10 21.83 1.24
3.917 1.34 9.917 3.72 15.917 3.10 21.92 1.24
4.000 1.34 10.000 3.72 16.000 3.10 22.00 1.24
4.083 1.65 10.083 4.75 16.083 1.86 22.08 1.24
4.167 1.65 10.167 4.75 16.167 1.86 22.17 1.24
4.250 1.65 10.250 4.75 16.250 1.86 22.25 1.24
4.333 1.65 10.333 4.75 16.333 1.86 22.33 1.24
4.417 1.65 10.417 4.75 16.417 1.86 22.42 1.24
4.500 1.65 10.500 4.75 16.500 1.86 22.50 1.24
4.583 1.65 10.583 6.40 16.583 1.86 22.58 1.24
4.667 1.65 10.667 6.40 16.667 1.86 22.67 1.24
4.750 1.65 10.750 6.40 16.750 1.86 22.75 1.24
4.833 1.65 10.833 6.40 16.833 1.86 22.83 1.24
4.917 1.65 10.917 6.40 16.917 1.86 22.92 1.24
5.000 1.65 11.000 6.40 17.000 1.86 23.00 1.24
5.083 1.65 11.083 9.91 17.083 1.86 23.08 1.24
5.167 1.65 11.167 9.91 17.167 1.86 23.17 1.24
5.250 1.65 11.250 9.91 17.250 1.86 23.25 1.24
5.333 1.65 11.333 9.91 17.333 1.86 23.33 1.24
5.417 1.65 11.417 9.91 17.417 1.86 23.42 1.24
5.500 1.65 11.500 9.91 17.500 1.86 23.50 1.24
5.583 1.65 11.583 42.93 17.583 1.86 23.58 1.24
5.667 1.65 11.667 42.93 17.667 1.86 23.67 1.24
5.750 1.65 11.750 42.93 17.750 1.86 23.75 1.24
5.833 1.65 11.833 113.93 17.833 1.86 23.83 1.24
5.917 1.65 11.917 113.93 17.917 1.86 23.92 1.24
6.000 1.65 12.000 113.93 18.000 1.86 24.00 1.24

Unit Hyd Qpeak (cms)= 1.676

PEAK FLOW (cms)= 1.468 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 55.387
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.537

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0010): 62.32 3.251 12.73 57.00
+ ID2= 2 (0134): 15.49 1.468 12.17 55.39
ID = 3 (0011): 77.81 4.190 12.55 56.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)
IN= 2---> OUT= 1
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW (cms) STORAGE (ha.m.)
0.0000 0.0000 9.4690 0.3529
0.4100 0.1040 0.0000 0.0000
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
INFLOW : ID= 2 (0011) 77.810 4.190 12.55 56.68
OUTFLOW: ID= 1 (0015) 77.810 4.138 12.62 56.62
PEAK FLOW REDUCTION [Qout/Qin](%)= 98.75
TIME SHIFT OF PEAK FLOW (min)= 4.50
MAXIMUM STORAGE USED (ha.m.)= 0.2061

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

HRP6.1-EX.2-100 YEAR.OUT

CALIB
STANDHYD (0135)
ID= 1 DT= 3.0 min |

Area (ha)= 6.36
Total Imp(%)= 36.00 Dir. Conn.(%)= 36.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.29 4.07
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 205.91 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP6.1-EX.2-100 YEAR.OUT

3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24

Max.Eff.Inten.(mm/hr)= 113.93 66.98
over (min) 6.00 12.00
Storage Coeff. (min)= 3.04 (ii) 11.47 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.10

TOTALS
PEAK FLOW (cms)= 0.72 0.52 1.193 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 101.70 51.59 69.63
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.50 0.67

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0012) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0135): 6.36 1.193 12.00 69.63
+ ID2= 2 (0015): 77.81 4.138 12.62 56.62
=====

ID = 3 (0012): 84.17 4.347 12.57 57.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040) |

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.550	1.03	6.550	2.06	12.550	14.86	18.55	1.86
0.600	1.03	6.600	2.06	12.600	14.86	18.60	1.86
0.650	1.03	6.650	2.06	12.650	14.86	18.65	1.86
0.700	1.03	6.700	2.06	12.700	14.86	18.70	1.86
0.750	1.03	6.750	2.06	12.750	14.86	18.75	1.86
0.800	1.03	6.800	2.06	12.800	14.86	18.80	1.86
0.850	1.03	6.850	2.06	12.850	14.86	18.85	1.86
0.900	1.03	6.900	2.06	12.900	14.86	18.90	1.86
0.950	1.03	6.950	2.06	12.950	14.86	18.95	1.86
1.000	1.03	7.000	2.06	13.000	14.86	19.00	1.86
1.050	1.03	7.050	2.06	13.050	14.44	19.05	1.86
1.100	1.03	7.100	2.06	13.100	14.44	19.10	1.86
1.150	1.03	7.150	2.06	13.150	14.44	19.15	1.86
1.200	1.03	7.200	2.06	13.200	14.44	19.20	1.86
1.250	1.03	7.250	2.06	13.250	14.44	19.25	1.86
1.300	1.03	7.300	2.06	13.300	14.44	19.30	1.86
1.350	1.03	7.350	2.06	13.350	14.44	19.35	1.86
1.400	1.03	7.400	2.06	13.400	14.44	19.40	1.86
1.450	1.03	7.450	2.06	13.450	14.44	19.45	1.86
1.500	1.03	7.500	2.06	13.500	14.45	19.50	1.86
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24

HRP6.1-EX_2-100 YEAR.OUT
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0000 /0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 /0.0000	Main Channel	
6.00	100.67	0.0000		
7.00	101.00	0.0000		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.590E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.136E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(m)	(m/s)
INFLOW : ID= 2 (0012)	84.17	4.35	12.57	57.61	0.76
OUTFLOW: ID= 1 (0040)	84.17	4.16	12.75	57.54	0.74

CALIB			
NASHYD (0121)	Area (ha)=	3.64	Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.11	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86		
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86		
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86		
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		

2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 1.241

PEAK FLOW	(cms)=	0.670 (l)
TIME TO PEAK	(hrs)=	12.000
RUNOFF VOLUME	(mm)=	54.445
TOTAL RAINFALL	(mm)=	103.200
RUNOFF COEFFICIENT	=	0.528

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0122)	Area (ha)=	16.13	
ID= 1 DT= 3.0 min	Total Imp(%)=	31.00	Dir. Conn.(%)= 31.00

			IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.00	11.13	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	327.92	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		

HRP6.1-EX_2-100 YEAR.OUT									
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		

HRP6.1-EX_2-100 YEAR.OUT									
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)= 113.93 66.98
over (min) 6.00 15.00
Storage Coeff. (min)= 4.02 (ii) 12.30 (iii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.24 0.09
TOTALS
PEAK FLOW (cms)= 1.54 1.33 2.666 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 101.70 51.59 67.12
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.50 0.65

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```

-----
| ADD HYD ( 0019)|
| 1 + 2 = 3 |
-----
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 ( 0121): 3.64 0.670 12.00 54.44
+ ID2= 2 ( 0122): 16.13 2.666 12.00 67.12
=====
ID = 3 ( 0019): 19.77 3.336 12.00 64.79

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0020)|
| 1 + 2 = 3 |
-----
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 ( 0019): 19.77 3.336 12.00 64.79
+ ID2= 2 ( 0040): 84.17 4.157 12.75 57.54
=====
ID = 3 ( 0020): 103.94 4.675 12.62 58.92

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUUU A A LLLLL
000 TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y M M 0 0
0 0 T T H H Y Y M M 0 0
000 T T H H Y Y M M 000

```

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4d53bb1-4f28-42ce-a4b2-4d4132b57854\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4d53bb1-4f28-42ce-a4b2-4d4132b57854\scenar

HRP6.1-EX_2-100 YEAR.OUT

DATE: 03/24/2023 TIME: 10:06:57

USER:

COMMENTS:

** SIMULATION : Run 05 **

MASS STORM
Filename: C:\Users\AbirA\AppData\Local\Temp\fd1c3467-cc8b-499d-b09d-61f2685b8f6a\95accb52
Ptotal=115.20 mm
Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07	
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07	
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07	
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07	
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07	
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07	
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07	
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07	
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38	
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38	
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38	
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38	
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38	
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38	
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38	
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38	
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38	
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38	
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38	
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38	
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38	
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38	
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38	
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38	

CALIB
NASHYD (1030)
ID= 1 DT= 5.0 min
Area (ha)= 30.38
Ia (mm)= 5.00
Curve Number (CN)= 77.0
of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07	
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07	
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07	
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07	
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07	
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07	
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07	
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07	
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07	
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07	
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07	
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07	
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07	
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07	
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07	
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07	
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07	
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07	
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07	
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07	
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07	
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07	
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07	

HRP6.1-EX_2-100 YEAR.OUT

2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07	
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38	
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38	
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38	
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38	
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38	
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38	
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38	
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38	
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38	
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38	
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38	
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38	
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38	
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38	
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38	
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38	
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38	
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38	
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38	
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38	
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38	
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38	
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38	
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38	
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38	
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38	
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38	
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38	
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38	
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38	
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38	
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38	
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38	
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38	
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38	
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38	
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38	
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38	
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38	
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38	
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38	
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38	
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38	
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38	
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38	
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38	
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38	
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38	

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 2.645 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 65.263
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
NASHYD (0130)
ID= 1 DT= 5.0 min
Area (ha)= 2.25
Ia (mm)= 5.00
Curve Number (CN)= 77.0
of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.12

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07	
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07	
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07	
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07	
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07	
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07	
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07	
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07	
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07	
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07	
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07	
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07	
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07	
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07	

HRP6.1-EX_2-100 YEAR.OUT

HRP6.1-EX_2-100 YEAR.OUT

1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 0.704

PEAK FLOW (cms)= 0.473 (1)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 64.446
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.559

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1030):	30.38	2.645	12.33	65.26
+ ID2= 2 (0130):	2.25	0.473	12.00	64.45
=====				
ID = 3 (0003):	32.63	2.746	12.33	65.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0021)
IN= 2--> OUT= 1 Routing time step (min)= 4.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning
0.00	101.00	0.0800
1.00	100.67	0.0800
2.00	100.33	0.0800 / 0.0350
3.00	100.00	0.0350
4.00	100.00	0.0350
5.00	100.33	0.0350 / 0.0800
6.00	100.67	0.0800
7.00	101.00	0.0800

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.165E+02	0.0	0.34	16.76
0.09	100.09	.417E+02	0.1	0.51	11.21
0.14	100.14	.695E+02	0.1	0.64	8.95
0.19	100.19	.102E+03	0.2	0.75	7.64
0.24	100.24	.139E+03	0.3	0.85	6.77
0.28	100.28	.181E+03	0.5	0.94	6.13
0.33	100.33	.227E+03	0.7	1.02	5.64
0.39	100.39	.288E+03	1.0	1.17	4.90
0.44	100.44	.355E+03	1.3	1.30	4.42
0.50	100.50	.428E+03	1.7	1.40	4.09
0.55	100.55	.508E+03	2.2	1.49	3.85
0.61	100.61	.594E+03	2.7	1.57	3.66
0.66	100.66	.686E+03	3.3	1.63	3.51
0.72	100.72	.785E+03	3.9	1.69	3.38
0.78	100.78	.890E+03	4.5	1.75	3.28
0.83	100.83	.100E+04	5.2	1.80	3.19
0.89	100.89	.112E+04	6.0	1.84	3.12
0.94	100.94	.124E+04	6.8	1.88	3.05
1.00	101.00	.138E+04	7.7	1.92	2.99

	<--- hydrograph <--->				<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0003)	32.63	2.75	12.33	65.21	0.61	1.57
OUTFLOW: ID= 1 (0021)	32.63	2.74	12.42	65.21	0.61	1.57

CALIB				
NASHYD (0131)	Area	(ha)=	14.65	Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=		0.40	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	1.15	6.083	2.30	12.083	16.60	18.08	2.07		
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07		
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07		
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07		
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07		
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		

HRP6.1-EX_2-100 YEAR.OUT

2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.413

PEAK FLOW (cms)= 1.725 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 73.167
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.635

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0131):	14.65	1.725	12.25	73.17
+ ID2= 2 (0021):	32.63	2.737	12.42	65.21
ID = 3 (0005):	47.28	4.388	12.33	67.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	8.25
STANDHYD (0132)	Total Imp(%)=	31.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	31.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.56	5.69
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (ft)=	234.52	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.6 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07

HRP6.1-EX_2-100 YEAR.OUT

0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38

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4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 78.96
over (min)= 6.00 12.00
Storage Coeff. (min)= 3.14 (ii) 11.97 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.09

TOTALS
PEAK FLOW (cms)= 0.89 0.84 1.667 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 113.70 60.84 77.23
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53 0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0132):	8.25	1.667	12.00	77.23
+ ID2= 2 (0005):	47.28	4.388	12.33	67.67
=====				
ID = 3 (0007):	55.53	5.008	12.25	69.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0022)|
| IN= 2--> OUT= 1 | Routing time step (min)= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0000 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0000	Main Channel	
6.00	100.67	0.0000		
7.00	101.00	0.0000		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45

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0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.259E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0007) 55.53 5.01 12.25 69.09 0.82 1.78
OUTFLOW: ID= 1 (0022) 55.53 5.00 12.25 69.09 0.81 1.78

| CALIB
| STANDHYD (0133)| Area (ha)= 6.79
| ID= 1 DT= 3.0 min | Total Imp(%)= 47.00 Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.19 3.60
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 212.76 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		

HRP6.1-EX_2-100 YEAR.OUT

HRP6.1-EX_2-100 YEAR.OUT

CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)					AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3					(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0133):					6.79	1.530	12.00	78.87
+ ID2= 2 (0022):					55.53	5.004	12.25	69.09
ID = 3 (0009):					62.32	6.079	12.05	70.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)					OVERFLOW IS OFF			
IN= 2---> OUT= 1					OUTFLOW	STORAGE	OUTFLOW	STORAGE
DT= 5.0 min					(cms)	(ha.m.)	(cms)	(ha.m.)
					0.0000	0.0000	3.1610	1.2220
					0.0000	0.0000	3.9640	1.4400
					0.0040	0.1320	5.1940	1.6250
					0.0280	0.2670	6.2920	1.8150
					0.0390	0.4050	6.6170	2.0100
					0.3670	0.7010	8.3440	2.2100
					1.0220	0.8510	9.3610	2.4150
					1.7620	1.0040	0.0000	0.0000
					AREA	QPEAK	TPEAK	R.V.
					(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0009)					62.320	6.079	12.05	70.16
OUTFLOW: ID= 1 (0010)					62.320	3.785	12.73	67.01

PEAK FLOW REDUCTION [qout/qin](%)= 62.26
TIME SHIFT OF PEAK FLOW (min)= 40.50
MAXIMUM STORAGE USED (ha.m.)= 1.3914

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB					Area	(ha)=	Curve Number	(CN)=
NASHYD (0134)					(mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min					U.H. Tp(hrs)=	0.35		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07		
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07		
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07		
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07		
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07		
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		

2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 62.00
over (min) 6.00 12.00
Storage Coeff. (min)= 2.96 (ii) 9.69 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.11

TOTALS

PEAK FLOW (cms)= 1.12 0.45 1.530 (iii)
TIME TO PEAK (hrs)= 12.00 12.05
RUNOFF VOLUME (mm)= 113.70 47.99 78.87
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.42 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

HRP6.1-EX_2-100 YEAR.OUT

2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.676

PEAK FLOW (cms)= 1.735 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 65.253
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.566

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0010):	62.32	3.785	12.73	67.01
+ ID2= 2 (0134):	15.49	1.735	12.17	65.25
=====				
ID = 3 (0011):	77.81	4.921	12.45	66.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)				
IN= 2--> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				

OUTFLOW		STORAGE		OUTFLOW
(cms)		(ha.m.)		(cms)
0.0000		0.0000		0.3520
0.4100		0.1040		0.0000

AREA		QPEAK	TPEAK	R.V.
(ha)		(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0011)		77.810	4.921	12.45
OUTFLOW: ID= 1 (0015)		77.810	4.884	12.55

PEAK FLOW REDUCTION [Qout/Qin](%)= 99.25
TIME SHIFT OF PEAK FLOW (min)= 6.00
MAXIMUM STORAGE USED (ha.m.)= 0.2265

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB				
STANDHYD (0135)				
ID= 1 DT= 3.0 min	Area	(ha)=	6.36	
	Total Imp(%)=	36.00	Dir. Conn.(%)=	36.00

HRP6.1-EX_2-100 YEAR.OUT

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.29	4.07
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	205.91	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38

HRP6.1-EX_2-100 YEAR.OUT

HRP6.1-EX_2-100 YEAR.OUT

3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)=	127.18	78.96
over (min)	6.00	12.00
Storage Coeff. (min)=	2.91 (ii)	10.98 (ii)
Unit Hyd. Tpeak (min)=	6.00	12.00
Unit Hyd. peak (cms)=	0.28	0.10
		TOTALS
PEAK FLOW (cms)=	0.80	0.62
TIME TO PEAK (hrs)=	12.00	12.05
RUNOFF VOLUME (mm)=	113.70	60.84
TOTAL RAINFALL (mm)=	115.20	115.20
RUNOFF COEFFICIENT =	0.99	0.53
		0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0012)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0135):	6.36	1.377	12.00	79.87
+ ID2= 2 (0015):	77.81	4.884	12.55	66.61
=====				
ID = 3 (0012):	84.17	5.171	12.50	67.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)				
IN= 2---> OUT= 1	Routing time step (min)!=	2.00		
<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		

0.00	101.00	0.0000			
1.00	100.67	0.0000			
2.00	100.33	0.0000 /0.0350	Main Channel		
3.00	100.00	0.0350	Main Channel		
4.00	100.00	0.0350	Main Channel		
5.00	100.33	0.0350 /0.0000	Main Channel		
6.00	100.67	0.0000			
7.00	101.00	0.0000			
<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.500E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.79
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.130E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.390E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52
<---- hydrograph ---->					
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)
INFLOW : ID= 2 (0012)	84.17	5.17	12.50	67.61	0.83
OUTFLOW: ID= 1 (0040)	84.17	4.96	12.70	67.54	0.81
					MAX VEL (m/s)
					1.79
					1.77

CALIB					
NASHYD (0121)	Area (ha)=	3.64	Curve Number (CN)=	77.0	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.11			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	1.15	6.083	2.30	12.083	16.00	18.08	2.07		
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07		
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07		
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07		
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07		
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		

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2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.241

PEAK FLOW (cms)= 0.788 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 64.142
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.557

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-----		-----	
CALIB			
STANDHYD (0122)			
ID= 1 DT= 3.0 min			
		Area (ha)= 16.13	
		Total Imp(%)= 31.00	Dir. Conn.(%)= 31.00
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)= 5.00	11.13	
Dep. Storage	(mm)= 1.50	1.50	
Average Slope	(%)= 2.00	2.00	
Length	(m)= 327.92	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07

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1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.

HRP6.1-EX_2-100 YEAR.OUT											
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38				
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38				
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38				
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38				
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38				
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38				
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38				
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38				
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38				
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38				
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38				
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38				
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38				
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38				

Max.Eff.Inten.(mm/hr)=	127.18	78.96	
over (min)	6.00	15.00	
Storage Coeff. (min)=	3.84 (ii)	12.67 (ii)	
Unit Hyd. Tpeak (min)=	6.00	15.00	
Unit Hyd. peak (cms)=	0.24	0.08	
PEAK FLOW (cms)=	1.73	1.56	3.043 (iii)
TIME TO PEAK (hrs)=	12.00	12.10	12.00
RUNOFF VOLUME (mm)=	113.70	60.84	77.23
TOTAL RAINFALL (mm)=	115.20	115.20	115.20
RUNOFF COEFFICIENT =	0.99	0.53	0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)					
1	2	3			
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):		3.64	0.788	12.00	64.14
+ ID2= 2 (0122):		16.13	3.043	12.00	77.23
=====					
ID = 3 (0019):		19.77	3.831	12.00	74.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)					
1	2	3			
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0019):		19.77	3.831	12.00	74.82
+ ID2= 2 (0040):		84.17	4.960	12.70	67.54
=====					
ID = 3 (0020):		103.94	5.719	12.55	68.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

```
=====
V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL
000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000
```

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\04a7ce2f-b4d3-470e-bad7-5992eed5f631\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\04a7ce2f-b4d3-470e-bad7-5992eed5f631\scenar

HRP6.1-EX_2-100 YEAR.OUT

DATE: 03/24/2023 TIME: 10:06:55

USER:

COMMENTS:

** SIMULATION : Run 06 **

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\fd1c3467-cc8b-4992-b09d-61f2685b8f6a\2985551a
Ptotal=127.20 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53

CALIB	
NASHYD (1030)	Area (ha)= 30.38 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29

HRP6.1-EX_2-100 YEAR.OUT

2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 3.064 (l)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 75.388
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.593

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-EX_2-100 YEAR.OUT

1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 0.704

PEAK FLOW (cms)= 0.546 (l)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 74.445
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.585

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

[ADD HYD (0003)]				
[1 + 2 = 3]				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1030):	30.38	3.064	12.33	75.39
+ ID2= 2 (0130):	2.25	0.546	12.00	74.44
=====				
ID = 3 (0003):	32.63	3.100	12.33	75.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

[ROUTE CHN(0021)]
[IN= 2--> OUT= 1] Routing time step (min)'= 4.00

<----- DATA FOR SECTION (1.1) ----->

[CALIB]				
[NASHYD (0130)]				
ID= 1 DT= 5.0 min	Area	(ha)=	2.25	Curve Number (CN)= 77.0
	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00

	U.H. Tp(hrs)=	0.12		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		

HRP6.1-EX_2-100 YEAR.OUT

HRP6.1-EX_2-100 YEAR.OUT

Distance	Elevation	Manning
0.00	101.00	0.0800
1.00	100.67	0.0800
2.00	100.33	0.0800 / 0.0350
3.00	100.00	0.0350
4.00	100.00	0.0350
5.00	100.33	0.0350 / 0.0800
6.00	100.67	0.0800
7.00	101.00	0.0800

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.185E+02	0.0	0.34	16.76
0.09	100.09	.417E+02	0.1	0.51	11.21
0.14	100.14	.695E+02	0.1	0.64	8.95
0.19	100.19	.102E+03	0.2	0.75	7.64
0.24	100.24	.139E+03	0.3	0.85	6.77
0.28	100.28	.181E+03	0.5	0.94	6.13
0.33	100.33	.227E+03	0.7	1.02	5.64
0.39	100.39	.280E+03	1.0	1.17	4.90
0.44	100.44	.355E+03	1.3	1.30	4.42
0.50	100.50	.428E+03	1.7	1.40	4.09
0.55	100.55	.508E+03	2.2	1.49	3.85
0.61	100.61	.594E+03	2.7	1.57	3.66
0.66	100.66	.686E+03	3.3	1.63	3.51
0.72	100.72	.785E+03	3.9	1.69	3.38
0.78	100.78	.890E+03	4.5	1.75	3.28
0.83	100.83	.100E+04	5.2	1.80	3.19
0.89	100.89	.112E+04	6.0	1.84	3.12
0.94	100.94	.124E+04	6.8	1.88	3.05
1.00	101.00	.138E+04	7.7	1.92	2.99

<---- hydrograph ---->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0003)	32.63	3.18	12.33	75.32	0.66
OUTFLOW: ID= 1 (0021)	32.63	3.17	12.42	75.32	0.65

2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.413

PEAK FLOW (cms)= 1.979 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 83.902
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.660

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0131):	14.65	1.979	12.25	83.90	
+ ID2= 2 (0021):	32.63	3.167	12.42	75.32	
=====					
ID = 3 (0005):	47.28	5.062	12.33	77.98	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (0132)					
ID= 1 DT= 3.0 min	Area	(ha)=	8.25		
	Total Imp(%)=	31.00	Dir. Conn.(%)=	31.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.56	5.69
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	234.52	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	1.27	6.083	2.54	12.083	18.33	18.08	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		

HRP6.1-EX_2-100 YEAR.OUT									
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		

HRP6.1-EX_2-100 YEAR.OUT									
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53		
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53		
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53		
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53		
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53		
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53		
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53		
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53		
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53		
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53		
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53		
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53		
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53		
Max.Eff.Inten.(mm/hr)= 140.43 91.28									
Storage Coeff. (min)= 3.02 (ii) 11.51 (ii)									
Unit Hyd. Tpeak (min)= 6.00 12.00									
Unit Hyd. peak (cms)= 0.27 0.10									
TOTALS									
PEAK FLOW (cms)= 0.99 0.99 1.903 (iii)									
TIME TO PEAK (hrs)= 12.00 12.05 12.00									
RUNOFF VOLUME (mm)= 125.70 70.39 87.53									
TOTAL RAINFALL (mm)= 127.20 127.20 127.20									
RUNOFF COEFFICIENT = 0.99 0.55 0.69									
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

DD HYD (0007)									
1 + 2 = 3									
-----		AREA	QPEAK	TPEAK	R.V.				
		(ha)	(cms)	(hrs)	(mm)				
ID1= 1 (0132):		8.25	1.903	12.00	87.53				
+ ID2= 2 (0005):		47.28	5.062	12.33	77.98				
-----		-----	-----	-----	-----				
ID = 3 (0007):		55.53	5.771	12.25	79.40				
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

ROUTE CHN(0022)									
N= 2 ---> OUT=									
Routing time step (min)'= 2.00									
<----- DATA FOR SECTION (1.1) ----->									
Distance		Elevation		Manning					
0.00		101.00		0.0800					
1.00		100.67		0.0800					
2.00		100.33		0.0800 / 0.0350		Main Channel			
3.00		100.00		0.0350		Main Channel			
4.00		100.00		0.0350		Main Channel			
5.00		100.33		0.0350 / 0.0800		Main Channel			
6.00		100.67		0.0800					
7.00		101.00		0.0800					
<----- TRAVEL TIME TABLE ----->									
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV. TIME				
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)				
0.05	100.05	.609E+01	0.0	0.34	5.51				
0.09	100.09	.137E+02	0.1	0.51	3.68				
0.14	100.14	.228E+02	0.1	0.64	2.94				
0.19	100.19	.335E+02	0.2	0.75	2.51				
0.24	100.24	.457E+02	0.3	0.85	2.22				
0.28	100.28	.594E+02	0.5	0.94	2.01				
0.33	100.33	.746E+02	0.7	1.02	1.85				
0.39	100.39	.945E+02	1.0	1.17	1.61				
0.44	100.44	.117E+03	1.3	1.30	1.45				

HRP6.1-EX_2-100 YEAR.OUT

0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.256E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

		<--- hydrograph --->			<-pipe / channel->		
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0007)	55.53	55.53	5.77	12.25	79.40	0.87	1.83
OUTFLOW: ID= 1 (0022)	55.53	55.53	5.77	12.25	79.40	0.87	1.83

HRP6.1-EX_2-100 YEAR.OUT

2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)=	149.43	72.61
over (min)	6.00	12.00
Storage Coeff. (min)=	2.85 (ii)	9.31 (ii)
Unit Hyd. Tpeak (min)=	6.00	12.00
Unit Hyd. peak (cms)=	0.28	0.11

PEAK FLOW (cms)=	1.24	0.53	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.00	1.729 (iii)
RUNOFF VOLUME (mm)=	125.70	56.15	88.84
TOTAL RAINFALL (mm)=	127.20	127.20	127.20
RUNOFF COEFFICIENT =	0.99	0.44	0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CALIB					
STANDHYD (0133)		Area	(ha)=	6.79	
D= 1 DT= 3.0 min		Total	Imp(%)=	47.00	Dir. Conn.(%)= 47.00
		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	3.19	3.60		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	212.76	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.6 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53

HRP6.1-EX_2-100 YEAR.OUT

CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)				
1	2	3		
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)
		R.V. (mm)		
ID1= 1 (0133):		6.79	1.729	12.00
+ ID2= 2 (0022):		55.53	5.768	12.25
ID = 3 (0009):		62.32	6.997	12.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)				
IN= 2--> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				
		OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)
		STORAGE (ha.m.)		
		0.0000	0.0000	3.1610
		0.0000	0.0000	3.9640
		0.0040	0.1320	5.1940
		0.0280	0.2670	6.2920
		0.0390	0.4050	6.6170
		0.3670	0.7010	8.3440
		1.0220	0.8510	9.3610
		1.7620	1.0040	0.0000
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)
		R.V. (mm)		
INFLOW : ID= 2 (0009)		62.320	6.997	12.05
OUTFLOW: ID= 1 (0010)		62.320	4.556	12.68

PEAK FLOW REDUCTION [Qout/Qin](%)= 65.12
TIME SHIFT OF PEAK FLOW (min)= 37.50
MAXIMUM STORAGE USED (ha.m.)= 1.5293

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB				
NASHYD (0134)				
ID= 1 DT= 5.0 min				
		Area (ha)=	15.49	Curve Number (CN)= 77.0
		Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
		U.H. Tp(hrs)=	0.35	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		

HRP6.1-EX_2-100 YEAR.OUT

2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.676

PEAK FLOW (cms)= 2.010 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 75.376
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.593

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)				
1	2	3		
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)
		R.V. (mm)		
ID1= 1 (0010):		62.32	4.556	12.68
+ ID2= 2 (0134):		15.49	2.010	12.17
ID = 3 (0011):		77.81	5.009	12.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)				
IN= 2--> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				
		OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)
		STORAGE (ha.m.)		
		0.0000	0.0000	9.4690
		0.4100	0.1040	0.0000
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)
		R.V. (mm)		
INFLOW : ID= 2 (0011)		77.810	5.009	12.55
OUTFLOW: ID= 1 (0015)		77.810	5.771	12.60

PEAK FLOW REDUCTION [Qout/Qin](%)= 99.34
TIME SHIFT OF PEAK FLOW (min)= 3.00
MAXIMUM STORAGE USED (ha.m.)= 0.2508

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB				
STANDHYD (0135)				
ID= 1 DT= 3.0 min				
		Area (ha)=	6.36	
		Total Imp(%)=	36.00	Dir. Conn.(%)= 36.00

HRP6.1-EX_2-100 YEAR.OUT

 Surface Area (ha)=
 Dep. Storage (mm)=
 Average Slope (%)=
 Length (m)=
 Mannings n =

IMPERVIOUS
 2.29
 1.50
 2.00
 265.91
 0.013

PERVIOUS (1)
 4.07
 1.50
 2.00
 40.00
 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP6.1-EX_2-100 YEAR.OUT

3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 91.28
 over (min) 6.00 12.00
 Storage Coeff. (min)= 2.79 (ii) 10.55 (ii)
 Unit Hyd. Tpeak (min)= 6.00 12.00
 Unit Hyd. peak (cms)= 0.28 0.10

PEAK FLOW (cms)= 0.89 0.73
 TIME TO PEAK (hrs)= 12.00 12.05
 RUNOFF VOLUME (mm)= 125.70 70.39
 TOTAL RAINFALL (mm)= 127.20 127.20
 RUNOFF COEFFICIENT = 0.99 0.55

TOTALS
 1.566 (iii)
 12.00
 90.30
 127.20
 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 72.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ADD HYD (0012) |
1 + 2 = 3
 ID1= 1 (0135): 6.36 1.566 12.00 90.30
 + ID2= 2 (0015): 77.81 5.771 12.00 76.83
 =====
 ID = 3 (0012): 84.17 6.049 12.55 77.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 | ROUTE CHN(0040) |
 | IN= 2---> OUT= 1 | Routing time step (min)!= 2.00

<----- DATA FOR SECTION (1.1) ----->
 Distance Elevation Manning

----- TRANSFORMED HYETOGRAPH -----
 TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
 hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
 0.050 1.27 | 6.050 2.54 | 12.050 18.32 | 18.05 2.29
 0.100 1.27 | 6.100 2.54 | 12.100 18.32 | 18.10 2.29
 0.150 1.27 | 6.150 2.54 | 12.150 18.32 | 18.15 2.29
 0.200 1.27 | 6.200 2.54 | 12.200 18.32 | 18.20 2.29
 0.250 1.27 | 6.250 2.54 | 12.250 18.32 | 18.25 2.29
 0.300 1.27 | 6.300 2.54 | 12.300 18.32 | 18.30 2.29
 0.350 1.27 | 6.350 2.54 | 12.350 18.32 | 18.35 2.29
 0.400 1.27 | 6.400 2.54 | 12.400 18.32 | 18.40 2.29
 0.450 1.27 | 6.450 2.54 | 12.450 18.32 | 18.45 2.29
 0.500 1.27 | 6.500 2.54 | 12.500 18.31 | 18.50 2.29
 0.550 1.27 | 6.550 2.54 | 12.550 9.41 | 18.55 2.29
 0.600 1.27 | 6.600 2.54 | 12.600 9.41 | 18.60 2.29
 0.650 1.27 | 6.650 2.54 | 12.650 9.41 | 18.65 2.29
 0.700 1.27 | 6.700 2.54 | 12.700 9.41 | 18.70 2.29
 0.750 1.27 | 6.750 2.54 | 12.750 9.41 | 18.75 2.29
 0.800 1.27 | 6.800 2.54 | 12.800 9.41 | 18.80 2.29
 0.850 1.27 | 6.850 2.54 | 12.850 9.41 | 18.85 2.29
 0.900 1.27 | 6.900 2.54 | 12.900 9.41 | 18.90 2.29
 0.950 1.27 | 6.950 2.54 | 12.950 9.41 | 18.95 2.29
 1.000 1.27 | 7.000 2.54 | 13.000 9.41 | 19.00 2.29
 1.050 1.27 | 7.050 2.54 | 13.050 1.78 | 19.05 2.29
 1.100 1.27 | 7.100 2.54 | 13.100 1.78 | 19.10 2.29
 1.150 1.27 | 7.150 2.54 | 13.150 1.78 | 19.15 2.29
 1.200 1.27 | 7.200 2.54 | 13.200 1.78 | 19.20 2.29
 1.250 1.27 | 7.250 2.54 | 13.250 1.78 | 19.25 2.29
 1.300 1.27 | 7.300 2.54 | 13.300 1.78 | 19.30 2.29
 1.350 1.27 | 7.350 2.54 | 13.350 1.78 | 19.35 2.29
 1.400 1.27 | 7.400 2.54 | 13.400 1.78 | 19.40 2.29
 1.450 1.27 | 7.450 2.54 | 13.450 1.78 | 19.45 2.29
 1.500 1.27 | 7.500 2.54 | 13.500 1.79 | 19.50 2.29
 1.550 1.27 | 7.550 2.54 | 13.550 10.43 | 19.55 2.29
 1.600 1.27 | 7.600 2.54 | 13.600 10.43 | 19.60 2.29
 1.650 1.27 | 7.650 2.54 | 13.650 10.43 | 19.65 2.29
 1.700 1.27 | 7.700 2.54 | 13.700 10.43 | 19.70 2.29
 1.750 1.27 | 7.750 2.54 | 13.750 10.43 | 19.75 2.29
 1.800 2.29 | 7.800 2.54 | 13.800 10.43 | 19.80 2.29
 1.850 2.29 | 7.850 2.54 | 13.850 10.43 | 19.85 2.29
 1.900 2.29 | 7.900 2.54 | 13.900 10.43 | 19.90 2.29
 1.950 2.29 | 7.950 2.54 | 13.950 10.43 | 19.95 2.29
 2.000 2.29 | 8.000 2.54 | 14.000 10.43 | 20.00 2.29
 2.050 1.65 | 8.050 3.43 | 14.050 3.82 | 20.05 1.53
 2.100 1.65 | 8.100 3.43 | 14.100 3.82 | 20.10 1.53
 2.150 1.65 | 8.150 3.43 | 14.150 3.82 | 20.15 1.53
 2.200 1.65 | 8.200 3.43 | 14.200 3.82 | 20.20 1.53
 2.250 1.65 | 8.250 3.43 | 14.250 3.82 | 20.25 1.53
 2.300 1.65 | 8.300 3.43 | 14.300 3.82 | 20.30 1.53
 2.350 1.65 | 8.350 3.43 | 14.350 3.82 | 20.35 1.53
 2.400 1.65 | 8.400 3.43 | 14.400 3.82 | 20.40 1.53
 2.450 1.65 | 8.450 3.43 | 14.450 3.82 | 20.45 1.53
 2.500 1.65 | 8.500 3.43 | 14.500 3.82 | 20.50 1.53
 2.550 1.65 | 8.550 3.43 | 14.550 3.82 | 20.55 1.53
 2.600 1.65 | 8.600 3.43 | 14.600 3.82 | 20.60 1.53
 2.650 1.65 | 8.650 3.43 | 14.650 3.82 | 20.65 1.53
 2.700 1.65 | 8.700 3.43 | 14.700 3.82 | 20.70 1.53
 2.750 1.65 | 8.750 3.43 | 14.750 3.82 | 20.75 1.53
 2.800 1.65 | 8.800 3.43 | 14.800 3.82 | 20.80 1.53
 2.850 1.65 | 8.850 3.43 | 14.850 3.82 | 20.85 1.53
 2.900 1.65 | 8.900 3.43 | 14.900 3.82 | 20.90 1.53
 2.950 1.65 | 8.950 3.43 | 14.950 3.82 | 20.95 1.53
 3.000 1.65 | 9.000 3.43 | 15.000 3.82 | 21.00 1.53
 3.050 1.65 | 9.050 4.07 | 15.050 3.82 | 21.05 1.53
 3.100 1.65 | 9.100 4.07 | 15.100 3.82 | 21.10 1.53
 3.150 1.65 | 9.150 4.07 | 15.150 3.82 | 21.15 1.53
 3.200 1.65 | 9.200 4.07 | 15.200 3.82 | 21.20 1.53
 3.250 1.65 | 9.250 4.07 | 15.250 3.82 | 21.25 1.53
 3.300 1.65 | 9.300 4.07 | 15.300 3.82 | 21.30 1.53
 3.350 1.65 | 9.350 4.07 | 15.350 3.82 | 21.35 1.53
 3.400 1.65 | 9.400 4.07 | 15.400 3.82 | 21.40 1.53
 3.450 1.65 | 9.450 4.07 | 15.450 3.82 | 21.45 1.53
 3.500 1.65 | 9.500 4.07 | 15.500 3.82 | 21.50 1.53
 3.550 1.65 | 9.550 4.58 | 15.550 3.82 | 21.55 1.53
 3.600 1.65 | 9.600 4.58 | 15.600 3.82 | 21.60 1.53
 3.650 1.65 | 9.650 4.58 | 15.650 3.82 | 21.65 1.53

HRP6.1-EX_2-100 YEAR.OUT				
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0000 /0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 /0.0000	Main Channel	
6.00	100.67	0.0000		
7.00	101.00	0.0000		

<----- TRAVEL TIME TABLE ----->						
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)	
0.05	100.05	.590E+02	0.0	0.34	53.36	
0.09	100.09	.133E+03	0.1	0.51	35.79	
0.14	100.14	.221E+03	0.1	0.64	28.48	
0.19	100.19	.324E+03	0.2	0.75	24.33	
0.24	100.24	.442E+03	0.3	0.85	21.55	
0.28	100.28	.575E+03	0.5	0.94	19.51	
0.33	100.33	.723E+03	0.7	1.02	17.94	
0.39	100.39	.916E+03	1.0	1.17	15.58	
0.44	100.44	.113E+04	1.3	1.30	14.08	
0.50	100.50	.130E+04	1.7	1.40	13.03	
0.55	100.55	.162E+04	2.2	1.49	12.25	
0.61	100.61	.189E+04	2.7	1.57	11.65	
0.66	100.66	.218E+04	3.3	1.63	11.17	
0.72	100.72	.250E+04	3.9	1.69	10.77	
0.78	100.78	.283E+04	4.5	1.75	10.45	
0.83	100.83	.319E+04	5.2	1.80	10.17	
0.89	100.89	.357E+04	6.0	1.84	9.92	
0.94	100.94	.390E+04	6.8	1.88	9.71	
1.00	101.00	.438E+04	7.7	1.92	9.52	
<---- hydrograph ----> <-pipe / channel->						
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0012)	84.17	6.05	12.55	77.85	0.89	1.84
OUTFLOW: ID= 1 (0040)	84.17	5.88	12.70	77.78	0.88	1.83

CALIB						
NASHYD (0121)	Area (ha)=	3.64	Curve Number (CN)=	77.0		
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00		
	U.H. Tp(hrs)=	0.11				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' hrs	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	
0.083	1.27 6.083	2.54	12.083	18.33	18.08	2.29			
0.167	1.27 6.167	2.54	12.167	18.32	18.17	2.29			
0.250	1.27 6.250	2.54	12.250	18.32	18.25	2.29			
0.333	1.27 6.333	2.54	12.333	18.32	18.33	2.29			
0.417	1.27 6.417	2.54	12.417	18.32	18.42	2.29			
0.500	1.27 6.500	2.54	12.500	18.32	18.50	2.29			
0.583	1.27 6.583	2.54	12.583	9.41	18.58	2.29			
0.667	1.27 6.667	2.54	12.667	9.41	18.67	2.29			
0.750	1.27 6.750	2.54	12.750	9.41	18.75	2.29			
0.833	1.27 6.833	2.54	12.833	9.41	18.83	2.29			
0.917	1.27 6.917	2.54	12.917	9.41	18.92	2.29			
1.000	1.27 7.000	2.54	13.000	9.41	19.00	2.29			
1.083	1.27 7.083	2.54	13.083	1.78	19.08	2.29			
1.167	1.27 7.167	2.54	13.167	1.78	19.17	2.29			
1.250	1.27 7.250	2.54	13.250	1.78	19.25	2.29			
1.333	1.27 7.333	2.54	13.333	1.78	19.33	2.29			
1.417	1.27 7.417	2.54	13.417	1.78	19.42	2.29			
1.500	1.27 7.500	2.54	13.500	1.78	19.50	2.29			
1.583	1.27 7.583	2.54	13.583	10.43	19.58	2.29			
1.667	1.27 7.667	2.54	13.667	10.43	19.67	2.29			
1.750	1.27 7.750	2.54	13.750	10.43	19.75	2.29			
1.833	2.29 7.833	2.54	13.833	10.43	19.83	2.29			
1.917	2.29 7.917	2.54	13.917	10.43	19.92	2.29			
2.000	2.29 8.000	2.54	14.000	10.43	20.00	2.29			
2.083	1.65 8.083	3.43	14.083	3.82	20.08	1.53			
2.167	1.65 8.167	3.43	14.167	3.82	20.17	1.53			
2.250	1.65 8.250	3.43	14.250	3.82	20.25	1.53			
2.333	1.65 8.333	3.43	14.333	3.82	20.33	1.53			
2.417	1.65 8.417	3.43	14.417	3.82	20.42	1.53			
2.500	1.65 8.500	3.43	14.500	3.82	20.50	1.53			
2.583	1.65 8.583	3.43	14.583	3.82	20.58	1.53			
2.667	1.65 8.667	3.43	14.667	3.82	20.67	1.53			
2.750	1.65 8.750	3.43	14.750	3.82	20.75	1.53			
2.833	1.65 8.833	3.43	14.833	3.82	20.83	1.53			

HRP6.1-EX_2-100 YEAR.OUT						
2.917	1.65 8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65 9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65 9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65 9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65 9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65 9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65 9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65 9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65 9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65 9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65 9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65 9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65 9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65 10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04 10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04 10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04 10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04 10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04 10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04 10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04 10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04 10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04 10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04 10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04 10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04 11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04 11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04 11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04 11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04 11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04 11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04 11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04 11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04 11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04 11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04 11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04 11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04 12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.241

PEAK FLOW	(cms)=	0.909 (i)
TIME TO PEAK	(hrs)=	12.000
RUNOFF VOLUME	(mm)=	74.093
TOTAL RAINFALL	(mm)=	127.200
RUNOFF COEFFICIENT	=	0.582

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB						
STANDHYD (0122)	Area (ha)=	16.13				
ID= 1 DT= 3.0 min	Total Imp(%)=	31.00	Dir. Conn.(%)=	31.00		
	IMPERVIOUS		PERVIOUS (i)			
Surface Area	(ha)=	5.00	11.13			
Dep. Storage	(mm)=	1.50	1.50			
Average Slope	(%)=	2.00	2.00			
Length	(m)=	327.92	40.00			
Mannings n	=	0.013	0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' hrs	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	
0.050	1.27 6.050	2.54	12.050	18.32	18.05	2.29			
0.100	1.27 6.100	2.54	12.100	18.32	18.10	2.29			
0.150	1.27 6.150	2.54	12.150	18.32	18.15	2.29			
0.200	1.27 6.200	2.54	12.200	18.32	18.20	2.29			
0.250	1.27 6.250	2.54	12.250	18.32	18.25	2.29			
0.300	1.27 6.300	2.54	12.300	18.32	18.30	2.29			
0.350	1.27 6.350	2.54	12.350	18.32	18.35	2.29			
0.400	1.27 6.400	2.54	12.400	18.32	18.40	2.29			
0.450	1.27 6.450	2.54	12.450	18.32	18.45	2.29			
0.500	1.27 6.500	2.54	12.500	18.31	18.50	2.29			
0.550	1.27 6.550	2.54	12.550	9.41	18.55	2.29			
0.600	1.27 6.600	2.54	12.600	9.41	18.60	2.29			
0.650	1.27 6.650	2.54	12.650	9.41	18.65	2.29			
0.700	1.27 6.700	2.54	12.700	9.41	18.70	2.29			
0.750	1.27 6.750	2.54	12.750	9.41	18.75	2.29			
0.800	1.27 6.800	2.54	12.800	9.41	18.80	2.29			
0.850	1.27 6.850	2.54	12.850	9.41	18.85	2.29			
0.900	1.27 6.900	2.54	12.900	9.41	18.90	2.29			
0.950	1.27 6.950	2.54	12.950	9.41	18.95	2.29			

HRP6.1-EX.2-100 YEAR.OUT									
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		

HRP6.1-EX.2-100 YEAR.OUT							
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53
Max.Eff.Inten.(mm/hr)=			140.43	91.28			
over (min)			6.00	15.00			
Storage Coeff. (min)=			3.69 (ii)	12.18 (ii)			
Unit Hyd. Tpeak (min)=			6.00	15.00			
Unit Hyd. peak (cms)=			0.25	0.09			
TOTALS							
PEAK FLOW (cms)=			1.91	1.83		3.471 (iii)	
TIME TO PEAK (hrs)=			12.00	12.10		12.00	
RUNOFF VOLUME (mm)=			125.70	70.39		87.53	
TOTAL RAINFALL (mm)=			127.20	127.20		127.20	
RUNOFF COEFFICIENT =			0.99	0.55		0.69	

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)				
1 + 2 = 3				

ID1= 1 (0121):	3.64	0.909	12.00	74.09
+ ID2= 2 (0122):	16.13	3.471	12.00	87.53
=====				
ID = 3 (0019):	19.77	4.380	12.00	85.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0019):	19.77	4.380	12.00	85.06
+ ID2= 2 (0040):	84.17	5.884	12.70	77.78
=====				
ID = 3 (0020):	103.94	6.717	12.53	79.17

HRP7-EX_2-100 YEAR.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
V V I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\54ce18ad-3d99-4a01-93fe-e02de17e135e\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\54ce18ad-3d99-4a01-93fe-e02de17e135e\scenar

DATE: 03/24/2023 TIME: 10:40:22

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\0eb7a9a7-c234-44bf-98e0-959e019c88cb\571fbdef
Ptotal= 57.60 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

CALIB
NASHYD (1040) Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69	
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69	
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69	
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69	
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69	
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69	
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69	
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69	
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69	
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69	
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69	
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69	
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69	
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69	
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69	
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69	
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69	
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69	
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69	
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69	
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69	
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69	
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69	
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69	
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69	
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69	
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69	
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69	
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69	
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69	
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69	
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69	
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69	
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69	
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69	
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69	
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69	
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69	

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 0.346 (1)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 20.152
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.350

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ROUTE CHN(0037) |

HRP7-EX_2-100 YEAR.OUT
| IN= 2--> OUT= 1 | Routing time step (min)!'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 /0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 /0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.259E+02	0.0	0.22	36.60
0.09	100.09	.582E+02	0.0	0.33	24.49
0.14	100.14	.970E+02	0.1	0.41	19.54
0.19	100.19	.142E+03	0.1	0.48	16.69
0.24	100.24	.194E+03	0.2	0.54	14.78
0.28	100.28	.252E+03	0.3	0.60	13.39
0.33	100.33	.317E+03	0.4	0.65	12.30
0.39	100.39	.402E+03	0.6	0.75	10.68
0.44	100.44	.495E+03	0.9	0.83	9.64
0.50	100.50	.598E+03	1.1	0.90	8.90
0.55	100.55	.709E+03	1.4	0.96	8.35
0.61	100.61	.829E+03	1.7	1.01	7.91
0.66	100.66	.958E+03	2.1	1.06	7.56
0.72	100.72	.110E+04	2.5	1.10	7.26
0.78	100.78	.124E+04	3.0	1.14	7.02
0.83	100.83	.140E+04	3.4	1.18	6.80
0.89	100.89	.156E+04	3.9	1.21	6.61
0.94	100.94	.174E+04	4.5	1.24	6.45
1.00	101.00	.192E+04	5.1	1.27	6.30

<---- hydrograph ----> <-pipe / channel->						
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(m)	(m)	(m/s)	
INFLOW : ID= 2 (1040)	10.35	0.35	12.25	20.15	0.30	0.61
OUTFLOW: ID= 1 (0037)	10.35	0.29	12.39	20.13	0.27	0.58

| CALIB |
| NASHYD (0140) | Area (ha)= 17.07 Curve Number (CN)= 77.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.583	0.58	6.583	1.15	12.583	8.29	18.58	1.04		
0.667	0.58	6.667	1.15	12.667	8.29	18.67	1.04		
0.750	0.58	6.750	1.15	12.750	8.29	18.75	1.04		
0.833	0.58	6.833	1.15	12.833	8.29	18.83	1.04		
0.917	0.58	6.917	1.15	12.917	8.29	18.92	1.04		
1.000	0.58	7.000	1.15	13.000	8.29	19.00	1.04		
1.083	0.58	7.083	1.15	13.083	8.29	19.08	1.04		
1.167	0.58	7.167	1.15	13.167	8.29	19.17	1.04		
1.250	0.58	7.250	1.15	13.250	8.29	19.25	1.04		
1.333	0.58	7.333	1.15	13.333	8.29	19.33	1.04		
1.417	0.58	7.417	1.15	13.417	8.29	19.42	1.04		
1.500	0.58	7.500	1.15	13.500	8.29	19.50	1.04		
1.583	0.58	7.583	1.15	13.583	8.29	19.58	1.04		
1.667	0.58	7.667	1.15	13.667	8.29	19.67	1.04		
1.750	0.58	7.750	1.15	13.750	8.29	19.75	1.04		
1.833	0.58	7.833	1.15	13.833	8.29	19.83	1.04		
1.917	0.58	7.917	1.15	13.917	8.29	19.92	1.04		
2.000	0.58	8.000	1.15	14.000	8.29	20.00	1.04		
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		

HRP7-EX_2-100 YEAR.OUT									
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69		
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69		
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69		
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69		

Unit Hyd Qpeak (cms)= 1.301

PEAK FLOW (cms)= 0.478 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 21.535
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.374

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0140):	17.07	0.478	12.42	21.54
+ ID2= 2 (0037):	10.35	0.295	12.39	20.13
=====				
ID = 3 (0029):	27.42	0.772	12.42	21.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (1041) | Area (ha)= 11.30 Curve Number (CN)= 77.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.26

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.583	0.58	6.583	1.15	12.583	8.29	18.58	1.04		
0.667	0.58	6.667	1.15	12.667	8.29	18.67	1.04		
0.750	0.58	6.750	1.15	12.750	8.29	18.75	1.04		

HRP7-EX_2-100 YEAR.OUT

HRP7-EX_2-100 YEAR.OUT

0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 0.497 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 21.522
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	
ID1= 1 (1041):	11.30	0.497	12.08	21.52
+ ID2= 2 (0029):	27.42	0.772	12.42	21.01
ID = 3 (0018):	38.72	1.165	12.25	21.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0030)
IN= 2----> OUT= 1

Routing time step (min)'= 2.00

Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 /0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 /0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.319E+02	0.0	0.38	26.06
0.09	100.09	.718E+02	0.1	0.57	17.44
0.14	100.14	.128E+03	0.1	0.71	13.91
0.19	100.19	.175E+03	0.2	0.83	11.89
0.24	100.24	.239E+03	0.4	0.94	10.53
0.28	100.28	.311E+03	0.5	1.04	9.53
0.33	100.33	.391E+03	0.7	1.13	8.76
0.39	100.39	.495E+03	1.1	1.30	7.61
0.44	100.44	.611E+03	1.5	1.44	6.86
0.50	100.50	.737E+03	1.9	1.56	6.34
0.55	100.55	.874E+03	2.5	1.66	5.94
0.61	100.61	.102E+04	3.0	1.75	5.63
0.66	100.66	.118E+04	3.7	1.83	5.38
0.72	100.72	.135E+04	4.4	1.91	5.17
0.78	100.78	.153E+04	5.1	1.97	5.00
0.83	100.83	.172E+04	5.9	2.04	4.84
0.89	100.89	.193E+04	6.8	2.10	4.71
0.94	100.94	.214E+04	7.8	2.15	4.59
1.00	101.00	.237E+04	8.8	2.20	4.48

	<---- hydrograph >----			<-pipe / channel->		
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0018)	38.72	1.17	12.25	21.16	0.40	1.32
OUTFLOW: ID= 1 (0030)	38.72	1.11	12.36	21.15	0.39	1.31

CALIB
NASHYD (0141)
ID= 1 DT= 5.0 min

Area (ha)= 11.25
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.24

Curve Number (CN)= 79.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69

HRP7-EX_2-100 YEAR.OUT

2.417	0.75		8.417	1.56		14.417	1.73		20.42	0.69
2.500	0.75		8.500	1.56		14.500	1.73		20.50	0.69
2.583	0.75		8.583	1.56		14.583	1.73		20.58	0.69
2.667	0.75		8.667	1.56		14.667	1.73		20.67	0.69
2.750	0.75		8.750	1.56		14.750	1.73		20.75	0.69
2.833	0.75		8.833	1.56		14.833	1.73		20.83	0.69
2.917	0.75		8.917	1.56		14.917	1.73		20.92	0.69
3.000	0.75		9.000	1.56		15.000	1.73		21.00	0.69
3.083	0.75		9.083	1.84		15.083	1.73		21.08	0.69
3.167	0.75		9.167	1.84		15.167	1.73		21.17	0.69
3.250	0.75		9.250	1.84		15.250	1.73		21.25	0.69
3.333	0.75		9.333	1.84		15.333	1.73		21.33	0.69
3.417	0.75		9.417	1.84		15.417	1.73		21.42	0.69
3.500	0.75		9.500	1.84		15.500	1.73		21.50	0.69
3.583	0.75		9.583	2.07		15.583	1.73		21.58	0.69
3.667	0.75		9.667	2.07		15.667	1.73		21.67	0.69
3.750	0.75		9.750	2.07		15.750	1.73		21.75	0.69
3.833	0.75		9.833	2.07		15.833	1.73		21.83	0.69
3.917	0.75		9.917	2.07		15.917	1.73		21.92	0.69
4.000	0.75		10.000	2.07		16.000	1.73		22.00	0.69
4.083	0.92		10.083	2.65		16.083	1.04		22.08	0.69
4.167	0.92		10.167	2.65		16.167	1.04		22.17	0.69
4.250	0.92		10.250	2.65		16.250	1.04		22.25	0.69
4.333	0.92		10.333	2.65		16.333	1.04		22.33	0.69
4.417	0.92		10.417	2.65		16.417	1.04		22.42	0.69
4.500	0.92		10.500	2.65		16.500	1.04		22.50	0.69
4.583	0.92		10.583	3.57		16.583	1.04		22.58	0.69
4.667	0.92		10.667	3.57		16.667	1.04		22.67	0.69
4.750	0.92		10.750	3.57		16.750	1.04		22.75	0.69
4.833	0.92		10.833	3.57		16.833	1.04		22.83	0.69
4.917	0.92		10.917	3.57		16.917	1.04		22.92	0.69
5.000	0.92		11.000	3.57		17.000	1.04		23.00	0.69
5.083	0.92		11.083	5.53		17.083	1.04		23.08	0.69
5.167	0.92		11.167	5.53		17.167	1.04		23.17	0.69
5.250	0.92		11.250	5.53		17.250	1.04		23.25	0.69
5.333	0.92		11.333	5.53		17.333	1.04		23.33	0.69
5.417	0.92		11.417	5.53		17.417	1.04		23.42	0.69
5.500	0.92		11.500	5.53		17.500	1.04		23.50	0.69
5.583	0.92		11.583	23.96		17.583	1.04		23.58	0.69
5.667	0.92		11.667	23.96		17.667	1.04		23.67	0.69
5.750	0.92		11.750	23.96		17.750	1.04		23.75	0.69
5.833	0.92		11.833	63.59		17.833	1.04		23.83	0.69
5.917	0.92		11.917	63.59		17.917	1.04		23.92	0.69
6.000	0.92		12.000	63.59		18.000	1.04		24.00	0.69

Unit Hyd Qpeak (cms)= 1.783

PEAK FLOW (cms)= 0.568 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 23.012
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.400

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0141):	11.25	0.568	12.08	23.01
+ ID2= 2 (0030):	38.72	1.115	12.36	21.15
=====				
ID = 3 (0021):	49.97	1.528	12.25	21.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0142)			
ID= 1 DT= 3.0 min	Area (ha)=	10.92	
	Total Imp(%)=	53.00	Dir. Conn.(%)= 53.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.79	5.13	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	269.81	40.00	
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN		TIME	RAIN		TIME	RAIN		TIME
hrs	mm/hr		hrs	mm/hr		hrs	mm/hr		hrs
0.050	0.58		6.050	1.15		12.050	8.29		18.05
									1.04

HRP7-EX_2-100 YEAR.OUT

0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69

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4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 18.99
over (min) 6.00 15.00
Storage Coeff. (min)= 4.51 (ii) 12.57 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

TOTALS
PEAK FLOW (cms)= 0.99 0.17 1.123 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 56.10 14.86 36.72
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.26 0.64

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):	10.92	1.123	12.00	36.72
+ ID2= 2 (0021):	49.97	1.528	12.25	21.57
=====				
ID = 3 (0023):	60.89	2.132	12.06	24.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 3.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000		0.0030	0.5000
0.0370	0.1125		1.0000	0.7700
0.0530	0.2275		6.4000	1.1000
0.0650	0.3450		9.2000	1.2500
0.0750	0.4630		0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0023)	60.890	2.132	12.06	24.29
OUTFLOW: ID= 1 (0024)	60.890	0.854	12.97	23.69
	PEAK FLOW REDUCTION [Qout/Qin](%)= 40.03			
	TIME SHIFT OF PEAK FLOW (min)= 55.00			
	MAXIMUM STORAGE USED (ha.m.)= 0.6606			

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CALIB			
STANDHYD (0143)	Area (ha)=	0.84	
ID= 1 DT= 1.0 min	Total Imp(%)=	55.00	Dir. Conn.(%)= 55.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.46	0.38
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	74.83	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.017	0.58	6.017	1.15	12.017	8.33	18.02	1.04
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04
0.083	0.58	6.083	1.15	12.083	8.29	18.08	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.117	0.58	6.117	1.15	12.117	8.29	18.12	1.04
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.183	0.58	6.183	1.15	12.183	8.29	18.18	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.217	0.58	6.217	1.15	12.217	8.29	18.22	1.04
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04
0.283	0.58	6.283	1.15	12.283	8.29	18.28	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.317	0.58	6.317	1.15	12.317	8.29	18.32	1.04
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04
0.383	0.58	6.383	1.15	12.383	8.29	18.38	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04
0.483	0.58	6.483	1.15	12.483	8.29	18.48	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.517	0.58	6.517	1.15	12.517	4.27	18.52	1.04
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.617	0.58	6.617	1.15	12.617	4.26	18.62	1.04
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.683	0.58	6.683	1.15	12.683	4.26	18.68	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.717	0.58	6.717	1.15	12.717	4.26	18.72	1.04
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04
0.783	0.58	6.783	1.15	12.783	4.26	18.78	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.817	0.58	6.817	1.15	12.817	4.26	18.82	1.04
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04
0.883	0.58	6.883	1.15	12.883	4.26	18.88	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04
0.983	0.58	6.983	1.15	12.983	4.26	18.98	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.017	0.58	7.017	1.15	13.017	0.81	19.02	1.04
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.117	0.58	7.117	1.15	13.117	0.81	19.12	1.04
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04

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1.183	0.58	7.183	1.15	13.183	0.81	19.18	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.217	0.58	7.217	1.15	13.217	0.81	19.22	1.04		
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04		
1.283	0.58	7.283	1.15	13.283	0.81	19.28	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.317	0.58	7.317	1.15	13.317	0.81	19.32	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04		
1.383	0.58	7.383	1.15	13.383	0.81	19.38	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04		
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		
1.483	0.58	7.483	1.15	13.483	0.81	19.48	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.517	0.58	7.517	1.15	13.517	4.72	19.52	1.04		
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04		
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.617	0.58	7.617	1.15	13.617	4.72	19.62	1.04		
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04		
1.683	0.58	7.683	1.15	13.683	4.72	19.68	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.717	0.58	7.717	1.15	13.717	4.72	19.72	1.04		
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.767	1.04	7.767	1.15	13.767	4.72	19.77	1.04		
1.783	1.04	7.783	1.15	13.783	4.72	19.78	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.817	1.04	7.817	1.15	13.817	4.72	19.82	1.04		
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04		
1.883	1.04	7.883	1.15	13.883	4.72	19.88	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04		
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04		
1.983	1.04	7.983	1.15	13.983	4.72	19.98	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.017	0.75	8.017	1.56	14.017	1.74	20.02	0.69		
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69		
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.117	0.75	8.117	1.56	14.117	1.73	20.12	0.69		
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.183	0.75	8.183	1.56	14.183	1.73	20.18	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.217	0.75	8.217	1.56	14.217	1.73	20.22	0.69		
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69		
2.283	0.75	8.283	1.56	14.283	1.73	20.28	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.317	0.75	8.317	1.56	14.317	1.73	20.32	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69		
2.383	0.75	8.383	1.56	14.383	1.73	20.38	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69		
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69		
2.483	0.75	8.483	1.56	14.483	1.73	20.48	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.517	0.75	8.517	1.56	14.517	1.73	20.52	0.69		
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69		
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.617	0.75	8.617	1.56	14.617	1.73	20.62	0.69		

HRP7-EX_2-100 YEAR.OUT									
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.683	0.75	8.683	1.56	14.683	1.73	20.68	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.717	0.75	8.717	1.56	14.717	1.73	20.72	0.69		
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69		
2.783	0.75	8.783	1.56	14.783	1.73	20.78	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.817	0.75	8.817	1.56	14.817	1.73	20.82	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69		
2.883	0.75	8.883	1.56	14.883	1.73	20.88	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69		
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69		
2.983	0.75	8.983	1.56	14.983	1.73	20.98	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.017	0.75	9.017	1.84	15.017	1.73	21.02	0.69		
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69		
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69		
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69		
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.117	0.75	9.117	1.84	15.117	1.73	21.12	0.69		
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.183	0.75	9.183	1.84	15.183	1.73	21.18	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.217	0.75	9.217	1.84	15.217	1.73	21.22	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.283	0.75	9.283	1.84	15.283	1.73	21.28	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.317	0.75	9.317	1.84	15.317	1.73	21.32	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.383	0.75	9.383	1.84	15.383	1.73	21.38	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.483	0.75	9.483	1.84	15.483	1.73	21.48	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.517	0.75	9.517	2.07	15.517	1.73	21.52	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.617	0.75	9.617	2.07	15.617	1.73	21.62	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.683	0.75	9.683	2.07	15.683	1.73	21.68	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.717	0.75	9.717	2.07	15.717	1.73	21.72	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.783	0.75	9.783	2.07	15.783	1.73	21.78	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.817	0.75	9.817	2.07	15.817	1.73	21.82	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.883	0.75	9.883	2.07	15.883	1.73	21.88	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
3.983	0.75	9.983	2.07	15.983	1.73	21.98	0.69		
3.999	0.75	9.999	2.07	15.999	1.73	21.99	0.69		
4.017	0.92	10.017	2.65	16.017	1.64	22.02	0.69		
4.033	0.92	10.033	2.65	16.033	1.64	22.03	0.69		
4.050	0.92	10.050	2.65	16.050	1.64	22.05	0.69		
4.067	0.92	10.067	2.65	16.067	1.64	22.07	0.69		

HRP7-EX_2-100 YEAR.OUT									
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.117	0.92	10.117	2.65	16.117	1.04	22.12	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.183	0.92	10.183	2.65	16.183	1.04	22.18	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.217	0.92	10.217	2.65	16.217	1.04	22.22	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.283	0.92	10.283	2.65	16.283	1.04	22.28	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.317	0.92	10.317	2.65	16.317	1.04	22.32	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.383	0.92	10.383	2.65	16.383	1.04	22.38	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.483	0.92	10.483	2.65	16.483	1.04	22.48	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.517	0.92	10.517	3.57	16.517	1.04	22.52	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.617	0.92	10.617	3.57	16.617	1.04	22.62	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.683	0.92	10.683	3.57	16.683	1.04	22.68	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.717	0.92	10.717	3.57	16.717	1.04	22.72	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		
4.783	0.92	10.783	3.57	16.783	1.04	22.78	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.817	0.92	10.817	3.57	16.817	1.04	22.82	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69		
4.883	0.92	10.883	3.57	16.883	1.04	22.88	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69		
4.983	0.92	10.983	3.57	16.983	1.04	22.98	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.017	0.92	11.017	5.53	17.017	1.04	23.02	0.69		
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69		
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69		
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.117	0.92	11.117	5.53	17.117	1.04	23.12	0.69		
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69		
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.183	0.92	11.183	5.53	17.183	1.04	23.18	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.217	0.92	11.217	5.53	17.217	1.04	23.22	0.69		
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69		
5.283	0.92	11.283	5.53	17.283	1.04	23.28	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.317	0.92	11.317	5.53	17.317	1.04	23.32	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69		
5.383	0.92	11.383	5.53	17.383	1.04	23.38	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69		
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69		
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.483	0.92	11.483	5.53	17.483	1.04	23.48	0.69		
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69		
5.517	0.92	11.517	23.96	17.517	1.04	23.52	0.69		

HRP7-EX_2-100 YEAR.OUT									
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.617	0.92	11.617	23.96	17.617	1.04	23.62	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.683	0.92	11.683	23.96	17.683	1.04	23.68	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.717	0.92	11.717	23.96	17.717	1.04	23.72	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69		
5.767	0.92	11.767	63.57	17.767	1.04	23.77	0.69		
5.783	0.92	11.783	63.59	17.783	1.04	23.78	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.817	0.92	11.817	63.59	17.817	1.04	23.82	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.883	0.92	11.883	63.59	17.883	1.04	23.88	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		
5.983	0.92	11.983	63.59	17.983	1.04	23.98	0.69		
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69		
Max.Eff.Inten.(mm/hr)=			63.59	26.91					
over (min)			5.00	10.00					
Storage Coeff. (min)=			2.09	9.99 (ii)					
Unit Hyd. Tpeak (min)=			5.00	10.00					
Unit Hyd. peak (cms)=			0.37	0.11					
					TOTALS				
PEAK FLOW (cms)=			0.08	0.02	0.100 (iii)				
TIME TO PEAK (hrs)=			12.00	12.07	12.00				
RUNOFF VOLUME (mm)=			56.10	20.32	39.99				
TOTAL RAINFALL (mm)=			57.60	57.60	57.60				
RUNOFF COEFFICIENT =			0.97	0.35	0.69				
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

HRP7-EX_2-100 YEAR.OUT									
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04		
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04		
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04		
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04		
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04		
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04		
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04		
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04		
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04		
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04		
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04		
1.767	0.81	7.767	1.15	13.767	4.72	19.77	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04		
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04		
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69		
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69		
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69		
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69		
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69		
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69		
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		

HRP7-EX_2-100 YEAR.OUT									
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69		
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69		
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69		
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69		
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69		

Max.Eff.Inten.(mm/hr)= 63.59 25.62
over (min) 5.00 16.00
Storage Coeff. (min)= 3.80 (ii) 15.96 (ii)
Unit Hyd. Tpeak (min)= 4.00 16.00
Unit Hyd. peak (cms)= 0.29 0.07
PEAK FLOW (cms)= 0.39 0.16 0.513 (iii)
TIME TO PEAK (hrs)= 12.00 12.17 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 33.56
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.58
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)
1 + 2 = 3
ID1= 1 (0144): 6.14 0.513 12.00 33.56
+ ID2= 2 (0026): 61.73 0.861 12.97 18.90
ID = 3 (0028): 67.87 0.924 12.95 20.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\3c50e653-3c11-423b-9872-5079735d04c8\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\3c50e653-3c11-423b-9872-5079735d04c8\scenar

DATE: 03/24/2023 TIME: 10:40:22

USER:

COMMENTS:

** SIMULATION : Run 02 **

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\8eb7a9a7-c234-44bf-98e0-959e019c88cb\fb8e60ca
Ptotal= 76.80 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.25 0.77 | 6.25 1.54 | 12.25 11.06 | 18.25 1.38
0.50 0.77 | 6.50 1.54 | 12.50 11.06 | 18.50 1.38
0.75 0.77 | 6.75 1.54 | 12.75 5.68 | 18.75 1.38
1.00 0.77 | 7.00 1.54 | 13.00 5.68 | 19.00 1.38
1.25 0.77 | 7.25 1.54 | 13.25 1.08 | 19.25 1.38

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1.50 0.77 | 7.50 1.54 | 13.50 1.08 | 19.50 1.38
1.75 0.77 | 7.75 1.54 | 13.75 6.30 | 19.75 1.38
2.00 1.38 | 8.00 1.54 | 14.00 6.30 | 20.00 1.38
2.25 1.00 | 8.25 2.07 | 14.25 2.30 | 20.25 0.92
2.50 1.00 | 8.50 2.07 | 14.50 2.30 | 20.50 0.92
2.75 1.00 | 8.75 2.07 | 14.75 2.30 | 20.75 0.92
3.00 1.00 | 9.00 2.07 | 15.00 2.30 | 21.00 0.92
3.25 1.00 | 9.25 2.46 | 15.25 2.30 | 21.25 0.92
3.50 1.00 | 9.50 2.46 | 15.50 2.30 | 21.50 0.92
3.75 1.00 | 9.75 2.76 | 15.75 2.30 | 21.75 0.92
4.00 1.00 | 10.00 2.76 | 16.00 2.30 | 22.00 0.92
4.25 1.23 | 10.25 3.53 | 16.25 1.38 | 22.25 0.92
4.50 1.23 | 10.50 3.53 | 16.50 1.38 | 22.50 0.92
4.75 1.23 | 10.75 4.76 | 16.75 1.38 | 22.75 0.92
5.00 1.23 | 11.00 4.76 | 17.00 1.38 | 23.00 0.92
5.25 1.23 | 11.25 7.37 | 17.25 1.38 | 23.25 0.92
5.50 1.23 | 11.50 7.37 | 17.50 1.38 | 23.50 0.92
5.75 1.23 | 11.75 31.95 | 17.75 1.38 | 23.75 0.92
6.00 1.23 | 12.00 84.79 | 18.00 1.38 | 24.00 0.92

CALIB
NASHYD (1040) Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.083 0.77 | 6.083 1.54 | 12.083 11.07 | 18.08 1.38
0.167 0.77 | 6.167 1.54 | 12.167 11.06 | 18.17 1.38
0.250 0.77 | 6.250 1.54 | 12.250 11.06 | 18.25 1.38
0.333 0.77 | 6.333 1.54 | 12.333 11.06 | 18.33 1.38
0.417 0.77 | 6.417 1.54 | 12.417 11.06 | 18.42 1.38
0.500 0.77 | 6.500 1.54 | 12.500 11.06 | 18.50 1.38
0.583 0.77 | 6.583 1.54 | 12.583 5.68 | 18.58 1.38
0.667 0.77 | 6.667 1.54 | 12.667 5.68 | 18.67 1.38
0.750 0.77 | 6.750 1.54 | 12.750 5.68 | 18.75 1.38
0.833 0.77 | 6.833 1.54 | 12.833 5.68 | 18.83 1.38
0.917 0.77 | 6.917 1.54 | 12.917 5.68 | 18.92 1.38
1.000 0.77 | 7.000 1.54 | 13.000 5.68 | 19.00 1.38
1.083 0.77 | 7.083 1.54 | 13.083 1.08 | 19.08 1.38
1.167 0.77 | 7.167 1.54 | 13.167 1.08 | 19.17 1.38
1.250 0.77 | 7.250 1.54 | 13.250 1.08 | 19.25 1.38
1.333 0.77 | 7.333 1.54 | 13.333 1.08 | 19.33 1.38
1.417 0.77 | 7.417 1.54 | 13.417 1.08 | 19.42 1.38
1.500 0.77 | 7.500 1.54 | 13.500 1.08 | 19.50 1.38
1.583 0.77 | 7.583 1.54 | 13.583 6.30 | 19.58 1.38
1.667 0.77 | 7.667 1.54 | 13.667 6.30 | 19.67 1.38
1.750 0.77 | 7.750 1.54 | 13.750 6.30 | 19.75 1.38
1.833 1.38 | 7.833 1.54 | 13.833 6.30 | 19.83 1.38
1.917 1.38 | 7.917 1.54 | 13.917 6.30 | 19.92 1.38
2.000 1.38 | 8.000 1.54 | 14.000 6.30 | 20.00 1.38
2.083 1.00 | 8.083 2.07 | 14.083 2.30 | 20.08 0.92
2.167 1.00 | 8.167 2.07 | 14.167 2.30 | 20.17 0.92
2.250 1.00 | 8.250 2.07 | 14.250 2.30 | 20.25 0.92
2.333 1.00 | 8.333 2.07 | 14.333 2.30 | 20.33 0.92
2.417 1.00 | 8.417 2.07 | 14.417 2.30 | 20.42 0.92
2.500 1.00 | 8.500 2.07 | 14.500 2.30 | 20.50 0.92
2.583 1.00 | 8.583 2.07 | 14.583 2.30 | 20.58 0.92
2.667 1.00 | 8.667 2.07 | 14.667 2.30 | 20.67 0.92
2.750 1.00 | 8.750 2.07 | 14.750 2.30 | 20.75 0.92
2.833 1.00 | 8.833 2.07 | 14.833 2.30 | 20.83 0.92
2.917 1.00 | 8.917 2.07 | 14.917 2.30 | 20.92 0.92
3.000 1.00 | 9.000 2.07 | 15.000 2.30 | 21.00 0.92
3.083 1.00 | 9.083 2.46 | 15.083 2.30 | 21.08 0.92
3.167 1.00 | 9.167 2.46 | 15.167 2.30 | 21.17 0.92
3.250 1.00 | 9.250 2.46 | 15.250 2.30 | 21.25 0.92
3.333 1.00 | 9.333 2.46 | 15.333 2.30 | 21.33 0.92
3.417 1.00 | 9.417 2.46 | 15.417 2.30 | 21.42 0.92
3.500 1.00 | 9.500 2.46 | 15.500 2.30 | 21.50 0.92
3.583 1.00 | 9.583 2.76 | 15.583 2.30 | 21.58 0.92
3.667 1.00 | 9.667 2.76 | 15.667 2.30 | 21.67 0.92
3.750 1.00 | 9.750 2.76 | 15.750 2.30 | 21.75 0.92
3.833 1.00 | 9.833 2.76 | 15.833 2.30 | 21.83 0.92
3.917 1.00 | 9.917 2.76 | 15.917 2.30 | 21.92 0.92
4.000 1.00 | 10.000 2.76 | 16.000 2.30 | 22.00 0.92
4.083 1.23 | 10.083 3.53 | 16.083 1.38 | 22.08 0.92
4.167 1.23 | 10.167 3.53 | 16.167 1.38 | 22.17 0.92
4.250 1.23 | 10.250 3.53 | 16.250 1.38 | 22.25 0.92
4.333 1.23 | 10.333 3.53 | 16.333 1.38 | 22.33 0.92
4.417 1.23 | 10.417 3.53 | 16.417 1.38 | 22.42 0.92
4.500 1.23 | 10.500 3.53 | 16.500 1.38 | 22.50 0.92

HRP7-EX_2-100 YEAR.OUT

4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 0.573 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 32.941
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.429

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0037)
IN= 2--> OUT= 1 Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.259E+02	0.0	0.22	36.60
0.09	100.09	.582E+02	0.0	0.33	24.49
0.14	100.14	.970E+02	0.1	0.41	19.54
0.19	100.19	.142E+03	0.1	0.48	16.69
0.24	100.24	.194E+03	0.2	0.54	14.78
0.28	100.28	.252E+03	0.3	0.60	13.39
0.33	100.33	.317E+03	0.4	0.65	12.30
0.39	100.39	.402E+03	0.6	0.75	10.68
0.44	100.44	.495E+03	0.9	0.83	9.64
0.50	100.50	.590E+03	1.1	0.90	8.90
0.55	100.55	.709E+03	1.4	0.96	8.35
0.61	100.61	.829E+03	1.7	1.01	7.91
0.66	100.66	.958E+03	2.1	1.06	7.56
0.72	100.72	.110E+04	2.5	1.10	7.26
0.78	100.78	.124E+04	3.0	1.14	7.02
0.83	100.83	.140E+04	3.4	1.18	6.80
0.89	100.89	.156E+04	3.9	1.21	6.61
0.94	100.94	.174E+04	4.5	1.24	6.45
1.00	101.00	.192E+04	5.1	1.27	6.30

<---- hydrograph ----> <-pipe / channel->

INFLOW : ID= 2 (1648)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
OUTFLOW: ID= 1 (0037)	10.35	0.51	12.36	32.92	0.35	0.68

CALIB
NASHYD (0148) Area (ha)= 17.07 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

HRP7-EX_2-100 YEAR.OUT

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 1.301

PEAK FLOW (cms)= 0.787 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 34.900
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.455

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP7-EX_2-100 YEAR.OUT

```
-----  
| ADD HYD ( 0029)|  
| 1 + 2 = 3 |  
-----  
ID1= 1 ( 0140): 17.07 0.787 12.42 34.91  
+ ID2= 2 ( 0037): 10.35 0.595 12.36 32.92  
=====
```

```
ID = 3 ( 0029): 27.42 1.292 12.36 34.16
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----  
| CALIB  
| NASHYD ( 1041)| Area (ha)= 11.30 Curve Number (CN)= 77.0  
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00  
| U.H. Tp(hrs)= 0.26  
-----
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

```
----- TRANSFORMED HYETOGRAPH -----  
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN  
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr  
0.083 0.77 | 6.083 1.54 | 12.083 11.07 | 18.08 1.38  
0.167 0.77 | 6.167 1.54 | 12.167 11.06 | 18.17 1.38  
0.250 0.77 | 6.250 1.54 | 12.250 11.06 | 18.25 1.38  
0.333 0.77 | 6.333 1.54 | 12.333 11.06 | 18.33 1.38  
0.417 0.77 | 6.417 1.54 | 12.417 11.06 | 18.42 1.38  
0.500 0.77 | 6.500 1.54 | 12.500 11.06 | 18.50 1.38  
0.583 0.77 | 6.583 1.54 | 12.583 5.68 | 18.58 1.38  
0.667 0.77 | 6.667 1.54 | 12.667 5.68 | 18.67 1.38  
0.750 0.77 | 6.750 1.54 | 12.750 5.68 | 18.75 1.38  
0.833 0.77 | 6.833 1.54 | 12.833 5.68 | 18.83 1.38  
0.917 0.77 | 6.917 1.54 | 12.917 5.68 | 18.92 1.38  
1.000 0.77 | 7.000 1.54 | 13.000 5.68 | 19.00 1.38  
1.083 0.77 | 7.083 1.54 | 13.083 1.08 | 19.08 1.38  
1.167 0.77 | 7.167 1.54 | 13.167 1.08 | 19.17 1.38  
1.250 0.77 | 7.250 1.54 | 13.250 1.08 | 19.25 1.38  
1.333 0.77 | 7.333 1.54 | 13.333 1.08 | 19.33 1.38  
1.417 0.77 | 7.417 1.54 | 13.417 1.08 | 19.42 1.38  
1.500 0.77 | 7.500 1.54 | 13.500 1.08 | 19.50 1.38  
1.583 0.77 | 7.583 1.54 | 13.583 6.30 | 19.58 1.38  
1.667 0.77 | 7.667 1.54 | 13.667 6.30 | 19.67 1.38  
1.750 0.77 | 7.750 1.54 | 13.750 6.30 | 19.75 1.38  
1.833 1.38 | 7.833 1.54 | 13.833 6.30 | 19.83 1.38  
1.917 1.38 | 7.917 1.54 | 13.917 6.30 | 19.92 1.38  
2.000 1.38 | 8.000 1.54 | 14.000 6.30 | 20.00 1.38  
2.083 1.00 | 8.083 2.07 | 14.083 2.30 | 20.08 0.92  
2.167 1.00 | 8.167 2.07 | 14.167 2.30 | 20.17 0.92  
2.250 1.00 | 8.250 2.07 | 14.250 2.30 | 20.25 0.92  
2.333 1.00 | 8.333 2.07 | 14.333 2.30 | 20.33 0.92  
2.417 1.00 | 8.417 2.07 | 14.417 2.30 | 20.42 0.92  
2.500 1.00 | 8.500 2.07 | 14.500 2.30 | 20.50 0.92  
2.583 1.00 | 8.583 2.07 | 14.583 2.30 | 20.58 0.92  
2.667 1.00 | 8.667 2.07 | 14.667 2.30 | 20.67 0.92  
2.750 1.00 | 8.750 2.07 | 14.750 2.30 | 20.75 0.92  
2.833 1.00 | 8.833 2.07 | 14.833 2.30 | 20.83 0.92  
2.917 1.00 | 8.917 2.07 | 14.917 2.30 | 20.92 0.92  
3.000 1.00 | 9.000 2.07 | 15.000 2.30 | 21.00 0.92  
3.083 1.00 | 9.083 2.46 | 15.083 2.30 | 21.08 0.92  
3.167 1.00 | 9.167 2.46 | 15.167 2.30 | 21.17 0.92  
3.250 1.00 | 9.250 2.46 | 15.250 2.30 | 21.25 0.92  
3.333 1.00 | 9.333 2.46 | 15.333 2.30 | 21.33 0.92  
3.417 1.00 | 9.417 2.46 | 15.417 2.30 | 21.42 0.92  
3.500 1.00 | 9.500 2.46 | 15.500 2.30 | 21.50 0.92  
3.583 1.00 | 9.583 2.76 | 15.583 2.30 | 21.58 0.92  
3.667 1.00 | 9.667 2.76 | 15.667 2.30 | 21.67 0.92  
3.750 1.00 | 9.750 2.76 | 15.750 2.30 | 21.75 0.92  
3.833 1.00 | 9.833 2.76 | 15.833 2.30 | 21.83 0.92  
3.917 1.00 | 9.917 2.76 | 15.917 2.30 | 21.92 0.92  
4.000 1.00 | 10.000 2.76 | 16.000 2.30 | 22.00 0.92  
4.083 1.23 | 10.083 3.53 | 16.083 1.38 | 22.08 0.92  
4.167 1.23 | 10.167 3.53 | 16.167 1.38 | 22.17 0.92  
4.250 1.23 | 10.250 3.53 | 16.250 1.38 | 22.25 0.92  
4.333 1.23 | 10.333 3.53 | 16.333 1.38 | 22.33 0.92  
4.417 1.23 | 10.417 3.53 | 16.417 1.38 | 22.42 0.92  
4.500 1.23 | 10.500 3.53 | 16.500 1.38 | 22.50 0.92  
4.583 1.23 | 10.583 4.76 | 16.583 1.38 | 22.58 0.92  
4.667 1.23 | 10.667 4.76 | 16.667 1.38 | 22.67 0.92  
4.750 1.23 | 10.750 4.76 | 16.750 1.38 | 22.75 0.92  
4.833 1.23 | 10.833 4.76 | 16.833 1.38 | 22.83 0.92  
4.917 1.23 | 10.917 4.76 | 16.917 1.38 | 22.92 0.92  
5.000 1.23 | 11.000 4.76 | 17.000 1.38 | 23.00 0.92  
5.083 1.23 | 11.083 7.37 | 17.083 1.38 | 23.08 0.92  
5.167 1.23 | 11.167 7.37 | 17.167 1.38 | 23.17 0.92  
5.250 1.23 | 11.250 7.37 | 17.250 1.38 | 23.25 0.92  
5.333 1.23 | 11.333 7.37 | 17.333 1.38 | 23.33 0.92
```

HRP7-EX_2-100 YEAR.OUT

```
5.417 1.23 |11.417 7.37 |17.417 1.38 | 23.42 0.92  
5.500 1.23 |11.500 7.37 |17.500 1.38 | 23.50 0.92  
5.583 1.23 |11.583 31.95 |17.583 1.38 | 23.58 0.92  
5.667 1.23 |11.667 31.95 |17.667 1.38 | 23.67 0.92  
5.750 1.23 |11.750 31.95 |17.750 1.38 | 23.75 0.92  
5.833 1.23 |11.833 84.78 |17.833 1.38 | 23.83 0.92  
5.917 1.23 |11.917 84.79 |17.917 1.38 | 23.92 0.92  
6.000 1.23 |12.000 84.79 |18.000 1.38 | 24.00 0.92
```

Unit Hyd Qpeak (cms)= 1.654

```
PEAK FLOW (cms)= 0.819 (1)  
TIME TO PEAK (hrs)= 12.083  
RUNOFF VOLUME (mm)= 34.887  
TOTAL RAINFALL (mm)= 76.800  
RUNOFF COEFFICIENT = 0.454
```

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
-----  
| ADD HYD ( 0018)|  
| 1 + 2 = 3 |  
-----  
ID1= 1 ( 1041): 11.30 0.819 12.08 34.89  
+ ID2= 2 ( 0029): 27.42 1.292 12.36 34.16  
=====
```

```
ID = 3 ( 0018): 38.72 1.952 12.25 34.37
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----  
| ROUTE CHN( 0030)|  
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00  
-----
```

```
<----- DATA FOR SECTION ( 1.1) ----->  
Distance Elevation Manning  
0.00 101.00 0.0500  
1.00 100.67 0.0500  
2.00 100.33 0.0500 / 0.0300 Main Channel  
3.00 100.00 0.0300 Main Channel  
4.00 100.00 0.0300 Main Channel  
5.00 100.33 0.0300 / 0.0500 Main Channel  
6.00 100.67 0.0500  
7.00 101.00 0.0500
```

```
<----- TRAVEL TIME TABLE ----->  
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME  
(m) (m) (cu.m.) (cms) (m/s) (min)  
0.05 100.05 .319E+02 0.0 0.38 26.06  
0.09 100.09 .718E+02 0.1 0.57 17.44  
0.14 100.14 .120E+03 0.1 0.71 13.91  
0.19 100.19 .175E+03 0.2 0.83 11.89  
0.24 100.24 .239E+03 0.4 0.94 10.53  
0.28 100.28 .311E+03 0.5 1.04 9.53  
0.33 100.33 .391E+03 0.7 1.13 8.76  
0.39 100.39 .495E+03 1.1 1.30 7.61  
0.44 100.44 .611E+03 1.5 1.44 6.86  
0.50 100.50 .737E+03 1.9 1.56 6.34  
0.55 100.55 .874E+03 2.5 1.66 5.94  
0.61 100.61 .102E+04 3.0 1.75 5.63  
0.66 100.66 .118E+04 3.7 1.83 5.38  
0.72 100.72 .135E+04 4.4 1.91 5.17  
0.78 100.78 .153E+04 5.1 1.97 5.00  
0.83 100.83 .172E+04 5.9 2.04 4.84  
0.89 100.89 .193E+04 6.8 2.10 4.71  
0.94 100.94 .214E+04 7.8 2.15 4.59  
1.00 101.00 .237E+04 8.8 2.20 4.48
```

```
<---- hydrograph ----> <-pipe / channel->  
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL  
(ha) (cms) (hrs) (mm) (m) (m/s)  
INFLOW : ID= 2 ( 0018) 38.72 1.95 12.25 34.37 0.50 1.56  
OUTFLOW: ID= 1 ( 0030) 38.72 1.88 12.33 34.37 0.49 1.54
```

```
-----  
| CALIB  
| NASHYD ( 0141)| Area (ha)= 11.25 Curve Number (CN)= 79.0  
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00  
| U.H. Tp(hrs)= 0.24  
-----
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

HRP7-EX_2-100 YEAR.OUT

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.77	6.083	1.54	12.083	11.06	18.08	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.38	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.38	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.38	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.38	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.38	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.38	20.00	1.38
2.083	1.08	8.083	2.07	14.083	2.38	20.08	0.92
2.167	1.08	8.167	2.07	14.167	2.38	20.17	0.92
2.250	1.08	8.250	2.07	14.250	2.38	20.25	0.92
2.333	1.08	8.333	2.07	14.333	2.38	20.33	0.92
2.417	1.08	8.417	2.07	14.417	2.38	20.42	0.92
2.500	1.08	8.500	2.07	14.500	2.38	20.50	0.92
2.583	1.08	8.583	2.07	14.583	2.38	20.58	0.92
2.667	1.08	8.667	2.07	14.667	2.38	20.67	0.92
2.750	1.08	8.750	2.07	14.750	2.38	20.75	0.92
2.833	1.08	8.833	2.07	14.833	2.38	20.83	0.92
2.917	1.08	8.917	2.07	14.917	2.38	20.92	0.92
3.000	1.08	9.000	2.07	15.000	2.38	21.00	0.92
3.083	1.08	9.083	2.46	15.083	2.38	21.08	0.92
3.167	1.08	9.167	2.46	15.167	2.38	21.17	0.92
3.250	1.08	9.250	2.46	15.250	2.38	21.25	0.92
3.333	1.08	9.333	2.46	15.333	2.38	21.33	0.92
3.417	1.08	9.417	2.46	15.417	2.38	21.42	0.92
3.500	1.08	9.500	2.46	15.500	2.38	21.50	0.92
3.583	1.08	9.583	2.76	15.583	2.38	21.58	0.92
3.667	1.08	9.667	2.76	15.667	2.38	21.67	0.92
3.750	1.08	9.750	2.76	15.750	2.38	21.75	0.92
3.833	1.08	9.833	2.76	15.833	2.38	21.83	0.92
3.917	1.08	9.917	2.76	15.917	2.38	21.92	0.92
4.000	1.08	10.000	2.76	16.000	2.38	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 1.783

PEAK FLOW (cms)= 0.925 (1)
 TIME TO PEAK (hrs)= 12.083
 RUNOFF VOLUME (mm)= 36.969
 TOTAL RAINFALL (mm)= 76.800
 RUNOFF COEFFICIENT = 0.481

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP7-EX_2-100 YEAR.OUT

ADD HYD (0021)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0141):	11.25	0.925	12.08	36.97
+ ID2= 2 (0030):	38.72	1.881	12.33	34.37
=====				
ID = 3 (0021):	49.97	2.581	12.25	34.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0142)				
ID= 1 DT= 3.0 min				
	Area	(ha)=	10.92	
	Total Imp(%)=	53.00	Dir. Conn.(%)=	53.00

		IMPERVIOUS	PERVIOUS (1)	
Surface Area	(ha)=	5.79	5.13	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	269.81	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.550	0.77	7.550	1.54	13.550	6.38	19.55	1.38
1.600	0.77	7.600	1.54	13.600	6.38	19.60	1.38
1.650	0.77	7.650	1.54	13.650	6.38	19.65	1.38
1.700	0.77	7.700	1.54	13.700	6.38	19.70	1.38
1.750	0.77	7.750	1.54	13.750	6.38	19.75	1.38
1.800	1.38	7.800	1.54	13.800	6.38	19.80	1.38
1.850	1.38	7.850	1.54	13.850	6.38	19.85	1.38
1.900	1.38	7.900	1.54	13.900	6.38	19.90	1.38
1.950	1.38	7.950	1.54	13.950	6.38	19.95	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.050	1.08	8.050	2.07	14.050	2.38	20.05	0.92
2.100	1.08	8.100	2.07	14.100	2.38	20.10	0.92
2.150	1.08	8.150	2.07	14.150	2.38	20.15	0.92
2.200	1.08	8.200	2.07	14.200	2.38	20.20	0.92
2.250	1.08	8.250	2.07	14.250	2.38	20.25	0.92
2.300	1.08	8.300	2.07	14.300	2.38	20.30	0.92
2.350	1.08	8.350	2.07	14.350	2.38	20.35	0.92
2.400	1.08	8.400	2.07	14.400	2.38	20.40	0.92
2.450	1.08	8.450	2.07	14.450	2.38	20.45	0.92
2.500	1.08	8.500	2.07	14.500	2.38	20.50	0.92
2.550	1.08	8.550	2.07	14.550	2.38	20.55	0.92
2.600	1.08	8.600	2.07	14.600	2.38	20.60	0.92
2.650	1.08	8.650	2.07	14.650	2.38	20.65	0.92
2.700	1.08	8.700	2.07	14.700	2.38	20.70	0.92
2.750	1.08	8.750	2.07	14.750	2.38	20.75	0.92
2.800	1.08	8.800	2.07	14.800	2.38	20.80	0.92

HRP7-EX_2-100 YEAR.OUT

2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 31.53
over (min) 6.00 12.00
Storage Coeff. (min)= 4.02 (ii) 11.21 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.24 0.10

TOTALS
1.605 (iii)
12.00
24.55
76.80
0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP7-EX_2-100 YEAR.OUT

ADD HYD (0023)					AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3					(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):					10.92	1.605	12.00	51.45
+ ID2= 2 (0021):					49.97	2.581	12.25	34.95
ID = 3 (0023):					60.89	3.428	12.06	37.91
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.								
RESERVOIR(0024)					OVERFLOW IS OFF			
IN= 2--> OUT= 1								
DT= 3.0 min					OUTFLOW	STORAGE	OUTFLOW	STORAGE
					(cms)	(ha.m.)	(cms)	(ha.m.)
					0.0000	0.0000	0.0030	0.5800
					0.0370	0.1125	1.9000	0.7700
					0.0530	0.2275	6.4000	1.1000
					0.0650	0.3450	9.2000	1.2500
					0.0750	0.4630	0.0000	0.0000
					AREA	QPEAK	TPEAK	R.V.
					(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0023)					60.890	3.428	12.06	37.91
OUTFLOW: ID= 1 (0024)					60.890	2.124	12.61	37.28
					PEAK FLOW REDUCTION [Qout/qin](%)= 61.96			
					TIME SHIFT OF PEAK FLOW (min)= 33.33			
					MAXIMUM STORAGE USED (ha.m.)= 0.7865			

CALIB					Area	(ha)=	0.84
STANDHYD (0143)					Total Imp(%)=	55.00	Dir. Conn.(%)= 55.00
ID= 1 DT= 1.0 min							
					Surface Area	(ha)=	0.46
					Dep. Storage	(mm)=	1.50
					Average Slope	(%)=	2.00
					Length	(m)=	74.83
					Mannings n	=	0.013
					IMPERVIOUS	PERVIOUS (i)	
					0.38	0.38	
					1.50	1.50	
					2.00	2.00	
					40.00	40.00	
					0.250	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	0.77	6.017	1.54	12.017	11.11	18.02	1.38		
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38		
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38		
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38		
0.083	0.77	6.083	1.54	12.083	11.06	18.08	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.117	0.77	6.117	1.54	12.117	11.06	18.12	1.38		
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38		
0.183	0.77	6.183	1.54	12.183	11.06	18.18	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.217	0.77	6.217	1.54	12.217	11.06	18.22	1.38		
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38		
0.283	0.77	6.283	1.54	12.283	11.06	18.28	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.317	0.77	6.317	1.54	12.317	11.06	18.32	1.38		
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38		
0.383	0.77	6.383	1.54	12.383	11.06	18.38	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38		
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38		
0.483	0.77	6.483	1.54	12.483	11.06	18.48	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.517	0.77	6.517	1.54	12.517	5.69	18.52	1.38		
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38		
0.583	0.77	6.583	1.54	12.583	5.68	18.59	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.617	0.77	6.617	1.54	12.617	5.68	18.62	1.38		
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38		

HRP7-EX_2-100 YEAR.OUT									
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38		
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38		
0.683	0.77	6.683	1.54	12.683	5.68	18.68	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.717	0.77	6.717	1.54	12.717	5.68	18.72	1.38		
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38		
0.783	0.77	6.783	1.54	12.783	5.68	18.78	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.817	0.77	6.817	1.54	12.817	5.68	18.82	1.38		
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38		
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38		
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38		
0.883	0.77	6.883	1.54	12.883	5.68	18.88	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38		
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38		
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38		
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38		
0.983	0.77	6.983	1.54	12.983	5.68	18.98	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.017	0.77	7.017	1.54	13.017	1.08	19.02	1.38		
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38		
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38		
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38		
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.117	0.77	7.117	1.54	13.117	1.08	19.12	1.38		
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38		
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38		
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38		
1.183	0.77	7.183	1.54	13.183	1.08	19.18	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.217	0.77	7.217	1.54	13.217	1.08	19.22	1.38		
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38		
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38		
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38		
1.283	0.77	7.283	1.54	13.283	1.08	19.28	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.317	0.77	7.317	1.54	13.317	1.08	19.32	1.38		
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38		
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38		
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38		
1.383	0.77	7.383	1.54	13.383	1.08	19.38	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38		
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38		
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38		
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38		
1.483	0.77	7.483	1.54	13.483	1.08	19.48	1.38		
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38		
1.517	0.77	7.517	1.54	13.517	6.29	19.52	1.38		
1.533	0.77	7.533	1.54	13.533	6.39	19.53	1.38		
1.550	0.77	7.550	1.54	13.550	6.39	19.55	1.38		
1.567	0.77	7.567	1.54	13.567	6.39	19.57	1.38		
1.583	0.77	7.583	1.54	13.583	6.39	19.58	1.38		
1.600	0.77	7.600	1.54	13.600	6.39	19.60	1.38		
1.617	0.77	7.617	1.54	13.617	6.39	19.62	1.38		
1.633	0.77	7.633	1.54	13.633	6.39	19.63	1.38		
1.650	0.77	7.650	1.54	13.650	6.39	19.65	1.38		
1.667	0.77	7.667	1.54	13.667	6.39	19.67	1.38		
1.683	0.77	7.683	1.54	13.683	6.39	19.68	1.38		
1.700	0.77	7.700	1.54	13.700	6.39	19.70	1.38		
1.717	0.77	7.717	1.54	13.717	6.39	19.72	1.38		
1.733	0.77	7.733	1.54	13.733	6.39	19.73	1.38		
1.750	0.77	7.750	1.54	13.750	6.39	19.75	1.38		
1.767	1.38	7.767	1.54	13.767	6.39	19.77	1.38		
1.783	1.38	7.783	1.54	13.783	6.39	19.78	1.38		
1.800	1.38	7.800	1.54	13.800	6.39	19.80	1.38		
1.817	1.38	7.817	1.54	13.817	6.39	19.82	1.38		
1.833	1.38	7.833	1.54	13.833	6.39	19.83	1.38		
1.850	1.38	7.850	1.54	13.850	6.39	19.85	1.38		
1.867	1.38	7.867	1.54	13.867	6.39	19.87	1.38		
1.883	1.38	7.883	1.54	13.883	6.39	19.88	1.38		
1.900	1.38	7.900	1.54	13.900	6.39	19.90	1.38		
1.917	1.38	7.917	1.54	13.917	6.39	19.92	1.38		
1.933	1.38	7.933	1.54	13.933	6.39	19.93	1.38		
1.950	1.38	7.950	1.54	13.950	6.39	19.95	1.38		
1.967	1.38	7.967	1.54	13.967	6.39	19.97	1.38		
1.983	1.38	7.983	1.54	13.983	6.39	19.98	1.38		
2.000	1.38	8.000	1.54	14.000	6.39	20.00	1.38		
2.017	1.00	8.017	2.07	14.017	2.31	20.02	0.92		
2.033	1.00	8.033	2.07	14.033	2.30	20.03	0.92		
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92		
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92		
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92		

HRP7-EX_2-100 YEAR.OUT							
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.117	1.00	8.117	2.07	14.117	2.30	20.12	0.92
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.183	1.00	8.183	2.07	14.183	2.30	20.18	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.217	1.00	8.217	2.07	14.217	2.30	20.22	0.92
2.233	1.00	8.233	2.07	14.233	2.30	20.23	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92
2.283	1.00	8.283	2.07	14.283	2.30	20.28	0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92
2.317	1.00	8.317	2.07	14.317	2.30	20.32	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92
2.367	1.00	8.367	2.07	14.367	2.30	20.37	0.92
2.383	1.00	8.383	2.07	14.383	2.30	20.38	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.433	1.00	8.433	2.07	14.433	2.30	20.43	0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92
2.483	1.00	8.483	2.07	14.483	2.30	20.48	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.517	1.00	8.517	2.07	14.517	2.30	20.52	0.92
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92
2.567	1.00	8.567	2.07	14.567	2.30	20.57	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.617	1.00	8.617	2.07	14.617	2.30	20.62	0.92
2.633	1.00	8.633	2.07	14.633	2.30	20.63	0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.683	1.00	8.683	2.07	14.683	2.30	20.68	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.717	1.00	8.717	2.07	14.717	2.30	20.72	0.92
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.767	1.00	8.767	2.07	14.767	2.30	20.77	0.92
2.783	1.00	8.783	2.07	14.783	2.30	20.78	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.817	1.00	8.817	2.07	14.817	2.30	20.82	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.867	1.00	8.867	2.07	14.867	2.30	20.87	0.92
2.883	1.00	8.883	2.07	14.883	2.30	20.88	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
2.967	1.00	8.967	2.07	14.967	2.30	20.97	0.92
2.983	1.00	8.983	2.07	14.983	2.30	20.98	0.92
2.999	1.00	8.999	2.07	15.000	2.30	21.00	0.92
3.017	1.00	9.017	2.46	15.017	2.30	21.02	0.92
3.033	1.00	9.033	2.46	15.033	2.30	21.03	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.067	1.00	9.067	2.46	15.067	2.30	21.07	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.09	0.92
3.117	1.00	9.117	2.46	15.117	2.30	21.12	0.92
3.133	1.00	9.133	2.46	15.133	2.30	21.13	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.183	1.00	9.183	2.46	15.183	2.30	21.18	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.217	1.00	9.217	2.46	15.217	2.30	21.22	0.92
3.233	1.00	9.233	2.46	15.233	2.30	21.23	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.267	1.00	9.267	2.46	15.267	2.30	21.27	0.92
3.283	1.00	9.283	2.46	15.283	2.30	21.28	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.317	1.00	9.317	2.46	15.317	2.30	21.32	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.367	1.00	9.367	2.46	15.367	2.30	21.37	0.92
3.383	1.00	9.383	2.46	15.383	2.30	21.38	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.433	1.00	9.433	2.46	15.433	2.30	21.43	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92
3.483	1.00	9.483	2.46	15.483	2.30	21.48	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.517	1.00	9.517	2.76	15.517	2.30	21.52	0.92
3.533	1.00	9.533	2.76	15.533	2.30	21.53	0.92

HRP7-EX_2-100 YEAR.OUT									
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92		
3.567	1.00	9.567	2.76	15.567	2.30	21.57	0.92		
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92		
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92		
3.617	1.00	9.617	2.76	15.617	2.30	21.62	0.92		
3.633	1.00	9.633	2.76	15.633	2.30	21.63	0.92		
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92		
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92		
3.683	1.00	9.683	2.76	15.683	2.30	21.68	0.92		
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92		
3.717	1.00	9.717	2.76	15.717	2.30	21.72	0.92		
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92		
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92		
3.767	1.00	9.767	2.76	15.767	2.30	21.77	0.92		
3.783	1.00	9.783	2.76	15.783	2.30	21.78	0.92		
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92		
3.817	1.00	9.817	2.76	15.817	2.30	21.82	0.92		
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92		
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92		
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92		
3.883	1.00	9.883	2.76	15.883	2.30	21.88	0.92		
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92		
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92		
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92		
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92		
3.967	1.00	9.967	2.76	15.967	2.30	21.97	0.92		
3.983	1.00	9.983	2.76	15.983	2.30	21.98	0.92		
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92		
4.017	1.23	10.017	3.53	16.017	1.39	22.02	0.92		
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92		
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92		
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92		
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92		
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92		
4.117	1.23	10.117	3.53	16.117	1.38	22.12	0.92		
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92		
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92		
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92		
4.183	1.23	10.183	3.53	16.183	1.38	22.18	0.92		
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92		
4.217	1.23	10.217	3.53	16.217	1.38	22.22	0.92		
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92		
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92		
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92		
4.283	1.23	10.283	3.53	16.283	1.38	22.28	0.92		
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92		
4.317	1.23	10.317	3.53	16.317	1.38	22.32	0.92		
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92		
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92		
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92		
4.383	1.23	10.383	3.53	16.383	1.38	22.38	0.92		
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92		
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92		
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92		
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92		
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92		
4.483	1.23	10.483	3.53	16.483	1.38	22.48	0.92		
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92		
4.517	1.23	10.517	4.76	16.517	1.38	22.52	0.92		
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92		
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92		
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92		
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92		
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92		
4.617	1.23	10.617	4.76	16.617	1.38	22.62	0.92		
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92		
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92		
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92		
4.683	1.23	10.683	4.76	16.683	1.38	22.68	0.92		
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92		
4.717	1.23	10.717	4.76	16.717	1.38	22.72	0.92		
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92		
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92		
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92		
4.783	1.23	10.783	4.76	16.783	1.38	22.78	0.92		
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92		
4.817	1.23	10.817	4.76	16.817	1.38	22.82	0.92		
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92		
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92		
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92		
4.883	1.23	10.883	4.76	16.883	1.38	22.88	0.92		
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92		
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92		
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92		
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92		
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92		
4.983	1.23	10.983	4.76	16.983	1.38	22.98	0.92		

HRP7-EX_2-100 YEAR.OUT									
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92		
5.017	1.23	11.017	7.37	17.017	1.38	23.02	0.92		
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92		
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92		
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92		
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92		
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92		
5.117	1.23	11.117	7.37	17.117	1.38	23.12	0.92		
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92		
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92		
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92		
5.183	1.23	11.183	7.37	17.183	1.38	23.18	0.92		
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92		
5.217	1.23	11.217	7.37	17.217	1.38	23.22	0.92		
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92		
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92		
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92		
5.283	1.23	11.283	7.37	17.283	1.38	23.28	0.92		
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92		
5.317	1.23	11.317	7.37	17.317	1.38	23.32	0.92		
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92		
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92		
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92		
5.383	1.23	11.383	7.37	17.383	1.38	23.38	0.92		
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92		
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92		
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92		
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92		
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92		
5.483	1.23	11.483	7.37	17.483	1.38	23.48	0.92		
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92		
5.517	1.23	11.517	31.94	17.517	1.38	23.52	0.92		
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92		
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92		
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92		
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92		
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92		
5.617	1.23	11.617	31.95	17.617	1.38	23.62	0.92		
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92		
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92		
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92		
5.683	1.23	11.683	31.95	17.683	1.38	23.68	0.92		
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92		
5.717	1.23	11.717	31.95	17.717	1.38	23.72	0.92		
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92		
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92		
5.767	1.23	11.767	84.76	17.767	1.38	23.77	0.92		
5.783	1.23	11.783	84.79	17.783	1.38	23.78	0.92		
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92		
5.817	1.23	11.817	84.79	17.817	1.38	23.82	0.92		
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92		
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92		
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92		
5.883	1.23	11.883	84.79	17.883	1.38	23.88	0.92		
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92		
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92		
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92		
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92		
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92		
5.983	1.23	11.983	84.79	17.983	1.38	23.98	0.92		
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92		
Max. Eff. Inten. (mm/hr)=	84.79			43.15					
over (min)	5.00			9.00					
Storage Coeff. (min)=	1.86			(ii)	8.82	(ii)			
Unit Hyd. Tpeak (min)=	5.00			9.00					
Unit Hyd. Tpeak (cms)=	0.39			0.13					
PEAK FLOW (cms)	0.11			0.03	*TOTALS*				
TIME TO PEAK (hrs)	12.00			12.05	0.141 (iii)				
RUNOFF VOLUME (mm)=	75.30			32.57	56.07				
TOTAL RAINFALL (mm)=	76.80			76.80	76.80				
RUNOFF COEFFICIENT =	0.98			0.42	0.73				
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL									
THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

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ID1= 1 (0143): 0.84 0.141 12.00 56.07
+ ID2= 2 (0024): 60.89 2.124 12.61 37.28
=====

ID = 3 (0026): 61.73 2.138 12.60 32.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0144)
ID= 1 DT= 2.0 min

Area (ha)= 6.14
Total Imp(%)= 37.00 Dir. Conn.(%)= 37.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.27 3.87
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 202.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.033 0.77 | 6.033 1.54 | 12.033 11.06 | 18.03 1.38
0.067 0.77 | 6.067 1.54 | 12.067 11.06 | 18.07 1.38
0.100 0.77 | 6.100 1.54 | 12.100 11.06 | 18.10 1.38
0.133 0.77 | 6.133 1.54 | 12.133 11.06 | 18.13 1.38
0.167 0.77 | 6.167 1.54 | 12.167 11.06 | 18.17 1.38
0.200 0.77 | 6.200 1.54 | 12.200 11.06 | 18.20 1.38
0.233 0.77 | 6.233 1.54 | 12.233 11.06 | 18.23 1.38
0.267 0.77 | 6.267 1.54 | 12.267 11.06 | 18.27 1.38
0.300 0.77 | 6.300 1.54 | 12.300 11.06 | 18.30 1.38
0.333 0.77 | 6.333 1.54 | 12.333 11.06 | 18.33 1.38
0.367 0.77 | 6.367 1.54 | 12.367 11.06 | 18.37 1.38
0.400 0.77 | 6.400 1.54 | 12.400 11.06 | 18.40 1.38
0.433 0.77 | 6.433 1.54 | 12.433 11.06 | 18.43 1.38
0.467 0.77 | 6.467 1.54 | 12.467 11.06 | 18.47 1.38
0.500 0.77 | 6.500 1.54 | 12.500 11.05 | 18.50 1.38
0.533 0.77 | 6.533 1.54 | 12.533 5.68 | 18.53 1.38
0.567 0.77 | 6.567 1.54 | 12.567 5.68 | 18.57 1.38
0.600 0.77 | 6.600 1.54 | 12.600 5.68 | 18.60 1.38
0.633 0.77 | 6.633 1.54 | 12.633 5.68 | 18.63 1.38
0.667 0.77 | 6.667 1.54 | 12.667 5.68 | 18.67 1.38
0.700 0.77 | 6.700 1.54 | 12.700 5.68 | 18.70 1.38
0.733 0.77 | 6.733 1.54 | 12.733 5.68 | 18.73 1.38
0.767 0.77 | 6.767 1.54 | 12.767 5.68 | 18.77 1.38
0.800 0.77 | 6.800 1.54 | 12.800 5.68 | 18.80 1.38
0.833 0.77 | 6.833 1.54 | 12.833 5.68 | 18.83 1.38
0.867 0.77 | 6.867 1.54 | 12.867 5.68 | 18.87 1.38
0.900 0.77 | 6.900 1.54 | 12.900 5.68 | 18.90 1.38
0.933 0.77 | 6.933 1.54 | 12.933 5.68 | 18.93 1.38
0.967 0.77 | 6.967 1.54 | 12.967 5.68 | 18.97 1.38
1.000 0.77 | 7.000 1.54 | 13.000 5.67 | 19.00 1.38
1.033 0.77 | 7.033 1.54 | 13.033 1.08 | 19.03 1.38
1.067 0.77 | 7.067 1.54 | 13.067 1.08 | 19.07 1.38
1.100 0.77 | 7.100 1.54 | 13.100 1.08 | 19.10 1.38
1.133 0.77 | 7.133 1.54 | 13.133 1.08 | 19.13 1.38
1.167 0.77 | 7.167 1.54 | 13.167 1.08 | 19.17 1.38
1.200 0.77 | 7.200 1.54 | 13.200 1.08 | 19.20 1.38
1.233 0.77 | 7.233 1.54 | 13.233 1.08 | 19.23 1.38
1.267 0.77 | 7.267 1.54 | 13.267 1.08 | 19.27 1.38
1.300 0.77 | 7.300 1.54 | 13.300 1.08 | 19.30 1.38
1.333 0.77 | 7.333 1.54 | 13.333 1.08 | 19.33 1.38
1.367 0.77 | 7.367 1.54 | 13.367 1.08 | 19.37 1.38
1.400 0.77 | 7.400 1.54 | 13.400 1.08 | 19.40 1.38
1.433 0.77 | 7.433 1.54 | 13.433 1.08 | 19.43 1.38
1.467 0.77 | 7.467 1.54 | 13.467 1.08 | 19.47 1.38
1.500 0.77 | 7.500 1.54 | 13.500 1.09 | 19.50 1.38
1.533 0.77 | 7.533 1.54 | 13.533 6.30 | 19.53 1.38
1.567 0.77 | 7.567 1.54 | 13.567 6.30 | 19.57 1.38
1.600 0.77 | 7.600 1.54 | 13.600 6.30 | 19.60 1.38
1.633 0.77 | 7.633 1.54 | 13.633 6.30 | 19.63 1.38
1.667 0.77 | 7.667 1.54 | 13.667 6.30 | 19.67 1.38
1.700 0.77 | 7.700 1.54 | 13.700 6.30 | 19.70 1.38
1.733 0.77 | 7.733 1.54 | 13.733 6.30 | 19.73 1.38
1.767 1.08 | 7.767 1.54 | 13.767 6.30 | 19.77 1.38
1.800 1.38 | 7.800 1.54 | 13.800 6.30 | 19.80 1.38
1.833 1.38 | 7.833 1.54 | 13.833 6.30 | 19.83 1.38
1.867 1.38 | 7.867 1.54 | 13.867 6.30 | 19.87 1.38
1.900 1.38 | 7.900 1.54 | 13.900 6.30 | 19.90 1.38
1.933 1.38 | 7.933 1.54 | 13.933 6.30 | 19.93 1.38
1.967 1.38 | 7.967 1.54 | 13.967 6.30 | 19.97 1.38
2.000 1.38 | 8.000 1.54 | 14.000 6.29 | 20.00 1.38
2.033 1.00 | 8.033 2.07 | 14.033 2.30 | 20.03 0.92
2.067 1.00 | 8.067 2.07 | 14.067 2.30 | 20.07 0.92

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2.100 1.00 | 8.100 2.07 | 14.100 2.30 | 20.10 0.92
2.133 1.00 | 8.133 2.07 | 14.133 2.30 | 20.13 0.92
2.167 1.00 | 8.167 2.07 | 14.167 2.30 | 20.17 0.92
2.200 1.00 | 8.200 2.07 | 14.200 2.30 | 20.20 0.92
2.233 1.00 | 8.233 2.07 | 14.233 2.30 | 20.23 0.92
2.267 1.00 | 8.267 2.07 | 14.267 2.30 | 20.27 0.92
2.300 1.00 | 8.300 2.07 | 14.300 2.30 | 20.30 0.92
2.333 1.00 | 8.333 2.07 | 14.333 2.30 | 20.33 0.92
2.367 1.00 | 8.367 2.07 | 14.367 2.30 | 20.37 0.92
2.400 1.00 | 8.400 2.07 | 14.400 2.30 | 20.40 0.92
2.433 1.00 | 8.433 2.07 | 14.433 2.30 | 20.43 0.92
2.467 1.00 | 8.467 2.07 | 14.467 2.30 | 20.47 0.92
2.500 1.00 | 8.500 2.07 | 14.500 2.30 | 20.50 0.92
2.533 1.00 | 8.533 2.07 | 14.533 2.30 | 20.53 0.92
2.567 1.00 | 8.567 2.07 | 14.567 2.30 | 20.57 0.92
2.600 1.00 | 8.600 2.07 | 14.600 2.30 | 20.60 0.92
2.633 1.00 | 8.633 2.07 | 14.633 2.30 | 20.63 0.92
2.667 1.00 | 8.667 2.07 | 14.667 2.30 | 20.67 0.92
2.700 1.00 | 8.700 2.07 | 14.700 2.30 | 20.70 0.92
2.733 1.00 | 8.733 2.07 | 14.733 2.30 | 20.73 0.92
2.767 1.00 | 8.767 2.07 | 14.767 2.30 | 20.77 0.92
2.800 1.00 | 8.800 2.07 | 14.800 2.30 | 20.80 0.92
2.833 1.00 | 8.833 2.07 | 14.833 2.30 | 20.83 0.92
2.867 1.00 | 8.867 2.07 | 14.867 2.30 | 20.87 0.92
2.900 1.00 | 8.900 2.07 | 14.900 2.30 | 20.90 0.92
2.933 1.00 | 8.933 2.07 | 14.933 2.30 | 20.93 0.92
2.967 1.00 | 8.967 2.07 | 14.967 2.30 | 20.97 0.92
3.000 1.00 | 9.000 2.07 | 15.000 2.30 | 21.00 0.92
3.033 1.00 | 9.033 2.46 | 15.033 2.30 | 21.03 0.92
3.067 1.00 | 9.067 2.46 | 15.067 2.30 | 21.07 0.92
3.100 1.00 | 9.100 2.46 | 15.100 2.30 | 21.10 0.92
3.133 1.00 | 9.133 2.46 | 15.133 2.30 | 21.13 0.92
3.167 1.00 | 9.167 2.46 | 15.167 2.30 | 21.17 0.92
3.200 1.00 | 9.200 2.46 | 15.200 2.30 | 21.20 0.92
3.233 1.00 | 9.233 2.46 | 15.233 2.30 | 21.23 0.92
3.267 1.00 | 9.267 2.46 | 15.267 2.30 | 21.27 0.92
3.300 1.00 | 9.300 2.46 | 15.300 2.30 | 21.30 0.92
3.333 1.00 | 9.333 2.46 | 15.333 2.30 | 21.33 0.92
3.367 1.00 | 9.367 2.46 | 15.367 2.30 | 21.37 0.92
3.400 1.00 | 9.400 2.46 | 15.400 2.30 | 21.40 0.92
3.433 1.00 | 9.433 2.46 | 15.433 2.30 | 21.43 0.92
3.467 1.00 | 9.467 2.46 | 15.467 2.30 | 21.47 0.92
3.500 1.00 | 9.500 2.46 | 15.500 2.30 | 21.50 0.92
3.533 1.00 | 9.533 2.76 | 15.533 2.30 | 21.53 0.92
3.567 1.00 | 9.567 2.76 | 15.567 2.30 | 21.57 0.92
3.600 1.00 | 9.600 2.76 | 15.600 2.30 | 21.60 0.92
3.633 1.00 | 9.633 2.76 | 15.633 2.30 | 21.63 0.92
3.667 1.00 | 9.667 2.76 | 15.667 2.30 | 21.67 0.92
3.700 1.00 | 9.700 2.76 | 15.700 2.30 | 21.70 0.92
3.733 1.00 | 9.733 2.76 | 15.733 2.30 | 21.73 0.92
3.767 1.00 | 9.767 2.76 | 15.767 2.30 | 21.77 0.92
3.800 1.00 | 9.800 2.76 | 15.800 2.30 | 21.80 0.92
3.833 1.00 | 9.833 2.76 | 15.833 2.30 | 21.83 0.92
3.867 1.00 | 9.867 2.76 | 15.867 2.30 | 21.87 0.92
3.900 1.00 | 9.900 2.76 | 15.900 2.30 | 21.90 0.92
3.933 1.00 | 9.933 2.76 | 15.933 2.30 | 21.93 0.92
3.967 1.00 | 9.967 2.76 | 15.967 2.30 | 21.97 0.92
4.000 1.00 | 10.000 2.77 | 16.000 2.30 | 22.00 0.92
4.033 1.23 | 10.033 3.53 | 16.033 1.38 | 22.03 0.92
4.067 1.23 | 10.067 3.53 | 16.067 1.38 | 22.07 0.92
4.100 1.23 | 10.100 3.53 | 16.100 1.38 | 22.10 0.92
4.133 1.23 | 10.133 3.53 | 16.133 1.38 | 22.13 0.92
4.167 1.23 | 10.167 3.53 | 16.167 1.38 | 22.17 0.92
4.200 1.23 | 10.200 3.53 | 16.200 1.38 | 22.20 0.92
4.233 1.23 | 10.233 3.53 | 16.233 1.38 | 22.23 0.92
4.267 1.23 | 10.267 3.53 | 16.267 1.38 | 22.27 0.92
4.300 1.23 | 10.300 3.53 | 16.300 1.38 | 22.30 0.92
4.333 1.23 | 10.333 3.53 | 16.333 1.38 | 22.33 0.92
4.367 1.23 | 10.367 3.53 | 16.367 1.38 | 22.37 0.92
4.400 1.23 | 10.400 3.53 | 16.400 1.38 | 22.40 0.92
4.433 1.23 | 10.433 3.53 | 16.433 1.38 | 22.43 0.92
4.467 1.23 | 10.467 3.53 | 16.467 1.38 | 22.47 0.92
4.500 1.23 | 10.500 3.53 | 16.500 1.38 | 22.50 0.92
4.533 1.23 | 10.533 4.76 | 16.533 1.38 | 22.53 0.92
4.567 1.23 | 10.567 4.76 | 16.567 1.38 | 22.57 0.92
4.600 1.23 | 10.600 4.76 | 16.600 1.38 | 22.60 0.92
4.633 1.23 | 10.633 4.76 | 16.633 1.38 | 22.63 0.92
4.667 1.23 | 10.667 4.76 | 16.667 1.38 | 22.67 0.92
4.700 1.23 | 10.700 4.76 | 16.700 1.38 | 22.70 0.92
4.733 1.23 | 10.733 4.76 | 16.733 1.38 | 22.73 0.92
4.767 1.23 | 10.767 4.76 | 16.767 1.38 | 22.77 0.92
4.800 1.23 | 10.800 4.76 | 16.800 1.38 | 22.80 0.92
4.833 1.23 | 10.833 4.76 | 16.833 1.38 | 22.83 0.92
4.867 1.23 | 10.867 4.76 | 16.867 1.38 | 22.87 0.92
4.900 1.23 | 10.900 4.76 | 16.900 1.38 | 22.90 0.92
4.933 1.23 | 10.933 4.76 | 16.933 1.38 | 22.93 0.92
4.967 1.23 | 10.967 4.76 | 16.967 1.38 | 22.97 0.92

HRP7-EX_2-100 YEAR.OUT

5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.500	1.23	11.500	7.40	17.500	1.38	23.50	0.92
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.767	1.23	11.767	58.44	17.767	1.38	23.77	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92
6.000	1.23	12.000	84.68	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 43.14
over (min) 5.00 14.00
Storage Coeff. (min)= 3.38 (ii) 13.26 (ii)
Unit Hyd. Tpeak (min)= 4.00 14.00
Unit Hyd. peak (cms)= 0.31 0.08

PEAK FLOW (cms)= 0.53 0.28
TIME TO PEAK (hrs)= 12.00 12.10
RUNOFF VOLUME (mm)= 75.30 32.57
TOTAL RAINFALL (mm)= 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.42

TOTALS
0.763 (iii)

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0144):	6.14	0.763	12.00	48.38
+ ID2= 2 (0026):	61.73	2.138	12.60	32.40
ID = 3 (0028):	67.87	2.284	12.58	33.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\b1052669-137a-4442-8d19-835e8a5d3325\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\b1052669-137a-4442-8d19-835e8a5d3325\scenar

HRP7-EX_2-100 YEAR.OUT

DATE: 03/24/2023 TIME: 10:40:24

USER:

COMMENTS:

** SIMULATION : Run 03 **

MASS STORM Filename: C:\Users\AbirA\AppData
ata\Local\Temp\
8eb7a9a7-c234-44bf-98e8-959e019c88cb\1913d010
Ptotal= 88.00 mm Comments: Mass 24-Hour SCS Type II Design Storm
Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60	
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60	
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60	
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60	
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60	
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60	
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60	
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60	
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07	
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07	
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07	
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07	
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07	
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07	
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07	
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07	
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07	
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07	
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07	
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07	
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07	
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07	
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07	
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60	
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60	
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60	
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60	
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60	
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60	
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60	
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60	
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60	
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60	
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60	
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60	
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60	
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60	
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60	
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60	
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60	
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60	
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60	
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60	
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60	
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60	

HRP7-EX_2-100 YEAR.OUT

1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 0.730 (1)
 TIME TO PEAK (hrs)= 12.167
 RUNOFF VOLUME (mm)= 41.676
 TOTAL RAINFALL (mm)= 88.800
 RUNOFF COEFFICIENT = 0.469

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 | ROUTE CHN(0037) |
 | IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (cu.m.)	VOLUME (m3)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.259E+02	0.0	0.22	36.60
0.09	100.09	.582E+02	0.0	0.33	24.49
0.14	100.14	.970E+02	0.1	0.41	19.54
0.19	100.19	.142E+03	0.1	0.48	16.69
0.24	100.24	.194E+03	0.2	0.54	14.78
0.28	100.28	.252E+03	0.3	0.60	13.39
0.33	100.33	.317E+03	0.4	0.65	12.30

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0.39	100.39	.402E+03	0.6	0.75	10.68
0.44	100.44	.495E+03	0.9	0.83	9.64
0.50	100.50	.598E+03	1.1	0.90	8.90
0.55	100.55	.709E+03	1.4	0.96	8.35
0.61	100.61	.820E+03	1.7	1.01	7.91
0.66	100.66	.958E+03	2.1	1.06	7.56
0.72	100.72	.110E+04	2.5	1.10	7.26
0.78	100.78	.124E+04	3.0	1.14	7.02
0.83	100.83	.140E+04	3.4	1.18	6.80
0.89	100.89	.156E+04	3.9	1.21	6.61
0.94	100.94	.174E+04	4.5	1.24	6.45
1.00	101.00	.192E+04	5.1	1.27	6.30

<---- hydrograph ---->						<-pipe / channel->	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)		
INFLOW : ID= 2 (1040)	10.35	0.73	12.17	41.68	0.41	0.78	
OUTFLOW: ID= 1 (0037)	10.35	0.66	12.33	41.66	0.39	0.76	

CALIB	NASHYD (0140)	Area (ha)= 17.07	Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.50		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60		
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60		
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60		
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60		
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60		
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60		
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07		
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07		
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07		
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07		
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07		
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07		
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07		

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4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.301

PEAK FLOW (cms)= 0.998 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 43.979
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.495

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0140):	17.07	0.998	12.33	43.98
+ ID2= 2 (0037):	10.35	0.658	12.33	41.66
=====				
ID = 3 (0029):	27.42	1.656	12.33	43.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (1041)				
ID= 1 DT= 5.0 min	Area	(ha)=	11.30	Curve Number (CN)= 77.0
	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.26		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07

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2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.039 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 43.951
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.495

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):	11.30	1.039	12.08	43.95
+ ID2= 2 (0029):	27.42	1.656	12.33	43.10
=====				
ID = 3 (0018):	38.72	2.499	12.25	43.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0030)				
IN= 2--> OUT= 1	Routing time step (min)'= 2.00			

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.319E+02	0.0	0.38	26.06
0.09	100.09	.718E+02	0.1	0.57	17.44
0.14	100.14	.120E+03	0.1	0.71	13.91
0.19	100.19	.175E+03	0.2	0.83	11.09
0.24	100.24	.239E+03	0.4	0.94	10.53

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0.28	100.28	.311E+03	0.5	1.04	9.53
0.33	100.33	.391E+03	0.7	1.13	8.76
0.39	100.39	.495E+03	1.1	1.30	7.61
0.44	100.44	.611E+03	1.5	1.44	6.86
0.50	100.50	.737E+03	1.9	1.56	6.34
0.55	100.55	.874E+03	2.5	1.66	5.94
0.61	100.61	.102E+04	3.0	1.75	5.63
0.66	100.66	.118E+04	3.7	1.83	5.38
0.72	100.72	.135E+04	4.4	1.91	5.17
0.78	100.78	.153E+04	5.1	1.97	5.00
0.83	100.83	.172E+04	5.9	2.04	4.84
0.89	100.89	.193E+04	6.8	2.10	4.71
0.94	100.94	.214E+04	7.8	2.15	4.59
1.00	101.00	.237E+04	8.8	2.20	4.48

<---- hydrograph <----> <-pipe / channel->

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0018)	38.72	2.50	12.25	43.35	0.56
OUTFLOW: ID= 1 (0030)	38.72	2.41	12.33	43.35	0.55
					1.65

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4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.783

PEAK FLOW (cms)= 1.165 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 46.366
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.522

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
NASHYD (0141) Area (ha)= 11.25 Curve Number (CN)= 79.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.24

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07

ADD HYD (0021)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0141): 11.25 1.165 12.08 46.37
+ ID2= 2 (0030): 38.72 2.414 12.33 43.35
===== ID = 3 (0021): 49.97 3.303 12.25 44.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0142) Area (ha)= 10.92
ID= 1 DT= 3.0 min Total Imp(%)= 53.00 Dir. Conn.(%)= 53.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.79 5.13
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 269.81 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60

HRP7-EX_2-100 YEAR.OUT									
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.800	0.89	7.800	1.78	13.800	7.28	19.80	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07		
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07		
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07		
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07		
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07		
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07		
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07		
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07		
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07		
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07		
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07		
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07		
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07		
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07		
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07		
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07		
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07		
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07		
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07		
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07		
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07		
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07		
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07		
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07		
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07		
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07		
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07		
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07		
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07		
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07		

HRP7-EX_2-100 YEAR.OUT							
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07
Max.Eff.Inten.(mm/hr)=			98.04	40.38			
over (min)=			6.00	12.00			
Storage Coeff. (min)=			3.79 (ii)	10.57 (ii)			
Unit Hyd. Tpeak (min)=			6.00	12.00			
Unit Hyd. peak (cms)=			0.24	0.10			
					TOTALS		
PEAK FLOW (cms)=			1.54	0.40	1.908 (iii)		
TIME TO PEAK (hrs)=			12.00	12.05	12.00		
RUNOFF VOLUME (mm)=			87.30	31.37	61.01		
TOTAL RAINFALL (mm)=			88.80	88.80	88.80		
RUNOFF COEFFICIENT =			0.98	0.35	0.69		
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:							
CN* = 62.0 Ia = Dep. Storage (Above)							
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.							
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

ADD HYD (0023)							
1 + 2 = 3							

ID1= 1 (0142):	10.92	1.908	12.00	61.01			
+ ID2= 2 (0021):	49.97	3.303	12.25	44.03			
=====							
ID = 3 (0023):	60.89	4.296	12.06	47.07			
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.							

RESERVOIR(0024)							
IN= 2---> OUT= 1							
DT= 3.0 min							

	OUTFLOW	STORAGE	OUTFLOW	STORAGE			
	(cms)	(ha.m.)	(cms)	(ha.m.)			
	0.0000	0.0000	0.0030	0.5800			
	0.0370	0.1125	1.9000	0.7700			
	0.0530	0.2275	6.4000	1.1000			
	0.0650	0.3450	9.2000	1.2500			
	0.0750	0.4630	0.0000	0.0000			
	AREA	QPEAK	TPEAK	R.V.			
	(ha)	(cms)	(hrs)	(mm)			
INFLOW : ID= 2 (0023)	60.890	4.296	12.06	47.07			
OUTFLOW: ID= 1 (0024)	60.890	3.046	12.50	46.43			
	PEAK FLOW REDUCTION [Qout/Qin](%)= 70.90						
	TIME SHIFT OF PEAK FLOW (min)= 26.67						
	MAXIMUM STORAGE USED (ha.m.)= 0.8541						

CALIB							
STANDHYD (0143)							
ID= 1 DT= 1.0 min							

	Area	(ha)=	0.84				
	Total Imp(%)=	55.00	Dir. Conn.(%)=	55.00			
	IMPERVIOUS		PERVIOUS (i)				
Surface Area	(ha)=	0.46		0.38			
Dep. Storage	(mm)=	1.50		1.50			
Average Slope	(%)=	2.00		2.00			
Length	(m)=	74.83		40.00			
Mannings n	=	0.013		0.250			
NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.							
---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.017	0.89	6.017	1.78	12.017	12.85	18.02	1.60
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60
0.083	0.89	6.083	1.78	12.083	12.79	18.08	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60

HRP7-EX_2-100 YEAR.OUT									
0.117	0.89	6.117	1.78	12.117	12.79	18.12	1.60		
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60		
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60		
0.183	0.89	6.183	1.78	12.183	12.79	18.18	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.217	0.89	6.217	1.78	12.217	12.79	18.22	1.60		
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60		
0.283	0.89	6.283	1.78	12.283	12.79	18.28	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.317	0.89	6.317	1.78	12.317	12.79	18.32	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60		
0.383	0.89	6.383	1.78	12.383	12.79	18.38	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60		
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60		
0.483	0.89	6.483	1.78	12.483	12.79	18.48	1.60		
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60		
0.517	0.89	6.517	1.78	12.517	6.58	18.52	1.60		
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60		
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60		
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.617	0.89	6.617	1.78	12.617	6.57	18.62	1.60		
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.683	0.89	6.683	1.78	12.683	6.57	18.68	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.717	0.89	6.717	1.78	12.717	6.57	18.72	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60		
0.783	0.89	6.783	1.78	12.783	6.57	18.78	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.817	0.89	6.817	1.78	12.817	6.57	18.82	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.883	0.89	6.883	1.78	12.883	6.57	18.88	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60		
0.983	0.89	6.983	1.78	12.983	6.57	18.98	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.017	0.89	7.017	1.78	13.017	1.25	19.02	1.60		
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.117	0.89	7.117	1.78	13.117	1.24	19.12	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.183	0.89	7.183	1.78	13.183	1.24	19.18	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.217	0.89	7.217	1.78	13.217	1.24	19.22	1.60		
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.283	0.89	7.283	1.78	13.283	1.24	19.28	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.317	0.89	7.317	1.78	13.317	1.24	19.32	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60		
1.383	0.89	7.383	1.78	13.383	1.24	19.38	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60		
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.483	0.89	7.483	1.78	13.483	1.24	19.48	1.60		
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60		
1.517	0.89	7.517	1.78	13.517	7.27	19.52	1.60		
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		

HRP7-EX_2-100 YEAR.OUT									
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60		
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.617	0.89	7.617	1.78	13.617	7.28	19.62	1.60		
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.683	0.89	7.683	1.78	13.683	7.28	19.68	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.717	0.89	7.717	1.78	13.717	7.28	19.72	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.767	1.60	7.767	1.78	13.767	7.28	19.77	1.60		
1.783	1.60	7.783	1.78	13.783	7.28	19.78	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.817	1.60	7.817	1.78	13.817	7.28	19.82	1.60		
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.883	1.60	7.883	1.78	13.883	7.28	19.88	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60		
1.983	1.60	7.983	1.78	13.983	7.28	19.98	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.017	1.15	8.017	2.40	14.017	2.68	20.02	1.07		
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.117	1.15	8.117	2.40	14.117	2.66	20.12	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.183	1.15	8.183	2.40	14.183	2.66	20.18	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.217	1.15	8.217	2.40	14.217	2.66	20.22	1.07		
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.283	1.15	8.283	2.40	14.283	2.66	20.28	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.317	1.15	8.317	2.40	14.317	2.66	20.32	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07		
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07		
2.383	1.15	8.383	2.40	14.383	2.66	20.38	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07		
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07		
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.483	1.15	8.483	2.40	14.483	2.66	20.48	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.517	1.15	8.517	2.40	14.517	2.66	20.52	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07		
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07		
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.617	1.15	8.617	2.40	14.617	2.66	20.62	1.07		
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07		
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.683	1.15	8.683	2.40	14.683	2.66	20.68	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.717	1.15	8.717	2.40	14.717	2.66	20.72	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07		
2.783	1.15	8.783	2.40	14.783	2.66	20.78	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.817	1.15	8.817	2.40	14.817	2.66	20.82	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07		
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.883	1.15	8.883	2.40	14.883	2.66	20.88	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07		
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07		
2.983	1.15	8.983	2.40	14.983	2.66	20.98	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		

HRP7-EX_2-100 YEAR.OUT									
3.017	1.15	9.017	2.84	15.017	2.66	21.02	1.07		
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07		
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.117	1.15	9.117	2.84	15.117	2.66	21.12	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07		
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07		
3.183	1.15	9.183	2.84	15.183	2.66	21.18	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.217	1.15	9.217	2.84	15.217	2.66	21.22	1.07		
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.283	1.15	9.283	2.84	15.283	2.66	21.28	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.317	1.15	9.317	2.84	15.317	2.66	21.32	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07		
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07		
3.383	1.15	9.383	2.84	15.383	2.66	21.38	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07		
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07		
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07		
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07		
3.483	1.15	9.483	2.84	15.483	2.66	21.48	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.517	1.15	9.517	3.20	15.517	2.66	21.52	1.07		
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07		
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07		
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07		
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.617	1.15	9.617	3.20	15.617	2.66	21.62	1.07		
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07		
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.683	1.15	9.683	3.20	15.683	2.66	21.68	1.07		
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07		
3.717	1.15	9.717	3.20	15.717	2.66	21.72	1.07		
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07		
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07		
3.783	1.15	9.783	3.20	15.783	2.66	21.78	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.817	1.15	9.817	3.20	15.817	2.66	21.82	1.07		
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07		
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07		
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07		
3.883	1.15	9.883	3.20	15.883	2.66	21.88	1.07		
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07		
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07		
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07		
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07		
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07		
3.983	1.15	9.983	3.20	15.983	2.66	21.98	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.017	1.42	10.017	4.08	16.017	1.60	22.02	1.07		
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07		
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07		
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07		
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07		
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07		
4.117	1.42	10.117	4.08	16.117	1.60	22.12	1.07		
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07		
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07		
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07		
4.183	1.42	10.183	4.08	16.183	1.60	22.18	1.07		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07		
4.217	1.42	10.217	4.08	16.217	1.60	22.22	1.07		
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07		
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07		
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07		
4.283	1.42	10.283	4.08	16.283	1.60	22.28	1.07		
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07		
4.317	1.42	10.317	4.08	16.317	1.60	22.32	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07		
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07		
4.383	1.42	10.383	4.08	16.383	1.60	22.38	1.07		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07		
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07		
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07		
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07		

HRP7-EX_2-100 YEAR.OUT									
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07		
4.483	1.42	10.483	4.08	16.483	1.60	22.48	1.07		
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07		
4.517	1.42	10.517	5.51	16.517	1.60	22.52	1.07		
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07		
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07		
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07		
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07		
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07		
4.617	1.42	10.617	5.51	16.617	1.60	22.62	1.07		
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07		
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07		
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07		
4.683	1.42	10.683	5.51	16.683	1.60	22.68	1.07		
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07		
4.717	1.42	10.717	5.51	16.717	1.60	22.72	1.07		
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07		
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07		
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07		
4.783	1.42	10.783	5.51	16.783	1.60	22.78	1.07		
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07		
4.817	1.42	10.817	5.51	16.817	1.60	22.82	1.07		
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07		
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07		
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07		
4.883	1.42	10.883	5.51	16.883	1.60	22.88	1.07		
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07		
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07		
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07		
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07		
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07		
4.983	1.42	10.983	5.51	16.983	1.60	22.98	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.017	1.42	11.017	8.52	17.017	1.60	23.02	1.07		
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07		
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07		
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07		
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07		
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07		
5.117	1.42	11.117	8.52	17.117	1.60	23.12	1.07		
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07		
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07		
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07		
5.183	1.42	11.183	8.52	17.183	1.60	23.18	1.07		
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07		
5.217	1.42	11.217	8.52	17.217	1.60	23.22	1.07		
5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07		
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07		
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07		
5.283	1.42	11.283	8.52	17.283	1.60	23.28	1.07		
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07		
5.317	1.42	11.317	8.52	17.317	1.60	23.32	1.07		
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07		
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07		
5.367	1.42	11.367	8.52	17.367	1.60	23.37	1.07		
5.383	1.42	11.383	8.52	17.383	1.60	23.38	1.07		
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07		
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07		
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07		
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07		
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07		
5.483	1.42	11.483	8.52	17.483	1.60	23.48	1.07		
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07		
5.517	1.42	11.517	36.93	17.517	1.60	23.52	1.07		
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07		
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07		
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07		
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07		
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07		
5.617	1.42	11.617	36.94	17.617	1.60	23.62	1.07		
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07		
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07		
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07		
5.683	1.42	11.683	36.94	17.683	1.60	23.68	1.07		
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07		
5.717	1.42	11.717	36.94	17.717	1.60	23.72	1.07		
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07		
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07		
5.767	1.42	11.767	98.01	17.767	1.60	23.77	1.07		
5.783	1.42	11.783	98.04	17.783	1.60	23.78	1.07		
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07		
5.817	1.42	11.817	98.04	17.817	1.60	23.82	1.07		
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07		
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07		
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07		
5.883	1.42	11.883	98.04	17.883	1.60	23.88	1.07		
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07		

HRP7-EX_2-100 YEAR.OUT									
5.917	1.42	[11.917	98.04	[17.917	1.60	[23.92	1.07		
5.933	1.42	[11.933	98.04	[17.933	1.60	[23.93	1.07		
5.950	1.42	[11.950	98.04	[17.950	1.60	[23.95	1.07		
5.967	1.42	[11.967	98.04	[17.967	1.60	[23.97	1.07		
5.983	1.42	[11.983	98.04	[17.983	1.60	[23.98	1.07		
6.000	1.42	[12.000	98.04	[18.000	1.60	[24.00	1.07		
Max.Eff.Inten.(mm/hr)=	98.04		54.22						
over (min)	5.00		9.00						
Storage Coeff. (min)=	1.76 (ii)		8.32 (ii)						
Unit Hyd. Tpeak (min)=	5.00		9.00						
Unit Hyd. peak (cms)=	0.39		0.13						
PEAK FLOW (cms)=	0.13		0.04		0.167 (iii)				
TIME TO PEAK (hrs)=	12.00		12.05		12.00				
RUNOFF VOLUME (mm)=	87.30		40.95		66.44				
TOTAL RAINFALL (mm)=	88.80		88.80		88.80				
RUNOFF COEFFICIENT =	0.98		0.46		0.75				

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)					
1	2	3			
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0143):		0.84	0.167	12.00	66.44
+ ID2= 2 (0024):		60.89	3.046	12.50	46.43
=====					
ID = 3 (0026):		61.73	3.073	12.50	41.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0144)			
ID= 1 DT= 2.0 min	Area (ha)=	6.14	
	Total Imp(%)=	37.00	Dir. Conn.(%)= 37.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.27	3.87	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	282.32	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60		
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60		
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60		
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60		
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60		
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60		
1.000	0.89	7.000	1.78	13.000	6.56	19.00	1.60		

HRP7-EX_2-100 YEAR.OUT									
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.500	0.89	7.500	1.78	13.500	1.26	19.50	1.60		
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60		
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.767	1.24	7.767	1.78	13.767	7.28	19.77	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60		
2.000	1.60	8.000	1.78	14.000	7.27	20.00	1.60		
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07		
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07		
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07		
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07		
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07		
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07		
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07		

HRP7-EX_2-100 YEAR.OUT

3.933	1.15		9.933	3.20		15.933	2.66		21.93	1.07
3.967	1.15		9.967	3.20		15.967	2.66		21.97	1.07
4.000	1.15		10.000	3.20		16.000	2.66		22.00	1.07
4.033	1.42		10.033	4.08		16.033	1.60		22.03	1.07
4.067	1.42		10.067	4.08		16.067	1.60		22.07	1.07
4.100	1.42		10.100	4.08		16.100	1.60		22.10	1.07
4.133	1.42		10.133	4.08		16.133	1.60		22.13	1.07
4.167	1.42		10.167	4.08		16.167	1.60		22.17	1.07
4.200	1.42		10.200	4.08		16.200	1.60		22.20	1.07
4.233	1.42		10.233	4.08		16.233	1.60		22.23	1.07
4.267	1.42		10.267	4.08		16.267	1.60		22.27	1.07
4.300	1.42		10.300	4.08		16.300	1.60		22.30	1.07
4.333	1.42		10.333	4.08		16.333	1.60		22.33	1.07
4.367	1.42		10.367	4.08		16.367	1.60		22.37	1.07
4.400	1.42		10.400	4.08		16.400	1.60		22.40	1.07
4.433	1.42		10.433	4.08		16.433	1.60		22.43	1.07
4.467	1.42		10.467	4.08		16.467	1.60		22.47	1.07
4.500	1.42		10.500	4.09		16.500	1.60		22.50	1.07
4.533	1.42		10.533	5.51		16.533	1.60		22.53	1.07
4.567	1.42		10.567	5.51		16.567	1.60		22.57	1.07
4.600	1.42		10.600	5.51		16.600	1.60		22.60	1.07
4.633	1.42		10.633	5.51		16.633	1.60		22.63	1.07
4.667	1.42		10.667	5.51		16.667	1.60		22.67	1.07
4.700	1.42		10.700	5.51		16.700	1.60		22.70	1.07
4.733	1.42		10.733	5.51		16.733	1.60		22.73	1.07
4.767	1.42		10.767	5.51		16.767	1.60		22.77	1.07
4.800	1.42		10.800	5.51		16.800	1.60		22.80	1.07
4.833	1.42		10.833	5.51		16.833	1.60		22.83	1.07
4.867	1.42		10.867	5.51		16.867	1.60		22.87	1.07
4.900	1.42		10.900	5.51		16.900	1.60		22.90	1.07
4.933	1.42		10.933	5.51		16.933	1.60		22.93	1.07
4.967	1.42		10.967	5.51		16.967	1.60		22.97	1.07
5.000	1.42		11.000	5.51		17.000	1.60		23.00	1.07
5.033	1.42		11.033	8.52		17.033	1.60		23.03	1.07
5.067	1.42		11.067	8.52		17.067	1.60		23.07	1.07
5.100	1.42		11.100	8.52		17.100	1.60		23.10	1.07
5.133	1.42		11.133	8.52		17.133	1.60		23.13	1.07
5.167	1.42		11.167	8.52		17.167	1.60		23.17	1.07
5.200	1.42		11.200	8.52		17.200	1.60		23.20	1.07
5.233	1.42		11.233	8.52		17.233	1.60		23.23	1.07
5.267	1.42		11.267	8.52		17.267	1.60		23.27	1.07
5.300	1.42		11.300	8.52		17.300	1.60		23.30	1.07
5.333	1.42		11.333	8.52		17.333	1.60		23.33	1.07
5.367	1.42		11.367	8.52		17.367	1.60		23.37	1.07
5.400	1.42		11.400	8.52		17.400	1.60		23.40	1.07
5.433	1.42		11.433	8.52		17.433	1.60		23.43	1.07
5.467	1.42		11.467	8.52		17.467	1.60		23.47	1.07
5.500	1.42		11.500	8.56		17.500	1.60		23.50	1.07
5.533	1.42		11.533	36.94		17.533	1.60		23.53	1.07
5.567	1.42		11.567	36.94		17.567	1.60		23.57	1.07
5.600	1.42		11.600	36.94		17.600	1.60		23.60	1.07
5.633	1.42		11.633	36.94		17.633	1.60		23.63	1.07
5.667	1.42		11.667	36.94		17.667	1.60		23.67	1.07
5.700	1.42		11.700	36.94		17.700	1.60		23.70	1.07
5.733	1.42		11.733	36.94		17.733	1.60		23.73	1.07
5.767	1.42		11.767	67.57		17.767	1.60		23.77	1.07
5.800	1.42		11.800	98.04		17.800	1.60		23.80	1.07
5.833	1.42		11.833	98.04		17.833	1.60		23.83	1.07
5.867	1.42		11.867	98.04		17.867	1.60		23.87	1.07
5.900	1.42		11.900	98.04		17.900	1.60		23.90	1.07
5.933	1.42		11.933	98.04		17.933	1.60		23.93	1.07
5.967	1.42		11.967	98.04		17.967	1.60		23.97	1.07
6.000	1.42		12.000	97.92		18.000	1.60		24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 54.21
over (min) 5.00 14.00
Storage Coeff. (min)= 3.19 (ii) 12.21 (iii)
Unit Hyd. Tpeak (min)= 4.00 14.00
Unit Hyd. peak (cms)= 0.32 0.09

PEAK FLOW (cms)= 0.61 0.37
TIME TO PEAK (hrs)= 12.00 12.10
RUNOFF VOLUME (mm)= 87.39 40.95 58.10
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.65

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CIV 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0028) |

HRP7-EX_2-100 YEAR.OUT

	1	+	2	=	3		AREA	QPEAK	TPEAK	R.V.
-----							(ha)	(cms)	(hrs)	(mm)
ID1=	1	(	0144)	:			6.14	0.923	12.00	58.10
+ ID2=	2	(	0026)	:			61.73	3.073	12.50	41.53
ID =	3	(	0028)	:			67.87	3.294	12.50	43.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VW I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\5439fef8-47d7-4be4-a1af-a5bc248abdb8\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\5439fef8-47d7-4be4-a1af-a5bc248abdb8\scenar

DATE: 03/24/2023

TIME: 10:40:22

USER:

COMMENTS: _____

** SIMULATION : Run 04

MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\8eb7a9a7-c234-44bf-98e8-959e019c88cb\cdfb3d47
| Ptotal=103.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86
2.00	1.86	8.00	2.06	14.00	8.46	20.00	1.86
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24

| CALIB |

HRP7-EX_2-100 YEAR.OUT
NASHYD (1040) | Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86		
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86		
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86		
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24		
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24		
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24		
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24		

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 0.930 (1)
TIME TO PEAK (hrs)= 12.167

HRP7-EX_2-100 YEAR.OUT
RUNOFF VOLUME (mm)= 52.723
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.511

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTING TIME TABLE									
ROUTING time step (min)'= 2.00									
<----- DATA FOR SECTION (1.1) ----->									
Distance	Elevation	Manning							
0.00	101.00	0.0500							
1.00	100.67	0.0500							
2.00	100.33	0.0500 / 0.0300	Main Channel						
3.00	100.00	0.0300	Main Channel						
4.00	100.00	0.0300	Main Channel						
5.00	100.33	0.0300 / 0.0500	Main Channel						
6.00	100.67	0.0500							
7.00	101.00	0.0500							
<----- TRAVEL TIME TABLE ----->									
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME				
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)				
0.05	100.05	.259E+02	0.0	0.22	36.60				
0.09	100.09	.582E+02	0.0	0.33	24.49				
0.14	100.14	.970E+02	0.1	0.41	19.54				
0.19	100.19	.142E+03	0.1	0.48	16.69				
0.24	100.24	.194E+03	0.2	0.54	14.78				
0.28	100.28	.252E+03	0.3	0.60	13.39				
0.33	100.33	.317E+03	0.4	0.65	12.30				
0.39	100.39	.402E+03	0.6	0.75	10.68				
0.44	100.44	.495E+03	0.9	0.83	9.64				
0.50	100.50	.598E+03	1.1	0.90	8.90				
0.55	100.55	.709E+03	1.4	0.96	8.35				
0.61	100.61	.829E+03	1.7	1.01	7.91				
0.66	100.66	.950E+03	2.1	1.06	7.56				
0.72	100.72	.110E+04	2.5	1.10	7.26				
0.78	100.78	.124E+04	3.0	1.14	7.02				
0.83	100.83	.140E+04	3.4	1.18	6.80				
0.89	100.89	.156E+04	3.9	1.21	6.61				
0.94	100.94	.174E+04	4.5	1.24	6.45				
1.00	101.00	.192E+04	5.1	1.27	6.30				
<---- hydrograph ----> <-pipe / channel->									
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL			
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)			
INFLOW : ID= 2 (1040)	10.35	0.93	12.17	52.72	0.46	0.85			
OUTFLOW: ID= 1 (0037)	10.35	0.85	12.33	52.70	0.44	0.83			

HRP7-EX_2-100 YEAR.OUT
NASHYD (0140) | Area (ha)= 17.07 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86		
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86		
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		

HRP7-EX_2-100 YEAR.OUT

1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 1.301

PEAK FLOW (cms)= 1.265 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 55.396
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.537

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0020)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0140):	17.07	1.265	12.33	55.40
+ ID2= 2 (0037):	10.35	0.849	12.33	52.70
=====				
ID = 3 (0029):	27.42	2.114	12.33	54.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (1041)				
ID= 1 DT= 5.0 min				

	Area	(ha)=	11.30	Curve Number (CN)= 77.0
	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.26		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

HRP7-EX_2-100 YEAR.OUT

0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.315 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 55.362
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.536

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0010)				

HRP7-EX_2-100 YEAR.OUT				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1041):	11.30	1.315	12.08	55.36
+ ID2= 2 (0029):	27.42	2.114	12.33	54.38

ID = 3 (0018):	38.72	3.183	12.25	54.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0030)	Routing time step (min) '= 2.00
IN= 2--> OUT= 1	

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->				
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)
0.05	100.05	.319E+02	0.0	0.38
0.09	100.09	.718E+02	0.1	0.57
0.14	100.14	.120E+03	0.1	0.71
0.19	100.19	.175E+03	0.2	0.83
0.24	100.24	.239E+03	0.4	0.94
0.28	100.28	.311E+03	0.5	1.04
0.33	100.33	.391E+03	0.7	1.13
0.39	100.39	.495E+03	1.1	1.30
0.44	100.44	.611E+03	1.5	1.44
0.50	100.50	.737E+03	1.9	1.56
0.55	100.55	.874E+03	2.5	1.66
0.61	100.61	.102E+04	3.0	1.75
0.66	100.66	.118E+04	3.7	1.83
0.72	100.72	.135E+04	4.4	1.91
0.78	100.78	.153E+04	5.1	1.97
0.83	100.83	.172E+04	5.9	2.04
0.89	100.89	.193E+04	6.8	2.10
0.94	100.94	.214E+04	7.8	2.15
1.00	101.00	.237E+04	8.8	2.20

<--- hydrograph --->				<-pipe / channel->	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0018)	38.72	3.18	12.25	54.67	0.62
OUTFLOW: ID= 1 (0030)	38.72	3.09	12.31	54.66	0.61

CALIB	
NASHYD (0141)	Area (ha)= 11.25 Curve Number (CN)= 79.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.24

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86

HRP7-EX_2-100 YEAR.OUT				
1.667	1.03	7.667	2.06	13.667
1.750	1.03	7.750	2.06	13.750
1.833	1.06	7.833	2.06	13.833
1.917	1.06	7.917	2.06	13.917
2.000	1.06	8.000	2.06	14.000
2.083	1.34	8.083	2.79	14.083
2.167	1.34	8.167	2.79	14.167
2.250	1.34	8.250	2.79	14.250
2.333	1.34	8.333	2.79	14.333
2.417	1.34	8.417	2.79	14.417
2.500	1.34	8.500	2.79	14.500
2.583	1.34	8.583	2.79	14.583
2.667	1.34	8.667	2.79	14.667
2.750	1.34	8.750	2.79	14.750
2.833	1.34	8.833	2.79	14.833
2.917	1.34	8.917	2.79	14.917
3.000	1.34	9.000	2.79	15.000
3.083	1.34	9.083	3.30	15.083
3.167	1.34	9.167	3.30	15.167
3.250	1.34	9.250	3.30	15.250
3.333	1.34	9.333	3.30	15.333
3.417	1.34	9.417	3.30	15.417
3.500	1.34	9.500	3.30	15.500
3.583	1.34	9.583	3.72	15.583
3.667	1.34	9.667	3.72	15.667
3.750	1.34	9.750	3.72	15.750
3.833	1.34	9.833	3.72	15.833
3.917	1.34	9.917	3.72	15.917
4.000	1.34	10.000	3.72	16.000
4.083	1.65	10.083	4.75	16.083
4.167	1.65	10.167	4.75	16.167
4.250	1.65	10.250	4.75	16.250
4.333	1.65	10.333	4.75	16.333
4.417	1.65	10.417	4.75	16.417
4.500	1.65	10.500	4.75	16.500
4.583	1.65	10.583	6.40	16.583
4.667	1.65	10.667	6.40	16.667
4.750	1.65	10.750	6.40	16.750
4.833	1.65	10.833	6.40	16.833
4.917	1.65	10.917	6.40	16.917
5.000	1.65	11.000	6.40	17.000
5.083	1.65	11.083	9.91	17.083
5.167	1.65	11.167	9.91	17.167
5.250	1.65	11.250	9.91	17.250
5.333	1.65	11.333	9.91	17.333
5.417	1.65	11.417	9.91	17.417
5.500	1.65	11.500	9.91	17.500
5.583	1.65	11.583	42.93	17.583
5.667	1.65	11.667	42.93	17.667
5.750	1.65	11.750	42.93	17.750
5.833	1.65	11.833	113.93	17.833
5.917	1.65	11.917	113.93	17.917
6.000	1.65	12.000	113.93	18.000

Unit Hyd Qpeak (cms)= 1.783

PEAK FLOW (cms)= 1.466 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 58.137
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.563

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0141):		11.25	1.466	12.08	58.14
+ ID2= 2 (0030):		38.72	3.085	12.31	54.66
=====					
ID = 3 (0021):		49.97	4.217	12.22	55.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (0142)	Area (ha)= 10.92
ID= 1 DT= 3.0 min	Total Imp(%)= 53.00 Dir. Conn.(%)= 53.00
Surface Area (ha)= 5.79	PERVIOUS (i)
Dep. Storage (mm)= 1.50	1.50
Average Slope (%)= 2.00	2.00
Length (m)= 269.81	40.00

Mannings n = 0.013 0.250 HRP7-EX_2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		

HRP7-EX_2-100 YEAR.OUT									
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)=	113.93	51.85	
over (min)	6.00	12.00	
Storage Coeff. (min)=	3.57 (ii)	9.96 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.25	0.11	
PEAK FLOW (cms)=	1.80	0.52	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.05	2.284 (iii)
RUNOFF VOLUME (mm)=	101.70	40.18	12.00
TOTAL RAINFALL (mm)=	103.20	103.20	72.79
RUNOFF COEFFICIENT =	0.99	0.39	0.71

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

[ADD HYD (0023)]				
[1 + 2 = 3]				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0142):	10.92	2.284	12.00	72.79
+ ID2= 2 (0021):	49.97	4.217	12.22	55.44
ID = 3 (0023):	60.89	5.392	12.06	58.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

[RESERVOIR(0024)]		OVERFLOW IS OFF	
[IN= 2----> OUT= 1]			
DT= 3.0 min			

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0030	0.5000
0.0370	0.1125	1.9000	0.7700
0.0530	0.2275	6.4000	1.1000
0.0650	0.3450	9.2000	1.2500
0.0750	0.4630	0.0000	0.0000

HRP7-EX_2-100 YEAR.OUT
INFLOW : ID= 2 (0023) 60.890 5.392 12.06 58.55
OUTFLOW: ID= 1 (0024) 60.890 4.145 12.42 57.90

PEAK FLOW REDUCTION [Qout/Qin](%)= 76.89
TIME SHIFT OF PEAK FLOW (min)= 21.67
MAXIMUM STORAGE USED (ha.m.)= 0.9349

CALIB
STANDHYD (0143)
ID= 1 DT= 1.0 min
Area (ha)= 0.84
Total Imp(%)= 55.00
Dir. Conn.(%)= 55.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.46 0.38
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 74.83 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.017	1.03	6.017	2.06	12.017	14.93	18.02	1.86		
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86		
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86		
0.083	1.03	6.083	2.06	12.083	14.86	18.08	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.117	1.03	6.117	2.06	12.117	14.86	18.12	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.183	1.03	6.183	2.06	12.183	14.86	18.18	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.217	1.03	6.217	2.06	12.217	14.86	18.22	1.86		
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.283	1.03	6.283	2.06	12.283	14.86	18.28	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.317	1.03	6.317	2.06	12.317	14.86	18.32	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86		
0.383	1.03	6.383	2.06	12.383	14.86	18.38	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86		
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.483	1.03	6.483	2.06	12.483	14.86	18.48	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.517	1.03	6.517	2.06	12.517	7.64	18.52	1.86		
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.617	1.03	6.617	2.06	12.617	7.64	18.62	1.86		
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.683	1.03	6.683	2.06	12.683	7.64	18.68	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.717	1.03	6.717	2.06	12.717	7.64	18.72	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86		
0.783	1.03	6.783	2.06	12.783	7.64	18.78	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.817	1.03	6.817	2.06	12.817	7.64	18.82	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.883	1.03	6.883	2.06	12.883	7.64	18.88	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86		
0.983	1.03	6.983	2.06	12.983	7.64	18.98	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.017	1.03	7.017	2.06	13.017	1.45	19.02	1.86		

HRP7-EX_2-100 YEAR.OUT							
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86
1.083	1.03	7.083	2.06	13.083	1.44	19.08	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.117	1.03	7.117	2.06	13.117	1.44	19.12	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.183	1.03	7.183	2.06	13.183	1.44	19.18	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.217	1.03	7.217	2.06	13.217	1.44	19.22	1.86
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.283	1.03	7.283	2.06	13.283	1.44	19.28	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.317	1.03	7.317	2.06	13.317	1.44	19.32	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.383	1.03	7.383	2.06	13.383	1.44	19.38	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.483	1.03	7.483	2.06	13.483	1.44	19.48	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.517	1.03	7.517	2.06	13.517	8.46	19.52	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.617	1.03	7.617	2.06	13.617	8.46	19.62	1.86
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.683	1.03	7.683	2.06	13.683	8.46	19.68	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.717	1.03	7.717	2.06	13.717	8.46	19.72	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.767	1.86	7.767	2.06	13.767	8.46	19.77	1.86
1.783	1.86	7.783	2.06	13.783	8.46	19.78	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.817	1.86	7.817	2.06	13.817	8.46	19.82	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.883	1.86	7.883	2.06	13.883	8.46	19.88	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86
1.983	1.86	7.983	2.06	13.983	8.46	19.98	1.86
2.000	1.86	8.000	2.07	14.000	8.46	20.00	1.86
2.017	1.34	8.017	2.79	14.017	3.11	20.02	1.24
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.117	1.34	8.117	2.79	14.117	3.10	20.12	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.183	1.34	8.183	2.79	14.183	3.10	20.18	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.217	1.34	8.217	2.79	14.217	3.10	20.22	1.24
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.283	1.34	8.283	2.79	14.283	3.10	20.28	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.317	1.34	8.317	2.79	14.317	3.10	20.32	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.383	1.34	8.383	2.79	14.383	3.10	20.38	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24

HRP7-EX_2-100 YEAR.OUT									
2.483	1.34	8.483	2.79	14.483	3.10	20.48	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.517	1.34	8.517	2.79	14.517	3.10	20.52	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24		
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.617	1.34	8.617	2.79	14.617	3.10	20.62	1.24		
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.683	1.34	8.683	2.79	14.683	3.10	20.68	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.717	1.34	8.717	2.79	14.717	3.10	20.72	1.24		
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24		
2.783	1.34	8.783	2.79	14.783	3.10	20.78	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.817	1.34	8.817	2.79	14.817	3.10	20.82	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.883	1.34	8.883	2.79	14.883	3.10	20.88	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24		
2.983	1.34	8.983	2.79	14.983	3.10	20.98	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.017	1.34	9.017	3.30	15.017	3.10	21.02	1.24		
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.117	1.34	9.117	3.30	15.117	3.10	21.12	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.183	1.34	9.183	3.30	15.183	3.10	21.18	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.217	1.34	9.217	3.30	15.217	3.10	21.22	1.24		
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.283	1.34	9.283	3.30	15.283	3.10	21.28	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.317	1.34	9.317	3.30	15.317	3.10	21.32	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.383	1.34	9.383	3.30	15.383	3.10	21.38	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.483	1.34	9.483	3.30	15.483	3.10	21.48	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.517	1.34	9.517	3.72	15.517	3.10	21.52	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.617	1.34	9.617	3.72	15.617	3.10	21.62	1.24		
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.683	1.34	9.683	3.72	15.683	3.10	21.68	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.717	1.34	9.717	3.72	15.717	3.10	21.72	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.783	1.34	9.783	3.72	15.783	3.10	21.78	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.817	1.34	9.817	3.72	15.817	3.10	21.82	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.883	1.34	9.883	3.72	15.883	3.10	21.88	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		

HRP7-EX_2-100 YEAR.OUT									
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
3.983	1.34	9.983	3.72	15.983	3.10	21.98	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.017	1.65	10.017	4.75	16.017	1.86	22.02	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.117	1.65	10.117	4.75	16.117	1.86	22.12	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.183	1.65	10.183	4.75	16.183	1.86	22.18	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.217	1.65	10.217	4.75	16.217	1.86	22.22	1.24		
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.283	1.65	10.283	4.75	16.283	1.86	22.28	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.317	1.65	10.317	4.75	16.317	1.86	22.32	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24		
4.383	1.65	10.383	4.75	16.383	1.86	22.38	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24		
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24		
4.483	1.65	10.483	4.75	16.483	1.86	22.48	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.517	1.65	10.517	6.40	16.517	1.86	22.52	1.24		
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24		
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.617	1.65	10.617	6.40	16.617	1.86	22.62	1.24		
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.683	1.65	10.683	6.40	16.683	1.86	22.68	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.717	1.65	10.717	6.40	16.717	1.86	22.72	1.24		
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24		
4.783	1.65	10.783	6.40	16.783	1.86	22.78	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.817	1.65	10.817	6.40	16.817	1.86	22.82	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24		
4.883	1.65	10.883	6.40	16.883	1.86	22.88	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24		
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24		
4.983	1.65	10.983	6.40	16.983	1.86	22.98	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.017	1.65	11.017	9.91	17.017	1.86	23.02	1.24		
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24		
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.117	1.65	11.117	9.91	17.117	1.86	23.12	1.24		
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.183	1.65	11.183	9.91	17.183	1.86	23.18	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.217	1.65	11.217	9.91	17.217	1.86	23.22	1.24		
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.283	1.65	11.283	9.91	17.283	1.86	23.28	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.317	1.65	11.317	9.91	17.317	1.86	23.32	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24		

HRP7-EX_2-100 YEAR.OUT									
5.383	1.65	[11.383	9.91	[17.383	1.86	[23.38	1.24		
5.400	1.65	[11.400	9.91	[17.400	1.86	[23.40	1.24		
5.417	1.65	[11.417	9.91	[17.417	1.86	[23.42	1.24		
5.433	1.65	[11.433	9.91	[17.433	1.86	[23.43	1.24		
5.450	1.65	[11.450	9.91	[17.450	1.86	[23.45	1.24		
5.467	1.65	[11.467	9.91	[17.467	1.86	[23.47	1.24		
5.483	1.65	[11.483	9.91	[17.483	1.86	[23.48	1.24		
5.500	1.65	[11.500	9.91	[17.500	1.86	[23.50	1.24		
5.517	1.65	[11.517	42.92	[17.517	1.86	[23.52	1.24		
5.533	1.65	[11.533	42.93	[17.533	1.86	[23.53	1.24		
5.550	1.65	[11.550	42.93	[17.550	1.86	[23.55	1.24		
5.567	1.65	[11.567	42.93	[17.567	1.86	[23.57	1.24		
5.583	1.65	[11.583	42.93	[17.583	1.86	[23.58	1.24		
5.600	1.65	[11.600	42.93	[17.600	1.86	[23.60	1.24		
5.617	1.65	[11.617	42.93	[17.617	1.86	[23.62	1.24		
5.633	1.65	[11.633	42.93	[17.633	1.86	[23.63	1.24		
5.650	1.65	[11.650	42.93	[17.650	1.86	[23.65	1.24		
5.667	1.65	[11.667	42.93	[17.667	1.86	[23.67	1.24		
5.683	1.65	[11.683	42.93	[17.683	1.86	[23.68	1.24		
5.700	1.65	[11.700	42.93	[17.700	1.86	[23.70	1.24		
5.717	1.65	[11.717	42.93	[17.717	1.86	[23.72	1.24		
5.733	1.65	[11.733	42.93	[17.733	1.86	[23.73	1.24		
5.750	1.65	[11.750	42.93	[17.750	1.86	[23.75	1.24		
5.767	1.65	[11.767	113.90	[17.767	1.86	[23.77	1.24		
5.783	1.65	[11.783	113.93	[17.783	1.86	[23.78	1.24		
5.800	1.65	[11.800	113.93	[17.800	1.86	[23.80	1.24		
5.817	1.65	[11.817	113.93	[17.817	1.86	[23.82	1.24		
5.833	1.65	[11.833	113.93	[17.833	1.86	[23.83	1.24		
5.850	1.65	[11.850	113.93	[17.850	1.86	[23.85	1.24		
5.867	1.65	[11.867	113.93	[17.867	1.86	[23.87	1.24		
5.883	1.65	[11.883	113.93	[17.883	1.86	[23.88	1.24		
5.900	1.65	[11.900	113.93	[17.900	1.86	[23.90	1.24		
5.917	1.65	[11.917	113.93	[17.917	1.86	[23.92	1.24		
5.933	1.65	[11.933	113.93	[17.933	1.86	[23.93	1.24		
5.950	1.65	[11.950	113.93	[17.950	1.86	[23.95	1.24		
5.967	1.65	[11.967	113.93	[17.967	1.86	[23.97	1.24		
5.983	1.65	[11.983	113.93	[17.983	1.86	[23.98	1.24		
6.000	1.65	[12.000	113.93	[18.000	1.86	[24.00	1.24		
Max.Eff.Inten.(mm/hr)= 113.93 68.20									
over (min) 5.00 8.00									
Storage Coeff. (min)= 1.66 (ii) 7.84 (ii)									
Unit Hyd. Tpeak (min)= 5.00 8.00									
Unit Hyd. peak (cms)= 0.40 0.14									
TOTALS									
PEAK FLOW (cms)= 0.15 0.06 0.201 (iii)									
TIME TO PEAK (hrs)= 12.00 12.03									
RUNOFF VOLUME (mm)= 101.69 51.58 79.15									
TOTAL RAINFALL (mm)= 103.20 103.20 103.20									
RUNOFF COEFFICIENT = 0.99 0.50 0.77									
(i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL									
THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0026)									
1 + 2 = 3									

ID1= 1 (0143): 0.84 0.201 12.00 79.15									
+ ID2= 2 (0024): 60.89 4.145 12.42 57.90									
=====									
ID = 3 (0026): 61.73 4.179 12.42 52.99									
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

CALIB									
STANDHYD (0144)									
ID= 1 DT= 2.0 min									

IMPERVIOUS PERVIOUS (i)									
Surface Area (ha)= 2.27 3.87									
Dep. Storage (mm)= 1.50 1.50									
Average Slope (%)= 2.00 2.00									
Length (m)= 202.32 40.00									
Mannings n = 0.013 0.250									
NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.									

---- TRANSFORMED HYETOGRAPH ----									

HRP7-EX_2-100 YEAR.OUT									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86		
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.500	1.03	6.500	2.06	12.500	14.85	18.50	1.86		
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86		
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86		
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86		
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86		
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86		
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86		
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86		
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86		
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86		
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86		
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86		
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24		
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24		
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24		
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		

HRP7-EX_2-100 YEAR.OUT									
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24		
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24		
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24		
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24		
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24		
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24		
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24		
5.500	1.65	11.500	9.95	17.500	1.86	23.50	1.24		
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24		
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24		

HRP7-EX_2-100 YEAR.OUT									
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24		
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24		
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24		
Max.Eff.Inten.(mm/hr)=	113.93	68.19							
over (min)	5.00	12.00							
Storage Coeff. (min)=	3.01 (ii)	11.23 (ii)							
Unit Hyd. Tpeak (min)=	4.00	12.00							
Unit Hyd. peak (cms)=	0.33	0.10							
PEAK FLOW (cms)=	0.71	0.49	1.156 (iii)						
TIME TO PEAK (hrs)=	12.00	12.07	12.00						
RUNOFF VOLUME (mm)=	101.70	51.59	70.13						
TOTAL RAINFALL (mm)=	103.20	103.20	103.20						
RUNOFF COEFFICIENT =	0.99	0.50	0.68						
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CM* = 72.0	Ia = Dep. Storage (Above)								
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL									
THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0028)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0144):	6.14	1.156	12.00	70.13
+ ID2= 2 (0026):	61.73	4.179	12.42	52.99
=====				
ID = 3 (0028):	67.87	4.465	12.42	54.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V	V	I	SSSS	U	U	A	L		(v 6.1.2002)
V	V	I	SS	U	U	A	A	L	
V	V	I	SS	U	U	AAAA	L		
V	V	I	SS	U	U	A	A	L	
VV	I	SSSS	UUUU	A	A	LLLL			
000	TTTT	TTTT	H	H	Y	Y	M	M	000 TM
0	0	T	T	H	H	Y	Y	MM	MM 0 0
0	0	T	T	H	H	Y	Y	M	M 0 0
000	T	T	H	H	Y	Y	M	M	000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voinput.dat
Output filename: C:\Users\Abira\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\fbfed297-79de-42a3-ac78-63d26d3e99ec\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\fbfed297-79de-42a3-ac78-63d26d3e99ec\scenar

DATE: 03/24/2023 TIME: 10:40:25

USER:

COMMENTS: _____

** SIMULATION : Run 05 **

MASS STORM	Filename: C:\Users\Abira\AppData\Local\Temp\8eb79a97-c234-44bf-98e0-959e019c88cb\95accb52
Ptotal=115.20 mm	Comments: Mass 24-Hour SCS Type II Design Storm
Duration of storm = 24.00 hrs	

HRP7-EX_2-100 YEAR.OUT

Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.15	6.25	2.30	12.25	16.50	18.25	2.07
0.50	1.15	6.50	2.30	12.50	16.50	18.50	2.07
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38

CALIB
NASHYD (1040)
ID= 1 DT= 5.0 min
Area (ha)= 10.35
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.35
Curve Number (CN)= 75.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38

HRP7-EX_2-100 YEAR.OUT

3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 1.104 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 62.307
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.541

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0037)
IN= 2--> OUT= 1
Routing time step (min)= 2.00

Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.259E+02	0.0	0.22	36.60
0.09	100.09	.582E+02	0.0	0.33	24.49
0.14	100.14	.970E+02	0.1	0.41	19.54
0.19	100.19	.142E+03	0.1	0.48	16.69
0.24	100.24	.194E+03	0.2	0.54	14.78
0.28	100.28	.252E+03	0.3	0.60	13.39
0.33	100.33	.317E+03	0.4	0.65	12.30
0.39	100.39	.402E+03	0.6	0.75	10.68
0.44	100.44	.495E+03	0.9	0.83	9.64
0.50	100.50	.598E+03	1.1	0.90	8.90
0.55	100.55	.709E+03	1.4	0.96	8.35
0.61	100.61	.829E+03	1.7	1.01	7.91
0.66	100.66	.958E+03	2.1	1.06	7.56
0.72	100.72	.110E+04	2.5	1.10	7.26
0.78	100.78	.124E+04	3.0	1.14	7.02
0.83	100.83	.140E+04	3.4	1.18	6.80
0.89	100.89	.156E+04	3.9	1.21	6.61
0.94	100.94	.174E+04	4.5	1.24	6.45
1.00	101.00	.192E+04	5.1	1.27	6.30

hydrograph
AREA (ha)
QPEAK (cms)
TPEAK (hrs)
R.V. (m)
MAX DEPTH (m)
MAX VEL (m/s)
INFLOW : ID= 2 (1040) 10.35 1.10 12.17 62.31 0.49 0.89
OUTFLOW: ID= 1 (0037) 10.35 1.01 12.33 62.29 0.47 0.87

HRP7-EX_2-100 YEAR.OUT

CALIB
NASHYD (0140) Area (ha)= 17.07 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.301

PEAK FLOW (cms)= 1.496 (1)

HRP7-EX_2-100 YEAR.OUT

TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 65.263
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.567

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0140):	17.07	1.496	12.33	65.26
+ ID2= 2 (0037):	10.35	1.009	12.33	62.29
ID = 3 (0029):	27.42	2.505	12.33	64.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0041) Area (ha)= 11.30 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.26

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38

HRP7-EX_2-100 YEAR.OUT

4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.554 (1)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 65.222
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.566

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):	11.30	1.554	12.08	65.22
+ ID2= 2 (0029):	27.42	2.505	12.33	64.14
=====				
ID = 3 (0018):	38.72	3.775	12.25	64.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0030)	
IN= 2--> OUT= 1	Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.319E+02	0.0	0.38	26.06
0.09	100.09	.718E+02	0.1	0.57	17.44
0.14	100.14	.120E+03	0.1	0.71	13.91
0.19	100.19	.175E+03	0.2	0.83	11.89
0.24	100.24	.239E+03	0.4	0.94	10.53
0.28	100.28	.311E+03	0.5	1.04	9.53
0.33	100.33	.391E+03	0.7	1.13	8.76
0.39	100.39	.495E+03	1.1	1.30	7.61
0.44	100.44	.611E+03	1.5	1.44	6.86
0.50	100.50	.737E+03	1.9	1.56	6.34
0.55	100.55	.874E+03	2.5	1.66	5.94
0.61	100.61	.102E+04	3.0	1.75	5.63
0.66	100.66	.110E+04	3.7	1.83	5.38
0.72	100.72	.135E+04	4.4	1.91	5.17
0.78	100.78	.153E+04	5.1	1.97	5.00
0.83	100.83	.172E+04	5.9	2.04	4.84
0.89	100.89	.193E+04	6.8	2.10	4.71
0.94	100.94	.214E+04	7.8	2.15	4.59
1.00	101.00	.237E+04	8.8	2.20	4.48

		<---- hydrograph ---->			<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0018)	38.72	3.78	12.25	64.46	0.67	1.85
OUTFLOW: ID= 1 (0030)	38.72	3.67	12.31	64.45	0.66	1.83

HRP7-EX_2-100 YEAR.OUT

CALIB					
NASHYD (0141)	Area	(ha)=	11.25	Curve Number	(CN)= 79.0
ID= 1 DT= 5.0 min	Id	(mm)=	5.06	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=		0.24		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	12.083	16.69	18.08	2.07	
0.167	1.15	6.167	12.167	16.59	18.17	2.07	
0.250	1.15	6.250	12.250	16.59	18.25	2.07	
0.333	1.15	6.333	12.333	16.59	18.33	2.07	
0.417	1.15	6.417	12.417	16.59	18.42	2.07	
0.500	1.15	6.500	12.500	16.59	18.50	2.07	
0.583	1.15	6.583	12.583	8.53	18.58	2.07	
0.667	1.15	6.667	12.667	8.52	18.67	2.07	
0.750	1.15	6.750	12.750	8.52	18.75	2.07	
0.833	1.15	6.833	12.833	8.52	18.83	2.07	
0.917	1.15	6.917	12.917	8.52	18.92	2.07	
1.000	1.15	7.000	13.000	8.52	19.00	2.07	
1.083	1.15	7.083	13.083	1.61	19.08	2.07	
1.167	1.15	7.167	13.167	1.61	19.17	2.07	
1.250	1.15	7.250	13.250	1.61	19.25	2.07	
1.333	1.15	7.333	13.333	1.61	19.33	2.07	
1.417	1.15	7.417	13.417	1.61	19.42	2.07	
1.500	1.15	7.500	13.500	1.61	19.50	2.07	
1.583	1.15	7.583	13.583	9.44	19.58	2.07	
1.667	1.15	7.667	13.667	9.45	19.67	2.07	
1.750	1.15	7.750	13.750	9.45	19.75	2.07	
1.833	2.07	7.833	13.833	9.45	19.83	2.07	
1.917	2.07	7.917	13.917	9.45	19.92	2.07	
2.000	2.07	8.000	14.000	9.45	20.00	2.07	
2.083	1.50	8.083	14.083	3.46	20.08	1.38	
2.167	1.50	8.167	14.167	3.46	20.17	1.38	
2.250	1.50	8.250	14.250	3.46	20.25	1.38	
2.333	1.50	8.333	14.333	3.46	20.33	1.38	
2.417	1.50	8.417	14.417	3.46	20.42	1.38	
2.500	1.50	8.500	14.500	3.46	20.50	1.38	
2.583	1.50	8.583	14.583	3.46	20.58	1.38	
2.667	1.50	8.667	14.667	3.46	20.67	1.38	
2.750	1.50	8.750	14.750	3.46	20.75	1.38	
2.833	1.50	8.833	14.833	3.46	20.83	1.38	
2.917	1.50	8.917	14.917	3.46	20.92	1.38	
3.000	1.50	9.000	15.000	3.46	21.00	1.38	
3.083	1.50	9.083	15.083	3.46	21.08	1.38	
3.167	1.50	9.167	15.167	3.46	21.17	1.38	
3.250	1.50	9.250	15.250	3.46	21.25	1.38	
3.333	1.50	9.333	15.333	3.46	21.33	1.38	
3.417	1.50	9.417	15.417	3.46	21.42	1.38	
3.500	1.50	9.500	15.500	3.46	21.50	1.38	
3.583	1.50	9.583	15.583	3.46	21.58	1.38	
3.667	1.50	9.667	15.667	3.46	21.67	1.38	
3.750	1.50	9.750	15.750	3.46	21.75	1.38	
3.833	1.50	9.833	15.833	3.46	21.83	1.38	
3.917	1.50	9.917	15.917	3.46	21.92	1.38	
4.000	1.50	10.000	16.000	3.46	22.00	1.38	
4.083	1.84	10.083	16.083	2.07	22.08	1.38	
4.167	1.84	10.167	16.167	2.07	22.17	1.38	
4.250	1.84	10.250	16.250	2.07	22.25	1.38	
4.333	1.84	10.333	16.333	2.07	22.33	1.38	
4.417	1.84	10.417	16.417	2.07	22.42	1.38	
4.500	1.84	10.500	16.500	2.07	22.50	1.38	
4.583	1.84	10.583	16.583	2.07	22.58	1.38	
4.667	1.84	10.667	16.667	2.07	22.67	1.38	
4.750	1.84	10.750	16.750	2.07	22.75	1.38	
4.833	1.84	10.833	16.833	2.07	22.83	1.38	
4.917	1.84	10.917	16.917	2.07	22.92	1.38	
5.000	1.84	11.000	17.000	2.07	23.00	1.38	
5.083	1.84	11.083	17.083	2.07	23.08	1.38	
5.167	1.84	11.167	17.167	2.07	23.17	1.38	
5.250	1.84	11.250	17.250	2.07	23.25	1.38	
5.333	1.84	11.333	17.333	2.07	23.33	1.38	
5.417	1.84	11.417	17.417	2.07	23.42	1.38	
5.500	1.84	11.500	17.500	2.07	23.50	1.38	
5.583	1.84	11.583	47.92	2.07	23.58	1.38	
5.667	1.84	11.667	47.92	2.07	23.67	1.38	
5.750	1.84	11.750	47.92	2.07	23.75	1.38	
5.833	1.84	11.833	127.17	2.07	23.83	1.38	
5.917	1.84	11.917	127.18	2.07	23.92	1.38	
6.000	1.84	12.000	127.18	2.07	24.00	1.38	

Unit Hyd Qpeak (cms)= 1.783

HRP7-EX_2-100 YEAR.OUT

PEAK FLOW (cms)= 1.724 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 68.270
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.593

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0141):	11.25	1.724	12.08	68.27
+ ID2= 2 (0030):	38.72	3.669	12.31	64.45
=====				
ID = 3 (0021):	49.97	5.010	12.22	65.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		Area (ha)=	10.92
STANDHYD (0142)		Total Imp(%)=	53.00
ID= 1 DT= 3.0 min		Dir. Conn.(%)=	53.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.79	5.13
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	269.81	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.15 6.050	2.30 12.050	16.59 18.05	2.07					
0.100	1.15 6.100	2.30 12.100	16.59 18.10	2.07					
0.150	1.15 6.150	2.30 12.150	16.59 18.15	2.07					
0.200	1.15 6.200	2.30 12.200	16.59 18.20	2.07					
0.250	1.15 6.250	2.30 12.250	16.59 18.25	2.07					
0.300	1.15 6.300	2.30 12.300	16.59 18.30	2.07					
0.350	1.15 6.350	2.30 12.350	16.59 18.35	2.07					
0.400	1.15 6.400	2.30 12.400	16.59 18.40	2.07					
0.450	1.15 6.450	2.30 12.450	16.59 18.45	2.07					
0.500	1.15 6.500	2.30 12.500	16.58 18.50	2.07					
0.550	1.15 6.550	2.30 12.550	8.52 18.55	2.07					
0.600	1.15 6.600	2.30 12.600	8.52 18.60	2.07					
0.650	1.15 6.650	2.30 12.650	8.52 18.65	2.07					
0.700	1.15 6.700	2.30 12.700	8.52 18.70	2.07					
0.750	1.15 6.750	2.30 12.750	8.52 18.75	2.07					
0.800	1.15 6.800	2.30 12.800	8.52 18.80	2.07					
0.850	1.15 6.850	2.30 12.850	8.52 18.85	2.07					
0.900	1.15 6.900	2.30 12.900	8.52 18.90	2.07					
0.950	1.15 6.950	2.30 12.950	8.52 18.95	2.07					
1.000	1.15 7.000	2.30 13.000	8.52 19.00	2.07					
1.050	1.15 7.050	2.30 13.050	1.61 19.05	2.07					
1.100	1.15 7.100	2.30 13.100	1.61 19.10	2.07					
1.150	1.15 7.150	2.30 13.150	1.61 19.15	2.07					
1.200	1.15 7.200	2.30 13.200	1.61 19.20	2.07					
1.250	1.15 7.250	2.30 13.250	1.61 19.25	2.07					
1.300	1.15 7.300	2.30 13.300	1.61 19.30	2.07					
1.350	1.15 7.350	2.30 13.350	1.61 19.35	2.07					
1.400	1.15 7.400	2.30 13.400	1.61 19.40	2.07					
1.450	1.15 7.450	2.30 13.450	1.61 19.45	2.07					
1.500	1.15 7.500	2.30 13.500	1.62 19.50	2.07					
1.550	1.15 7.550	2.30 13.550	9.45 19.55	2.07					
1.600	1.15 7.600	2.30 13.600	9.45 19.60	2.07					
1.650	1.15 7.650	2.30 13.650	9.45 19.65	2.07					
1.700	1.15 7.700	2.30 13.700	9.45 19.70	2.07					
1.750	1.15 7.750	2.30 13.750	9.45 19.75	2.07					
1.800	2.07 7.800	2.30 13.800	9.45 19.80	2.07					
1.850	2.07 7.850	2.30 13.850	9.45 19.85	2.07					
1.900	2.07 7.900	2.30 13.900	9.45 19.90	2.07					
1.950	2.07 7.950	2.30 13.950	9.45 19.95	2.07					
2.000	2.07 8.000	2.30 14.000	9.44 20.00	2.07					
2.050	1.50 8.050	3.11 14.050	3.46 20.05	1.38					
2.100	1.50 8.100	3.11 14.100	3.46 20.10	1.38					
2.150	1.50 8.150	3.11 14.150	3.46 20.15	1.38					
2.200	1.50 8.200	3.11 14.200	3.46 20.20	1.38					
2.250	1.50 8.250	3.11 14.250	3.46 20.25	1.38					
2.300	1.50 8.300	3.11 14.300	3.46 20.30	1.38					
2.350	1.50 8.350	3.11 14.350	3.46 20.35	1.38					

HRP7-EX_2-100 YEAR.OUT

2.400	1.50 8.400	3.11 14.400	3.46 20.40	1.38
2.450	1.50 8.450	3.11 14.450	3.46 20.45	1.38
2.500	1.50 8.500	3.11 14.500	3.46 20.50	1.38
2.550	1.50 8.550	3.11 14.550	3.46 20.55	1.38
2.600	1.50 8.600	3.11 14.600	3.46 20.60	1.38
2.650	1.50 8.650	3.11 14.650	3.46 20.65	1.38
2.700	1.50 8.700	3.11 14.700	3.46 20.70	1.38
2.750	1.50 8.750	3.11 14.750	3.46 20.75	1.38
2.800	1.50 8.800	3.11 14.800	3.46 20.80	1.38
2.850	1.50 8.850	3.11 14.850	3.46 20.85	1.38
2.900	1.50 8.900	3.11 14.900	3.46 20.90	1.38
2.950	1.50 8.950	3.11 14.950	3.46 20.95	1.38
3.000	1.50 9.000	3.11 15.000	3.46 21.00	1.38
3.050	1.50 9.050	3.69 15.050	3.46 21.05	1.38
3.100	1.50 9.100	3.69 15.100	3.46 21.10	1.38
3.150	1.50 9.150	3.69 15.150	3.46 21.15	1.38
3.200	1.50 9.200	3.69 15.200	3.46 21.20	1.38
3.250	1.50 9.250	3.69 15.250	3.46 21.25	1.38
3.300	1.50 9.300	3.69 15.300	3.46 21.30	1.38
3.350	1.50 9.350	3.69 15.350	3.46 21.35	1.38
3.400	1.50 9.400	3.69 15.400	3.46 21.40	1.38
3.450	1.50 9.450	3.69 15.450	3.46 21.45	1.38
3.500	1.50 9.500	3.69 15.500	3.46 21.50	1.38
3.550	1.50 9.550	4.15 15.550	3.46 21.55	1.38
3.600	1.50 9.600	4.15 15.600	3.46 21.60	1.38
3.650	1.50 9.650	4.15 15.650	3.46 21.65	1.38
3.700	1.50 9.700	4.15 15.700	3.46 21.70	1.38
3.750	1.50 9.750	4.15 15.750	3.46 21.75	1.38
3.800	1.50 9.800	4.15 15.800	3.46 21.80	1.38
3.850	1.50 9.850	4.15 15.850	3.46 21.85	1.38
3.900	1.50 9.900	4.15 15.900	3.46 21.90	1.38
3.950	1.50 9.950	4.15 15.950	3.46 21.95	1.38
4.000	1.50 10.000	4.15 16.000	3.45 22.00	1.38
4.050	1.84 10.050	5.30 16.050	2.07 22.05	1.38
4.100	1.84 10.100	5.30 16.100	2.07 22.10	1.38
4.150	1.84 10.150	5.30 16.150	2.07 22.15	1.38
4.200	1.84 10.200	5.30 16.200	2.07 22.20	1.38
4.250	1.84 10.250	5.30 16.250	2.07 22.25	1.38
4.300	1.84 10.300	5.30 16.300	2.07 22.30	1.38
4.350	1.84 10.350	5.30 16.350	2.07 22.35	1.38
4.400	1.84 10.400	5.30 16.400	2.07 22.40	1.38
4.450	1.84 10.450	5.30 16.450	2.07 22.45	1.38
4.500	1.84 10.500	5.30 16.500	2.07 22.50	1.38
4.550	1.84 10.550	7.14 16.550	2.07 22.55	1.38
4.600	1.84 10.600	7.14 16.600	2.07 22.60	1.38
4.650	1.84 10.650	7.14 16.650	2.07 22.65	1.38
4.700	1.84 10.700	7.14 16.700	2.07 22.70	1.38
4.750	1.84 10.750	7.14 16.750	2.07 22.75	1.38
4.800	1.84 10.800	7.14 16.800	2.07 22.80	1.38
4.850	1.84 10.850	7.14 16.850	2.07 22.85	1.38
4.900	1.84 10.900	7.14 16.900	2.07 22.90	1.38
4.950	1.84 10.950	7.14 16.950	2.07 22.95	1.38
5.000	1.84 11.000	7.14 17.000	2.07 23.00	1.38
5.050	1.84 11.050	11.06 17.050	2.07 23.05	1.38
5.100	1.84 11.100	11.06 17.100	2.07 23.10	1.38
5.150	1.84 11.150	11.06 17.150	2.07 23.15	1.38
5.200	1.84 11.200	11.06 17.200	2.07 23.20	1.38
5.250	1.84 11.250	11.06 17.250	2.07 23.25	1.38
5.300	1.84 11.300	11.06 17.300	2.07 23.30	1.38
5.350	1.84 11.350	11.06 17.350	2.07 23.35	1.38
5.400	1.84 11.400	11.06 17.400	2.07 23.40	1.38
5.450	1.84 11.450	11.06 17.450	2.07 23.45	1.38
5.500	1.84 11.500	11.06 17.500	2.07 23.50	1.38
5.550	1.84 11.550	47.92 17.550	2.07 23.55	1.38
5.600	1.84 11.600	47.92 17.600	2.07 23.60	1.38
5.650	1.84 11.650	47.92 17.650	2.07 23.65	1.38
5.700	1.84 11.700	47.92 17.700	2.07 23.70	1.38
5.750	1.84 11.750	47.97 17.750	2.07 23.75	1.38
5.800	1.84 11.800	127.18 17.800	2.07 23.80	1.38
5.850	1.84 11.850	127.18 17.850	2.07 23.85	1.38
5.900	1.84 11.900	127.18 17.900	2.07 23.90	1.38
5.950	1.84 11.950	127.18 17.950	2.07 23.95	1.38
6.000	1.84 12.000	127.12 18.000	2.07 24.00	1.38

Max.Eff.Inten.(mm/hr)=	127.18	62.00
over (min)	6.00	12.00
Storage Coeff. (min)=	3.42 (ii)	9.53 (ii)
Unit Hyd. Tpeak (min)=	6.00	12.00
Unit Hyd. peak (cms)=	0.26	0.11

PEAK FLOW (cms)=	2.01	0.64	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.05	2.607 (iii)
RUNOFF VOLUME (mm)=	113.70	47.99	82.82
TOTAL RAINFALL (mm)=	115.20	115.20	115.20
RUNOFF COEFFICIENT =	0.99	0.42	0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):	10.92	2.607	12.00	82.82
+ ID2= 2 (0021):	49.97	5.010	12.22	65.31
=====				
ID = 3 (0023):	60.89	6.342	12.06	68.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)				
IN= 2 ---> OUT= 1				
DT= 3.0 min				

	OVERFLOW IS OFF			
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0030	0.5800
	0.0370	0.1125	1.9000	0.7700
	0.0530	0.2275	6.4000	1.1000
	0.0650	0.3450	9.2000	1.2500
	0.0750	0.4630	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0023)	60.890	6.342	12.06	68.45
OUTFLOW: ID= 1 (0024)	60.890	5.073	12.39	67.79

PEAK FLOW REDUCTION [Qout/ Qin](%)= 79.99
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 1.0027

CALIB				
STANDHYD (0143)				
ID= 1 DT= 1.0 min				

	Area	(ha)=	0.84	
	Total Imp(%)=	55.00	Dir. Conn.(%)=	55.00

	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	0.46	0.38	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	74.83	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN									
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr									

0.017	1.15	6.017	2.30	12.017	16.66	18.02	2.07		
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07		
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07		
0.083	1.15	6.083	2.30	12.083	16.59	18.08	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.117	1.15	6.117	2.30	12.117	16.59	18.12	2.07		
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07		
0.183	1.15	6.183	2.30	12.183	16.59	18.18	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.217	1.15	6.217	2.30	12.217	16.59	18.22	2.07		
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07		
0.283	1.15	6.283	2.30	12.283	16.59	18.28	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.317	1.15	6.317	2.30	12.317	16.59	18.32	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07		
0.383	1.15	6.383	2.30	12.383	16.59	18.38	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07		
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07		
0.483	1.15	6.483	2.30	12.483	16.59	18.48	2.07		

0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.517	1.15	6.517	2.30	12.517	8.53	18.52	2.07
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07
0.583	1.15	6.583	2.30	12.583	8.52	18.58	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.617	1.15	6.617	2.30	12.617	8.52	18.62	2.07
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.683	1.15	6.683	2.30	12.683	8.52	18.68	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.717	1.15	6.717	2.30	12.717	8.52	18.72	2.07
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07
0.783	1.15	6.783	2.30	12.783	8.52	18.78	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.817	1.15	6.817	2.30	12.817	8.52	18.82	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07
0.883	1.15	6.883	2.30	12.883	8.52	18.88	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07
0.983	1.15	6.983	2.30	12.983	8.52	18.98	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.017	1.15	7.017	2.30	13.017	1.62	19.02	2.07
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.117	1.15	7.117	2.30	13.117	1.61	19.12	2.07
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.183	1.15	7.183	2.30	13.183	1.61	19.18	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.217	1.15	7.217	2.30	13.217	1.61	19.22	2.07
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07
1.283	1.15	7.283	2.30	13.283	1.61	19.28	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.317	1.15	7.317	2.30	13.317	1.61	19.32	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07
1.383	1.15	7.383	2.30	13.383	1.61	19.38	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07
1.483	1.15	7.483	2.30	13.483	1.61	19.48	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.517	1.15	7.517	2.30	13.517	9.43	19.52	2.07
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07
1.583	1.15	7.583	2.30	13.583	9.45	19.58	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.617	1.15	7.617	2.30	13.617	9.45	19.62	2.07
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.683	1.15	7.683	2.30	13.683	9.45	19.68	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.717	1.15	7.717	2.30	13.717	9.45	19.72	2.07
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.767	2.07	7.767	2.30	13.767	9.45	19.77	2.07
1.783	2.07	7.783	2.30	13.783	9.45	19.78	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.817	2.07	7.817	2.30	13.817	9.45	19.82	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07
1.883	2.07	7.883	2.30	13.883	9.45	19.88	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07

HRP7-EX_2-100 YEAR.OUT									
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
1.983	2.07	7.983	2.30	13.983	9.45	19.98	2.07		
2.000	2.07	8.000	2.31	14.000	9.45	20.00	2.07		
2.017	1.50	8.017	3.11	14.017	3.46	20.02	1.38		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.117	1.50	8.117	3.11	14.117	3.46	20.12	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.183	1.50	8.183	3.11	14.183	3.46	20.18	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.217	1.50	8.217	3.11	14.217	3.46	20.22	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.283	1.50	8.283	3.11	14.283	3.46	20.28	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.317	1.50	8.317	3.11	14.317	3.46	20.32	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.383	1.50	8.383	3.11	14.383	3.46	20.38	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.483	1.50	8.483	3.11	14.483	3.46	20.48	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.517	1.50	8.517	3.11	14.517	3.46	20.52	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.617	1.50	8.617	3.11	14.617	3.46	20.62	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.683	1.50	8.683	3.11	14.683	3.46	20.68	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.717	1.50	8.717	3.11	14.717	3.46	20.72	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.783	1.50	8.783	3.11	14.783	3.46	20.78	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.817	1.50	8.817	3.11	14.817	3.46	20.82	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.883	1.50	8.883	3.11	14.883	3.46	20.88	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
2.983	1.50	8.983	3.11	14.983	3.46	20.98	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.017	1.50	9.017	3.69	15.017	3.46	21.02	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.117	1.50	9.117	3.69	15.117	3.46	21.12	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.183	1.50	9.183	3.69	15.183	3.46	21.18	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.217	1.50	9.217	3.69	15.217	3.46	21.22	1.38		
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38		
3.283	1.50	9.283	3.69	15.283	3.46	21.28	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.317	1.50	9.317	3.69	15.317	3.46	21.32	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38		
3.383	1.50	9.383	3.69	15.383	3.46	21.38	1.38		

HRP7-EX_2-100 YEAR.OUT							
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.483	1.50	9.483	3.69	15.483	3.46	21.48	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.517	1.50	9.517	4.15	15.517	3.46	21.52	1.38
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.617	1.50	9.617	4.15	15.617	3.46	21.62	1.38
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.683	1.50	9.683	4.15	15.683	3.46	21.68	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.717	1.50	9.717	4.15	15.717	3.46	21.72	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38
3.783	1.50	9.783	4.15	15.783	3.46	21.78	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.817	1.50	9.817	4.15	15.817	3.46	21.82	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.883	1.50	9.883	4.15	15.883	3.46	21.88	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38
3.983	1.50	9.983	4.15	15.983	3.46	21.98	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.017	1.84	10.017	5.30	16.017	2.07	22.02	1.38
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.117	1.84	10.117	5.30	16.117	2.07	22.12	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.183	1.84	10.183	5.30	16.183	2.07	22.18	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.217	1.84	10.217	5.30	16.217	2.07	22.22	1.38
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.283	1.84	10.283	5.30	16.283	2.07	22.28	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.317	1.84	10.317	5.30	16.317	2.07	22.32	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38
4.383	1.84	10.383	5.30	16.383	2.07	22.38	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.483	1.84	10.483	5.30	16.483	2.07	22.48	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.517	1.84	10.517	7.14	16.517	2.07	22.52	1.38
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.617	1.84	10.617	7.14	16.617	2.07	22.62	1.38
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.683	1.84	10.683	7.14	16.683	2.07	22.68	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.717	1.84	10.717	7.14	16.717	2.07	22.72	1.38
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38
4.783	1.84	10.783	7.14	16.783	2.07	22.78	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.817	1.84	10.817	7.14	16.817	2.07	22.82	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38

HRP7-EX_2-100 YEAR.OUT

ADD HYD (0026)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0143):	0.84	0.229	12.00	89.91
+ ID2= 2 (0024):	60.89	5.073	12.39	67.79
=====				
ID = 3 (0026):	61.73	5.110	12.38	62.86

CALIB			
STANDHYD (0144)	Area (ha)=	6.14	
ID= 1 DT= 2.0 min	Total Imp(%)=	37.00	Dir. Conn.(%)= 37.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.27	3.87
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	202.32	40.00
Mannings n =	0.013	0.250

TRANSFORMED HYETOGRAPH									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
h	mm/hr	hrs	mm/hr	h	mm/hr	h	mm/hr	h	mm/hr
0.067	1.15	6.067	2.30	12.033	16.59	18.067	16.59	18.067	16.59
0.100	1.15	6.100	2.30	12.100	16.59	18.100	16.59	18.100	16.59
0.133	1.15	6.133	2.30	12.133	16.59	18.133	16.59	18.133	16.59
0.167	1.15	6.167	2.30	12.167	16.59	18.167	16.59	18.167	16.59
0.200	1.15	6.200	2.30	12.200	16.59	18.200	16.59	18.200	16.59
0.233	1.15	6.233	2.30	12.233	16.59	18.233	16.59	18.233	16.59
0.267	1.15	6.267	2.30	12.267	16.59	18.267	16.59	18.267	16.59
0.300	1.15	6.300	2.30	12.300	16.59	18.300	16.59	18.300	16.59
0.333	1.15	6.333	2.30	12.333	16.59	18.333	16.59	18.333	16.59
0.367	1.15	6.367	2.30	12.367	16.59	18.367	16.59	18.367	16.59
0.400	1.15	6.400	2.30	12.400	16.59	18.400	16.59	18.400	16.59
0.433	1.15	6.433	2.30	12.433	16.59	18.433	16.59	18.433	16.59
0.467	1.15	6.467	2.30	12.467	16.59	18.467	16.59	18.467	16.59
0.500	1.15	6.500	2.30	12.500	16.59	18.500	16.59	18.500	16.59
0.533	1.15	6.533	2.30	12.533	8.52	18.533	8.52	18.533	8.52
0.567	1.15	6.567	2.30	12.567	8.52	18.567	8.52	18.567	8.52
0.600	1.15	6.600	2.30	12.600	8.52	18.600	8.52	18.600	8.52
0.633	1.15	6.633	2.30	12.633	8.52	18.633	8.52	18.633	8.52
0.667	1.15	6.667	2.30	12.667	8.52	18.667	8.52	18.667	8.52
0.700	1.15	6.700	2.30	12.700	8.52	18.700	8.52	18.700	8.52
0.733	1.15	6.733	2.30	12.733	8.52	18.733	8.52	18.733	8.52
0.767	1.15	6.767	2.30	12.767	8.52	18.767	8.52	18.767	8.52
0.800	1.15	6.800	2.30	12.800	8.52	18.800	8.52	18.800	8.52
0.833	1.15	6.833	2.30	12.833	8.52	18.833	8.52	18.833	8.52
0.867	1.15	6.867	2.30	12.867	8.52	18.867	8.52	18.867	8.52
0.900	1.15	6.900	2.30	12.900	8.52	18.900	8.52	18.900	8.52
0.933	1.15	6.933	2.30	12.933	8.52	18.933	8.52	18.933	8.52
0.967	1.15	6.967	2.30	12.967	8.52	18.967	8.52	18.967	8.52
1.000	1.15	7.000	2.30	13.000	8.51	19.000	8.51	19.000	8.51
1.033	1.15	7.033	2.30	13.033	1.61	19.033	1.61	19.033	1.61
1.067	1.15	7.067	2.30	13.067	1.61	19.067	1.61	19.067	1.61
1.100	1.15	7.100	2.30	13.100	1.61	19.100	1.61	19.100	1.61
1.133	1.15	7.133	2.30	13.133	1.61	19.133	1.61	19.133	1.61
1.167	1.15	7.167	2.30	13.167	1.61	19.167	1.61	19.167	1.61
1.200	1.15	7.200	2.30	13.200	1.61	19.200	1.61	19.200	1.61
1.233	1.15	7.233	2.30	13.233	1.61	19.233	1.61	19.233	1.61
1.267	1.15	7.267	2.30	13.267	1.61	19.267	1.61	19.267	1.61
1.300	1.15	7.300	2.30	13.30					

HRP7-EX_2-100 YEAR.OUT									
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38		
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38		
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38		
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38		
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38		
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38		
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38		
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		

HRP7-EX_2-100 YEAR.OUT									
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38		
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38		
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38		
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38		
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38		
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38		
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38		
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38		
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38		
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38		
5.500	1.84	11.500	11.10	17.500	2.07	23.50	1.38		
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38		
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38		
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38		
5.767	1.84	11.767	87.66	17.767	2.07	23.77	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38		
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38		
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38		
6.000	1.84	12.000	127.63	18.000	2.07	24.00	1.38		
Max.Eff.Inten.(mm/hr)= 127.18 80.29									
over (min) 5.00 12.00									
Storage Coeff. (min)= 2.88 (ii) 10.81 (ii)									
Unit Hyd. Tpeak (min)= 4.00 12.00									
Unit Hyd. peak (cms)= 0.34 0.18									
PEAK FLOW (cms)= 0.80 0.59 *TOTALS* 1.332 (iii)									
TIME TO PEAK (hrs)= 12.00 12.07 12.00									
RUNOFF VOLUME (mm)= 113.70 60.84 80.40									
TOTAL RAINFALL (mm)= 115.20 115.20 115.20									
RUNOFF COEFFICIENT = 0.99 0.53 0.70									
(i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

DD HYD (0020)									
1 + 2 = 3									

HRP7-EX_2-100 YEAR.OUT

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000 T T H H Y M M 000
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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voinput.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\7f797e1eb-1a7a-4cc6-bbea-755d41400b31\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\7f797e1eb-1a7a-4cc6-bbea-755d41400b31\scenar

DATE: 03/24/2023 TIME: 10:40:24

USER:

COMMENTS: _____

** SIMULATION : Run 06 **

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\8eb7a9a7-c234-44bf-98e8-959e019c88cb\2985551a
Ptotal=127.20 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29	
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29	
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29	
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29	
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29	
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29	
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29	
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29	
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53	
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53	
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53	
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53	
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53	
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53	
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53	
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53	
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53	
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53	
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53	
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53	
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53	
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53	
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53	
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53	

CALIB
NASHYD (1040)
ID= 1 DT= 5.0 min
Area (ha)= 10.35 Curve Number (CN)= 75.0
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.003	1.27	6.003	2.54	12.003	18.33	18.00	2.29	
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29	
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29	
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29	
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29	
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29	
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29	
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29	
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29	

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0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 1.283 (l)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 72.171
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0037)	Routing time step (min)'= 2.00
IN= 2---> OUT= 1	
Distance	Elevation Manning
0.00	101.00 0.0500
1.00	100.67 0.0500
2.00	100.33 0.0500 /0.0300 Main Channel
3.00	100.00 0.0300 Main Channel
4.00	100.00 0.0300 Main Channel
5.00	100.33 0.0300 /0.0500 Main Channel

HRP7-EX_2-100 YEAR.OUT

	6.00	100.67	0.0500		
	7.00	101.00	0.0500		
<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.259E+02	0.0	0.22	36.60
0.09	100.09	.582E+02	0.0	0.33	24.49
0.14	100.14	.970E+02	0.1	0.41	19.54
0.19	100.19	.142E+03	0.1	0.48	16.69
0.24	100.24	.194E+03	0.2	0.54	14.78
0.28	100.28	.252E+03	0.3	0.60	13.39
0.33	100.33	.317E+03	0.4	0.65	12.30
0.39	100.39	.402E+03	0.6	0.75	10.68
0.44	100.44	.495E+03	0.9	0.83	9.64
0.50	100.50	.598E+03	1.1	0.90	8.90
0.55	100.55	.709E+03	1.4	0.96	8.35
0.61	100.61	.829E+03	1.7	1.01	7.91
0.66	100.66	.958E+03	2.1	1.06	7.56
0.72	100.72	.110E+04	2.5	1.10	7.26
0.78	100.78	.124E+04	3.0	1.14	7.02
0.83	100.83	.140E+04	3.4	1.18	6.80
0.89	100.89	.156E+04	3.9	1.21	6.61
0.94	100.94	.174E+04	4.5	1.24	6.45
1.00	101.00	.192E+04	5.1	1.27	6.30

<---- hydrograph ---->			<-pipe / channel->		
INFLOW : ID= 2 (1040)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)
OUTFLOW: ID= 1 (0037)	10.35	1.28	12.17	72.15	0.51
	10.35	1.18	12.33	72.15	0.91

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53

HRP7-EX_2-100 YEAR.OUT

3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.301

PEAK FLOW (cms)= 1.733 (1)
 TIME TO PEAK (hrs)= 12.333
 RUNOFF VOLUME (mm)= 75.388
 TOTAL RAINFALL (mm)= 127.200
 RUNOFF COEFFICIENT = 0.593

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1	2	3	AREA (ha)	QPEAK (cms)
ID1= 1 (0140):	17.07	1.733	12.33	75.39
+ ID2= 2 (0037):	10.35	1.179	12.33	72.15
ID = 3 (0029):	27.42	2.912	12.33	74.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	Curve Number (CN)=
NASHYD (1041)	11.30	77.0
ID= 1 DT= 5.0 min	5.00	# of Linear Res.(N)= 3.00
U.H. Tp(hrs)=	0.26	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29

HRP7-EX_2-100 YEAR.OUT									
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53		
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53		
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53		
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53		
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53		
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53		
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53		
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53		

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.799 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 75.341
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.592

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)					
1	2	3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)
ID1= 1 (1041):			11.30	1.799	12.08
+ ID2= 2 (0029):			27.42	2.912	12.33
ID = 3 (0018):			38.72	4.382	12.25
					74.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0030)			
IN= 2--> OUT= 1		Routing time step (min)'= 2.00	
<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel

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4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

TRAVEL TIME TABLE					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.319E+02	0.0	0.38	26.06
0.09	100.09	.718E+02	0.1	0.57	17.44
0.14	100.14	.120E+03	0.1	0.71	13.91
0.19	100.19	.175E+03	0.2	0.83	11.89
0.24	100.24	.230E+03	0.4	0.94	10.53
0.28	100.28	.311E+03	0.5	1.04	9.53
0.33	100.33	.391E+03	0.7	1.13	8.76
0.39	100.39	.495E+03	1.1	1.30	7.61
0.44	100.44	.611E+03	1.5	1.44	6.86
0.50	100.50	.737E+03	1.9	1.56	6.34
0.55	100.55	.874E+03	2.5	1.66	5.94
0.61	100.61	.102E+04	3.0	1.75	5.63
0.66	100.66	.118E+04	3.7	1.83	5.38
0.72	100.72	.135E+04	4.4	1.91	5.17
0.78	100.78	.153E+04	5.1	1.97	5.00
0.83	100.83	.172E+04	5.9	2.04	4.84
0.89	100.89	.193E+04	6.8	2.10	4.71
0.94	100.94	.214E+04	7.8	2.15	4.59
1.00	101.00	.237E+04	8.8	2.20	4.48
<----- hydrograph ----->					
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
					MAX DEPTH (m)
					MAX VEL (m/s)
INFLOW : ID= 2 (0018)		38.72	4.38	12.25	74.51
OUTFLOW: ID= 1 (0030)		38.72	4.26	12.31	74.50
					0.72
					1.91
					0.71
					1.90

CALIB NASHYD (0141) Area (ha)= 11.25 Curve Number (CN)= 79.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.24

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		

HRP7-EX_2-100 YEAR.OUT

3.250	1.65		9.250	4.07		15.250	3.82		21.25	1.53
3.333	1.65		9.333	4.07		15.333	3.82		21.33	1.53
3.417	1.65		9.417	4.07		15.417	3.82		21.42	1.53
3.500	1.65		9.500	4.07		15.500	3.82		21.50	1.53
3.583	1.65		9.583	4.58		15.583	3.82		21.58	1.53
3.667	1.65		9.667	4.58		15.667	3.82		21.67	1.53
3.750	1.65		9.750	4.58		15.750	3.82		21.75	1.53
3.833	1.65		9.833	4.58		15.833	3.82		21.83	1.53
3.917	1.65		9.917	4.58		15.917	3.82		21.92	1.53
4.000	1.65		10.000	4.58		16.000	3.82		22.00	1.53
4.083	2.04		10.083	5.85		16.083	2.29		22.08	1.53
4.167	2.04		10.167	5.85		16.167	2.29		22.17	1.53
4.250	2.04		10.250	5.85		16.250	2.29		22.25	1.53
4.333	2.04		10.333	5.85		16.333	2.29		22.33	1.53
4.417	2.04		10.417	5.85		16.417	2.29		22.42	1.53
4.500	2.04		10.500	5.85		16.500	2.29		22.50	1.53
4.583	2.04		10.583	7.89		16.583	2.29		22.58	1.53
4.667	2.04		10.667	7.89		16.667	2.29		22.67	1.53
4.750	2.04		10.750	7.89		16.750	2.29		22.75	1.53
4.833	2.04		10.833	7.89		16.833	2.29		22.83	1.53
4.917	2.04		10.917	7.89		16.917	2.29		22.92	1.53
5.000	2.04		11.000	7.89		17.000	2.29		23.00	1.53
5.083	2.04		11.083	12.21		17.083	2.29		23.08	1.53
5.167	2.04		11.167	12.21		17.167	2.29		23.17	1.53
5.250	2.04		11.250	12.21		17.250	2.29		23.25	1.53
5.333	2.04		11.333	12.21		17.333	2.29		23.33	1.53
5.417	2.04		11.417	12.21		17.417	2.29		23.42	1.53
5.500	2.04		11.500	12.21		17.500	2.29		23.50	1.53
5.583	2.04		11.583	52.91		17.583	2.29		23.58	1.53
5.667	2.04		11.667	52.92		17.667	2.29		23.67	1.53
5.750	2.04		11.750	52.92		17.750	2.29		23.75	1.53
5.833	2.04		11.833	140.42		17.833	2.29		23.83	1.53
5.917	2.04		11.917	140.43		17.917	2.29		23.92	1.53
6.000	2.04		12.000	140.43		18.000	2.29		24.00	1.53

Unit Hyd Qpeak (cms)= 1.783

PEAK FLOW (cms)= 1.987 (1)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 78.638
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.618

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0141):	11.25	1.987	12.08	78.64
+ ID2= 2 (0030):	38.72	4.265	12.31	74.50
=====				
ID = 3 (0021):	49.97	5.821	12.22	75.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (0142)		Area (ha)= 10.92
ID= 1 DT= 3.0 min		Total Imp(%)= 53.00 Dir. Conn.(%)= 53.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.79	5.13
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	269.81	40.00
Mannings n	=	0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.27		6.050	2.54		12.050	18.32		18.05 2.29
0.100	1.27		6.100	2.54		12.100	18.32		18.10 2.29
0.150	1.27		6.150	2.54		12.150	18.32		18.15 2.29
0.200	1.27		6.200	2.54		12.200	18.32		18.20 2.29
0.250	1.27		6.250	2.54		12.250	18.32		18.25 2.29
0.300	1.27		6.300	2.54		12.300	18.32		18.30 2.29
0.350	1.27		6.350	2.54		12.350	18.32		18.35 2.29
0.400	1.27		6.400	2.54		12.400	18.32		18.40 2.29
0.450	1.27		6.450	2.54		12.450	18.32		18.45 2.29
0.500	1.27		6.500	2.54		12.500	18.31		18.50 2.29
0.550	1.27		6.550	2.54		12.550	9.41		18.55 2.29

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0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53

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4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 72.61
over (min) 6.00 12.00
Storage Coeff. (min)= 3.29 (ii) 9.16 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.26 0.11

PEAK FLOW (cms)= 2.23 0.76 2.930 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 125.70 56.15 93.01
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.44 0.73

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN² = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):	10.92	2.936	12.00	93.01
+ ID2= 2 (0021):	49.97	5.821	12.22	75.44
=====				
ID = 3 (0023):	60.89	7.321	12.06	78.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)				
IN= 2----> OUT= 1				
DT= 3.0 min				
OVERFLOW IS OFF				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0030	0.5000
	0.0370	0.1125	1.9000	0.7700
	0.0530	0.2275	6.4000	1.1000
	0.0650	0.3450	9.2000	1.2500
	0.0750	0.4630	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0023)	60.890	7.321	12.06	78.59
OUTFLOW: ID= 1 (0024)	60.890	5.998	12.36	77.93

PEAK FLOW REDUCTION [Qout/Qin](%)= 81.93
TIME SHIFT OF PEAK FLOW (min)= 18.33
MAXIMUM STORAGE USED (ha.m.)= 1.0705

CALIB				
STANDHYD (0143)				
ID= 1 DT= 1.0 min	Area (ha)=	0.84		
	Total Imp(%)=	55.00	Dir. Conn.(%)=	55.00
IMPERVIOUS				
Surface Area (ha)=	0.46	0.38		
Dep. Storage (mm)=	1.50	1.50		
Average Slope (%)=	2.00	2.00		
Length (m)=	74.83	40.00		
Mannings n	=	0.013	0.250	

HRP7-EX_2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.017	1.27	6.017	2.54	12.017	18.40	18.02	2.29		
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29		
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29		
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29		
0.083	1.27	6.083	2.54	12.083	18.32	18.08	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.117	1.27	6.117	2.54	12.117	18.32	18.12	2.29		
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.183	1.27	6.183	2.54	12.183	18.32	18.18	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.217	1.27	6.217	2.54	12.217	18.32	18.22	2.29		
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29		
0.283	1.27	6.283	2.54	12.283	18.32	18.28	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.317	1.27	6.317	2.54	12.317	18.32	18.32	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29		
0.383	1.27	6.383	2.54	12.383	18.32	18.38	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29		
0.483	1.27	6.483	2.54	12.483	18.32	18.48	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.517	1.27	6.517	2.54	12.517	9.42	18.52	2.29		
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.617	1.27	6.617	2.54	12.617	9.41	18.62	2.29		
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.683	1.27	6.683	2.54	12.683	9.41	18.68	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.717	1.27	6.717	2.54	12.717	9.41	18.72	2.29		
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29		
0.783	1.27	6.783	2.54	12.783	9.41	18.78	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.817	1.27	6.817	2.54	12.817	9.41	18.82	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29		
0.883	1.27	6.883	2.54	12.883	9.41	18.88	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29		
0.983	1.27	6.983	2.54	12.983	9.41	18.98	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.017	1.27	7.017	2.54	13.017	1.79	19.02	2.29		
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.117	1.27	7.117	2.54	13.117	1.78	19.12	2.29		
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.183	1.27	7.183	2.54	13.183	1.78	19.18	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.217	1.27	7.217	2.54	13.217	1.78	19.22	2.29		
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29		
1.283	1.27	7.283	2.54	13.283	1.78	19.28	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.317	1.27	7.317	2.54	13.317	1.78	19.32	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		

HRP7-EX_2-100 YEAR.OUT									
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29		
1.383	1.27	7.383	2.54	13.383	1.78	19.38	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29		
1.483	1.27	7.483	2.54	13.483	1.78	19.48	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.517	1.27	7.517	2.54	13.517	10.41	19.52	2.29		
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.617	1.27	7.617	2.54	13.617	10.43	19.62	2.29		
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.683	1.27	7.683	2.54	13.683	10.43	19.68	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.717	1.27	7.717	2.54	13.717	10.43	19.72	2.29		
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.767	2.29	7.767	2.54	13.767	10.43	19.77	2.29		
1.783	2.29	7.783	2.54	13.783	10.43	19.78	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.817	2.29	7.817	2.54	13.817	10.43	19.82	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29		
1.883	2.29	7.883	2.54	13.883	10.43	19.88	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29		
1.983	2.29	7.983	2.54	13.983	10.43	19.98	2.29		
2.000	2.29	8.000	2.55	14.000	10.43	20.00	2.29		
2.017	1.65	8.017	3.43	14.017	3.83	20.02	1.53		
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.117	1.65	8.117	3.43	14.117	3.82	20.12	1.53		
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.183	1.65	8.183	3.43	14.183	3.82	20.18	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.217	1.65	8.217	3.43	14.217	3.82	20.22	1.53		
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53		
2.283	1.65	8.283	3.43	14.283	3.82	20.28	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.317	1.65	8.317	3.43	14.317	3.82	20.32	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53		
2.383	1.65	8.383	3.43	14.383	3.82	20.38	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53		
2.483	1.65	8.483	3.43	14.483	3.82	20.48	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.517	1.65	8.517	3.43	14.517	3.82	20.52	1.53		
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.617	1.65	8.617	3.43	14.617	3.82	20.62	1.53		
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.683	1.65	8.683	3.43	14.683	3.82	20.68	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.717	1.65	8.717	3.43	14.717	3.82	20.72	1.53		
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53		
2.783	1.65	8.783	3.43	14.783	3.82	20.78	1.53		

HRP7-EX_2-100 YEAR.OUT									
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.817	1.65	8.817	3.43	14.817	3.82	20.82	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53		
2.883	1.65	8.883	3.43	14.883	3.82	20.88	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53		
2.983	1.65	8.983	3.43	14.983	3.82	20.98	1.53		
3.000	1.65	9.000	3.44	15.000	3.82	21.00	1.53		
3.017	1.65	9.017	4.07	15.017	3.82	21.02	1.53		
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.117	1.65	9.117	4.07	15.117	3.82	21.12	1.53		
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.183	1.65	9.183	4.07	15.183	3.82	21.18	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.217	1.65	9.217	4.07	15.217	3.82	21.22	1.53		
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53		
3.283	1.65	9.283	4.07	15.283	3.82	21.28	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.317	1.65	9.317	4.07	15.317	3.82	21.32	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53		
3.383	1.65	9.383	4.07	15.383	3.82	21.38	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53		
3.483	1.65	9.483	4.07	15.483	3.82	21.48	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.517	1.65	9.517	4.58	15.517	3.82	21.52	1.53		
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53		
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.617	1.65	9.617	4.58	15.617	3.82	21.62	1.53		
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.683	1.65	9.683	4.58	15.683	3.82	21.68	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.717	1.65	9.717	4.58	15.717	3.82	21.72	1.53		
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53		
3.783	1.65	9.783	4.58	15.783	3.82	21.78	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.817	1.65	9.817	4.58	15.817	3.82	21.82	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53		
3.883	1.65	9.883	4.58	15.883	3.82	21.88	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53		
3.983	1.65	9.983	4.58	15.983	3.82	21.98	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.017	2.04	10.017	5.85	16.017	2.29	22.02	1.53		
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.117	2.04	10.117	5.85	16.117	2.29	22.12	1.53		
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.183	2.04	10.183	5.85	16.183	2.29	22.18	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.217	2.04	10.217	5.85	16.217	2.29	22.22	1.53		
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53		

HRP7-EX_2-100 YEAR.OUT

HRP7-EX_2-100 YEAR.OUT

TOTALS

CN* = 72 @ Ia = Dep Storage (Above)

ID1= 1 (0143):	0.84	0.258	12.00	100.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY

NDHYD (0144) | Area (ha)= 6.14

	IRI ERV100S	ERV100S (±)
Surface Area (ha)=	2.27	3.87

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP

--- TRANSFORMED HYETOGRAPH ---

HRP7-EX_2-100 YEAR.OUT							
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.767	1.27	7.767	2.54	13.767	10.43	19.77	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53

HRP7-EX_2-100 YEAR.OUT							
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53
Max.Eff.Inten.(mm/hr) over (min)				140.43	92.72		
Storage Coeff. (min)				5.76	12.00		
Unit Hyd. Tpeak (min)				0.40	12.00		
Unit Hyd. peak (cms)				0.35	0.18		
					TOTALS		
PEAK FLOW (cms)				0.88	0.79	1.513 (iii)	
TIME TO PEAK (hrs)				12.00	12.07	12.00	
RUNOFF VOLUME (mm)				125.70	70.38	90.85	
TOTAL RAINFALL (mm)				127.20	127.20	127.20	

RUNOFF COEFFICIENT = 0.99 0.55 HRP7-EX_2-100 YEAR.OUT
0.71

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0144):	6.14	1.513	12.00	90.85
+ ID2= 2 (0026):	61.73	6.040	12.37	72.99
=====				
ID = 3 (0028):	67.87	6.465	12.33	74.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP8-EX_2-100 YEAR.OUT

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

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000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y M M O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\2278ab64-9f69-468c-b261-818b138498d4\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\2278ab64-9f69-468c-b261-818b138498d4\scenar

DATE: 03/24/2023 TIME: 11:05:53

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\73a4457d-0469-437c-91dc-11b99a0fcb4f\571fbdef
Ptotal= 57.60 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	'	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

CALIB
NASHYD (1050) Area (ha)= 4.49 Curve Number (CN)= 77.0
ID= 1 DT= 2.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04	
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04	
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04	
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04	
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04	
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04	
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04	
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04	
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04	
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04	
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04	
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04	
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04	
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04	
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04	
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04	
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04	
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04	
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04	
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04	
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04	
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04	
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04	
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04	
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04	
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04	
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04	
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04	
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04	
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04	
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04	
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04	
1.767	0.81	7.767	1.15	13.767	4.72	19.77	1.04	
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04	
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04	
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04	
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69	
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69	
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69	
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69	
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69	
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69	
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69	
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69	
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69	
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69	
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69	
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69	
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69	
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69	
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69	
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69	
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69	
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69	
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69	
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69	

HRP8-EX_2-100 YEAR.OUT									
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69		
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69		
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69		
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69		
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69		
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69		

HRP8-EX_2-100 YEAR.OUT									
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69		

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.260 (1)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 21.534
TOTAL RAINFALL (mm)= 57.689
RUNOFF COEFFICIENT = 0.374

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
NASWYD (0150)
ID= 1 DT= 2.0 min
Area (ha)= 6.87
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.19
Curve Number (CN)= 82.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04		
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04		
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04		
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04		
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04		
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04		
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04		
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04		

HRP8-EX_2-100 YEAR.OUT									
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04		
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69		
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69		
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69		
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69		
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69		
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69		
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69		
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		

HRP8-EX_2-100 YEAR.OUT									
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69		
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69		
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69		
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69		

Unit Hyd Qpeak (cms)= 1.346

PEAK FLOW (cms)= 0.440 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 25.532
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.443

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID= 1 (1050):	4.49	0.260	12.07	21.53
+ ID2= 2 (0150):	6.87	0.440	12.07	25.53
=====				
ID = 3 (0018):	11.36	0.700	12.07	23.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)					
IN= 2---> OUT= 1					

Routing time step (min)'= 2.00					

<----- DATA FOR SECTION (1.1) ----->					
Distance	Elevation	Manning			
0.00	101.00	0.0500			
1.00	100.67	0.0500			
2.00	100.33	0.0500	0.0300	Main Channel	
3.00	100.00	0.0300	0.0300	Main Channel	
4.00	99.67	0.0300	0.0300	Main Channel	
5.00	100.33	0.0300	0.0500	Main Channel	
6.00	100.67	0.0500			
7.00	101.00	0.0500			

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV. TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.358E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.85	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21

HRP8-EX_2-100 YEAR.OUT						
0.44	100.44	.122E+04	1.3	1.27	15.53	
0.50	100.50	.147E+04	1.7	1.37	14.34	
0.55	100.55	.174E+04	2.2	1.46	13.44	
0.61	100.61	.204E+04	2.7	1.54	12.74	
0.66	100.66	.236E+04	3.2	1.62	12.17	
0.72	100.72	.269E+04	3.8	1.68	11.70	
0.78	100.78	.306E+04	4.5	1.74	11.30	
0.83	100.83	.344E+04	5.2	1.80	10.96	
0.89	100.89	.385E+04	6.0	1.85	10.65	
0.94	100.94	.427E+04	6.9	1.90	10.38	
1.00	101.00	.472E+04	7.8	1.94	10.14	
<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0018)	11.36	0.70	12.07	23.95	0.34	1.01
OUTFLOW: ID= 1 (0037)	11.36	0.43	12.23	23.92	0.27	0.88

CALIB					
NASHYD (1051)	Area	(ha)=	50.34	Curve Number (CN)=	82.0
ID= 1 DT= 8.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=		0.63		

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.133	0.58	6.133	1.15	12.133	8.30	18.13	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.533	0.58	6.533	1.15	12.533	7.29	18.53	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04		
1.067	0.58	7.067	1.15	13.067	2.53	19.07	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		
1.600	0.58	7.600	1.15	13.600	3.74	19.60	1.04		
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04		
1.867	0.98	7.867	1.15	13.867	4.72	19.87	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69		
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
3.067	0.75	9.067	1.70	15.067	1.73	21.07	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.600	0.75	9.600	2.02	15.600	1.73	21.60	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.533	0.92	10.533	2.88	16.533	1.04	22.53	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
5.067	0.92	11.067	4.55	17.067	1.04	23.07	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.600	0.92	11.600	19.35	17.600	1.04	23.60	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.867	0.92	11.867	58.64	17.867	1.04	23.87	0.69		
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69		

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 1.451 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 25.530
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.443

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1051):	50.34	1.451	12.53	25.53
+ ID2= 2 (0037):	11.36	0.432	12.23	23.92
=====				
ID = 3 (0029):	61.70	1.886	12.40	25.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0151)	Area	(ha)=	10.65	
ID= 1 DT= 3.0 min	Total Imp(%)=	29.00	Dir. Conn.(%)=	29.00

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	7.56			
Dep. Storage	(mm)=	1.50		1.50	
Average Slope	(%)=	2.00		2.00	
Length	(m)=	272.00		272.00	
Mannings n	=	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		

HRP8-EX_2-100 YEAR.OUT

2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 10.33
over (min) 6.00 60.00
Storage Coeff. (min)= 4.53 (ii) 59.82 (iii)
Unit Hyd. Tpeak (min)= 6.00 60.00
Unit Hyd. peak (cms)= 0.22 0.02

TOTALS
PEAK FLOW (cms)= 0.53 0.13 0.561 (iii)
TIME TO PEAK (hrs)= 12.00 12.90 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 30.69
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.53

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP8-EX_2-100 YEAR.OUT

ADD HYD (0031)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0151):	10.65	0.561	12.00 30.69
+ ID2= 2 (0029):	61.70	1.806	12.40 25.23
ID = 3 (0031):	72.35	1.964	12.40 26.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0039)
IN= 2--> OUT= 1 Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.998E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

<---- hydrograph ---->					<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0031)	72.35	1.96	12.40	26.04	0.71	0.89
OUTFLOW: ID= 1 (0039)	72.35	1.89	12.57	26.03	0.69	0.88

CALIB
STANDHYD (0152)
ID= 1 DT= 3.0 min

Area (ha)= 15.40		Dir. Conn.(%)= 43.00	
Total Imp(%)= 43.00			

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 6.62	8.78	
Dep. Storage	(mm)= 1.50	1.50	
Average Slope	(%)= 2.00	2.00	
Length	(m)= 335.00	335.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04

HRP8-FX 2-100 YEAR OUT

HRP8-FX 2-100 YEAR OUT

TOTALS

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV. TIME (min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.290E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.53
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53

HRP8-EX_2-100 YEAR.OUT						
0.72	100.72	.655E+03	2.1	0.90	5.32	
0.78	100.78	.743E+03	2.4	0.93	5.14	
0.83	100.83	.836E+03	2.8	0.96	4.98	
0.89	100.89	.934E+03	3.2	0.99	4.84	
0.94	100.94	.104E+04	3.7	1.01	4.72	
1.00	101.00	.115E+04	4.1	1.04	4.61	
<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0033)	87.75	2.18	12.03	27.55	0.74	0.91
OUTFLOW: ID= 1 (0040)	87.75	2.09	12.57	27.55	0.73	0.90

RESERVOIR(0036)		OVERFLOW IS OFF			
IN= 2--> OUT= 1					
DT= 4.0 min					
		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	1.5621	0.7845
		0.0206	0.1029	3.2275	0.8811
		0.0461	0.1764	5.2638	0.9799
		0.0618	0.2539	7.6097	1.0811
		0.0743	0.3353	10.2263	1.1844
		0.0850	0.4205	13.0858	1.2900
		0.0945	0.5081	16.1669	1.3979
		0.1031	0.5980	19.5735	1.5082
		0.1071	0.6438	23.5541	1.6210
		0.3092	0.6901	35.0828	1.9135
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	87.750	2.092	12.57	27.55	
OUTFLOW: ID= 1 (0036)	87.750	1.731	13.10	27.22	
PEAK FLOW REDUCTION [Qout/Qin](%)= 82.75					
TIME SHIFT OF PEAK FLOW (min)= 32.00					
MAXIMUM STORAGE USED (ha.m.)= 0.7945					

CALIB				
NASHYD (0153)	Area	(ha)=	1.70	Curve Number (CN)= 79.0
ID= 1 DT= 1.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.11		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	0.58	6.017	1.15	12.017	8.33	18.02	1.04		
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04		
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04		
0.083	0.58	6.083	1.15	12.083	8.29	18.08	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.117	0.58	6.117	1.15	12.117	8.29	18.12	1.04		
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.183	0.58	6.183	1.15	12.183	8.29	18.18	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.217	0.58	6.217	1.15	12.217	8.29	18.22	1.04		
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.283	0.58	6.283	1.15	12.283	8.29	18.28	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.317	0.58	6.317	1.15	12.317	8.29	18.32	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04		
0.383	0.58	6.383	1.15	12.383	8.29	18.38	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04		
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04		
0.483	0.58	6.483	1.15	12.483	8.29	18.48	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.517	0.58	6.517	1.15	12.517	4.27	18.52	1.04		
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		

HRP8-EX_2-100 YEAR.OUT							
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.617	0.58	6.617	1.15	12.617	4.26	18.62	1.04
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.683	0.58	6.683	1.15	12.683	4.26	18.68	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.717	0.58	6.717	1.15	12.717	4.26	18.72	1.04
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04
0.783	0.58	6.783	1.15	12.783	4.26	18.78	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.817	0.58	6.817	1.15	12.817	4.26	18.82	1.04
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04
0.883	0.58	6.883	1.15	12.883	4.26	18.88	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04
0.983	0.58	6.983	1.15	12.983	4.26	18.98	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.017	0.58	7.017	1.15	13.017	0.81	19.02	1.04
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.117	0.58	7.117	1.15	13.117	0.81	19.12	1.04
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.183	0.58	7.183	1.15	13.183	0.81	19.18	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.217	0.58	7.217	1.15	13.217	0.81	19.22	1.04
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04
1.283	0.58	7.283	1.15	13.283	0.81	19.28	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.317	0.58	7.317	1.15	13.317	0.81	19.32	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04
1.383	0.58	7.383	1.15	13.383	0.81	19.38	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04
1.483	0.58	7.483	1.15	13.483	0.81	19.48	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.517	0.58	7.517	1.15	13.517	4.72	19.52	1.04
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.617	0.58	7.617	1.15	13.617	4.72	19.62	1.04
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.683	0.58	7.683	1.15	13.683	4.72	19.68	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.717	0.58	7.717	1.15	13.717	4.72	19.72	1.04
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.767	1.04	7.767	1.15	13.767	4.72	19.77	1.04
1.783	1.04	7.783	1.15	13.783	4.72	19.78	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.817	1.04	7.817	1.15	13.817	4.72	19.82	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04
1.883	1.04	7.883	1.15	13.883	4.72	19.88	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04
1.983	1.04	7.983	1.15	13.983	4.72	19.98	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04

HRP8-EX_2-100 YEAR.OUT									
2.017	0.75	8.017	1.56	14.017	1.74	20.02	0.69		
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69		
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.117	0.75	8.117	1.56	14.117	1.73	20.12	0.69		
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.183	0.75	8.183	1.56	14.183	1.73	20.18	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.217	0.75	8.217	1.56	14.217	1.73	20.22	0.69		
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69		
2.283	0.75	8.283	1.56	14.283	1.73	20.28	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.317	0.75	8.317	1.56	14.317	1.73	20.32	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69		
2.383	0.75	8.383	1.56	14.383	1.73	20.38	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69		
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69		
2.483	0.75	8.483	1.56	14.483	1.73	20.48	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.517	0.75	8.517	1.56	14.517	1.73	20.52	0.69		
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69		
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.617	0.75	8.617	1.56	14.617	1.73	20.62	0.69		
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.683	0.75	8.683	1.56	14.683	1.73	20.68	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.717	0.75	8.717	1.56	14.717	1.73	20.72	0.69		
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69		
2.783	0.75	8.783	1.56	14.783	1.73	20.78	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.817	0.75	8.817	1.56	14.817	1.73	20.82	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69		
2.883	0.75	8.883	1.56	14.883	1.73	20.88	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69		
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69		
2.983	0.75	8.983	1.56	14.983	1.73	20.98	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.017	0.75	9.017	1.84	15.017	1.73	21.02	0.69		
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69		
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69		
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69		
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.117	0.75	9.117	1.84	15.117	1.73	21.12	0.69		
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.183	0.75	9.183	1.84	15.183	1.73	21.18	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.217	0.75	9.217	1.84	15.217	1.73	21.22	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.283	0.75	9.283	1.84	15.283	1.73	21.28	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.317	0.75	9.317	1.84	15.317	1.73	21.32	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.383	0.75	9.383	1.84	15.383	1.73	21.38	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69		

HRP8-EX_2-100 YEAR.OUT									
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.483	0.75	9.483	1.84	15.483	1.73	21.48	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.517	0.75	9.517	2.07	15.517	1.73	21.52	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.617	0.75	9.617	2.07	15.617	1.73	21.62	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.683	0.75	9.683	2.07	15.683	1.73	21.68	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.717	0.75	9.717	2.07	15.717	1.73	21.72	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.783	0.75	9.783	2.07	15.783	1.73	21.78	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.817	0.75	9.817	2.07	15.817	1.73	21.82	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.883	0.75	9.883	2.07	15.883	1.73	21.88	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
3.983	0.75	9.983	2.07	15.983	1.73	21.98	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.017	0.92	10.017	2.65	16.017	1.04	22.02	0.69		
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69		
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69		
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69		
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.117	0.92	10.117	2.65	16.117	1.04	22.12	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.183	0.92	10.183	2.65	16.183	1.04	22.18	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.217	0.92	10.217	2.65	16.217	1.04	22.22	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.283	0.92	10.283	2.65	16.283	1.04	22.28	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.317	0.92	10.317	2.65	16.317	1.04	22.32	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.383	0.92	10.383	2.65	16.383	1.04	22.38	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.483	0.92	10.483	2.65	16.483	1.04	22.48	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.517	0.92	10.517	3.57	16.517	1.04	22.52	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.617	0.92	10.617	3.57	16.617	1.04	22.62	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.683	0.92	10.683	3.57	16.683	1.04	22.68	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.717	0.92	10.717	3.57	16.717	1.04	22.72	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		
4.783	0.92	10.783	3.57	16.783	1.04	22.78	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.817	0.92	10.817	3.57	16.817	1.04	22.82	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69		
4.883	0.92	10.883	3.57	16.883	1.04	22.88	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		

HRP8-EX_2-100 YEAR.OUT

HRP8-EX_2-100 YEAR.OUT

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0038) | Area (ha)= 87.75 Curve Number (CN)= 82.0
| ID= 1 DT= 8.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.92

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.133 0.58 | 6.133 1.15 | 12.133 8.30 | 18.13 1.04
0.267 0.58 | 6.267 1.15 | 12.267 8.29 | 18.27 1.04
0.400 0.58 | 6.400 1.15 | 12.400 8.29 | 18.40 1.04
0.533 0.58 | 6.533 1.15 | 12.533 7.29 | 18.53 1.04
0.667 0.58 | 6.667 1.15 | 12.667 4.26 | 18.67 1.04
0.800 0.58 | 6.800 1.15 | 12.800 4.26 | 18.80 1.04
0.933 0.58 | 6.933 1.15 | 12.933 4.26 | 18.93 1.04
1.067 0.58 | 7.067 1.15 | 13.067 2.53 | 19.07 1.04
1.200 0.58 | 7.200 1.15 | 13.200 0.81 | 19.20 1.04
1.333 0.58 | 7.333 1.15 | 13.333 0.81 | 19.33 1.04
1.467 0.58 | 7.467 1.15 | 13.467 0.81 | 19.47 1.04
1.600 0.58 | 7.600 1.15 | 13.600 3.74 | 19.60 1.04
1.733 0.58 | 7.733 1.15 | 13.733 4.72 | 19.73 1.04
1.867 0.98 | 7.867 1.15 | 13.867 4.72 | 19.87 1.04
2.000 1.04 | 8.000 1.15 | 14.000 4.72 | 20.00 1.04
2.133 0.75 | 8.133 1.56 | 14.133 1.73 | 20.13 0.69
2.267 0.75 | 8.267 1.56 | 14.267 1.73 | 20.27 0.69
2.400 0.75 | 8.400 1.56 | 14.400 1.73 | 20.40 0.69
2.533 0.75 | 8.533 1.56 | 14.533 1.73 | 20.53 0.69
2.667 0.75 | 8.667 1.56 | 14.667 1.73 | 20.67 0.69
2.800 0.75 | 8.800 1.56 | 14.800 1.73 | 20.80 0.69
2.933 0.75 | 8.933 1.56 | 14.933 1.73 | 20.93 0.69
3.067 0.75 | 9.067 1.70 | 15.067 1.73 | 21.07 0.69
3.200 0.75 | 9.200 1.84 | 15.200 1.73 | 21.20 0.69
3.333 0.75 | 9.333 1.84 | 15.333 1.73 | 21.33 0.69
3.467 0.75 | 9.467 1.84 | 15.467 1.73 | 21.47 0.69
3.600 0.75 | 9.600 2.02 | 15.600 1.73 | 21.60 0.69
3.733 0.75 | 9.733 2.07 | 15.733 1.73 | 21.73 0.69
3.867 0.75 | 9.867 2.07 | 15.867 1.73 | 21.87 0.69
4.000 0.75 | 10.000 2.07 | 16.000 1.73 | 22.00 0.69
4.133 0.92 | 10.133 2.65 | 16.133 1.04 | 22.13 0.69
4.267 0.92 | 10.267 2.65 | 16.267 1.04 | 22.27 0.69
4.400 0.92 | 10.400 2.65 | 16.400 1.04 | 22.40 0.69
4.533 0.92 | 10.533 2.88 | 16.533 1.04 | 22.53 0.69
4.667 0.92 | 10.667 3.57 | 16.667 1.04 | 22.67 0.69
4.800 0.92 | 10.800 3.57 | 16.800 1.04 | 22.80 0.69
4.933 0.92 | 10.933 3.57 | 16.933 1.04 | 22.93 0.69
5.067 0.92 | 11.067 4.55 | 17.067 1.04 | 23.07 0.69
5.200 0.92 | 11.200 5.53 | 17.200 1.04 | 23.20 0.69
5.333 0.92 | 11.333 5.53 | 17.333 1.04 | 23.33 0.69
5.467 0.92 | 11.467 5.53 | 17.467 1.04 | 23.47 0.69
5.600 0.92 | 11.600 19.35 | 17.600 1.04 | 23.60 0.69
5.733 0.92 | 11.733 23.96 | 17.733 1.04 | 23.73 0.69
5.867 0.92 | 11.867 58.64 | 17.867 1.04 | 23.87 0.69
6.000 0.92 | 12.000 63.59 | 18.000 1.04 | 24.00 0.69

Unit Hyd Qpeak (cms)= 3.643

PEAK FLOW (cms)= 1.911 (i)
TIME TO PEAK (hrs)= 12.800
RUNOFF VOLUME (mm)= 25.533
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.443

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

Unit Hyd Qpeak (cms)= 0.580

PEAK FLOW (cms)= 0.128 (i)
TIME TO PEAK (hrs)= 12.033
RUNOFF VOLUME (mm)= 18.761
TOTAL RAINFALL (mm)= 57.601
RUNOFF COEFFICIENT = 0.326

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0035) |
| 1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)

ID1= 1 (0153): 1.70 0.128 12.03 18.76
+ ID2= 2 (0036): 87.75 1.731 13.10 27.22

ID = 3 (0035): 89.45 1.742 13.07 23.17

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y Y M M 0 0
000 T T H H Y Y M M 000
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HRP8-EX_2-100 YEAR.OUT

***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\Abira\AppData\Local\Civica\VHS\18b4af95-7c1b-43ad-8aec-1bb40ca06caf\ve498dbe7-6fae-4a57-b616-52e4c6cb9e4b\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VHS\18b4af95-7c1b-43ad-8aec-1bb40ca06caf\ve498dbe7-6fae-4a57-b616-52e4c6cb9e4b\scenar

DATE: 03/24/2023 TIME: 11:05:54

USER:

COMMENTS: _____

** SIMULATION : Run 82 **

MASS STORM	Filename: C:\Users\Abira\AppData\Local\Temp\73a4457d-d469-437c-91dc-11b99a0fcb4f\fb8e60ca
Ptotal= 76.80 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.77	6.25	1.54	12.25	11.06	18.25	1.38	
0.50	0.77	6.50	1.54	12.50	11.06	18.50	1.38	
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38	
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38	
1.25	0.77	7.25	1.54	13.25	1.08	19.25	1.38	
1.50	0.77	7.50	1.54	13.50	1.08	19.50	1.38	
1.75	0.77	7.75	1.54	13.75	6.30	19.75	1.38	
2.00	1.38	8.00	1.54	14.00	6.30	20.00	1.38	
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92	
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92	
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92	
3.00	1.00	9.00	2.07	15.00	2.30	21.00	0.92	
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92	
3.50	1.00	9.50	2.46	15.50	2.30	21.50	0.92	
3.75	1.00	9.75	2.76	15.75	2.30	21.75	0.92	
4.00	1.00	10.00	2.76	16.00	2.30	22.00	0.92	
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92	
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92	
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92	
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92	
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92	
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92	
5.75	1.23	11.75	31.95	17.75	1.38	23.75	0.92	
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92	

CALIB |
NASHYD (1050) |
ID= 1 DT= 2.0 min | Area (ha)= 4.49 Curve Number (CN)= 77.0
| | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38	
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38	
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38	
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38	
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38	
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38	
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38	
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38	
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38	
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38	
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38	
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38	
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38	
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38	

HRP8-EX_2-100 YEAR.OUT

0.500	0.77	6.500	1.54	12.500	11.05	18.50	1.38	
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38	
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38	
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38	
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38	
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38	
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38	
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38	
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38	
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38	
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38	
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38	
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38	
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38	
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38	
1.000	0.77	7.000	1.54	13.000	5.67	19.00	1.38	
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38	
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38	
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38	
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38	
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38	
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38	
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38	
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38	
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38	
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38	
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38	
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38	
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38	
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38	
1.500	0.77	7.500	1.54	13.500	1.09	19.50	1.38	
1.533	0.77	7.533	1.54	13.533	6.30	19.53	1.38	
1.567	0.77	7.567	1.54	13.567	6.30	19.57	1.38	
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38	
1.633	0.77	7.633	1.54	13.633	6.30	19.63	1.38	
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38	
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38	
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38	
1.767	1.08	7.767	1.54	13.767	6.30	19.77	1.38	
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38	
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38	
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38	
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38	
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38	
1.967	1.38	7.967	1.54	13.967	6.30	19.97	1.38	
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38	
2.033	1.00	8.033	2.07	14.033	2.30	20.03	0.92	
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92	
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92	
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92	
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92	
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92	
2.233	1.00	8.233	2.07	14.233	2.30	20.23	0.92	
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92	
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92	
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92	
2.367	1.00	8.367	2.07	14.367	2.30	20.37	0.92	
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92	
2.433	1.00	8.433	2.07	14.433	2.30	20.43	0.92	
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92	
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92	
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92	
2.567	1.00	8.567	2.07	14.567	2.30	20.57	0.92	
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92	
2.633	1.00	8.633	2.07	14.633	2.30	20.63	0.92	
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92	
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92	
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92	
2.767	1.00	8.767	2.07	14.767	2.30	20.77	0.92	
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92	
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92	
2.867	1.00	8.867	2.07	14.867	2.30	20.87	0.92	
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92	
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92	
2.967	1.00	8.967	2.07	14.967	2.30	20.97	0.92	
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92	
3.033	1.00	9.033	2.46	15.033	2.30	21.03	0.92	
3.067	1.00	9.067	2.46	15.067	2.30	21.07	0.92	
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92	
3.133	1.00	9.133	2.46	15.133	2.30	21.13	0.92	
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92	
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92	
3.233	1.00	9.233	2.46	15.233	2.30	21.23	0.92	
3.267	1.00	9.267	2.46	15.267	2.30	21.27	0.92	
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92	
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92	
3.367	1.00	9.367	2.46	15.367	2.30	21.37	0.92	

HRP8-EX_2-100 YEAR.OUT									
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92		
3.433	1.00	9.433	2.46	15.433	2.30	21.43	0.92		
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92		
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92		
3.533	1.00	9.533	2.76	15.533	2.30	21.53	0.92		
3.567	1.00	9.567	2.76	15.567	2.30	21.57	0.92		
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92		
3.633	1.00	9.633	2.76	15.633	2.30	21.63	0.92		
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92		
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92		
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92		
3.767	1.00	9.767	2.76	15.767	2.30	21.77	0.92		
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92		
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92		
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92		
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92		
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92		
3.967	1.00	9.967	2.76	15.967	2.30	21.97	0.92		
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92		
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92		
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92		
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92		
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92		
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92		
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92		
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92		
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92		
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92		
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92		
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92		
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92		
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92		
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92		
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92		
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92		
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92		
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92		
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92		
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92		
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92		
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92		
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92		
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92		
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92		
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92		
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92		
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92		
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92		
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92		
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92		
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92		
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92		
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92		
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92		
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92		
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92		
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92		
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92		
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92		
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92		
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92		
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92		
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92		
5.500	1.23	11.500	7.40	17.500	1.38	23.50	0.92		
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92		
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92		
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92		
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92		
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92		
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92		
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92		
5.767	1.23	11.767	58.44	17.767	1.38	23.77	0.92		
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92		
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92		
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92		
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92		
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92		
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92		
6.000	1.23	12.000	84.68	18.000	1.38	24.00	0.92		

Unit Hyd Qpeak (cms)= 1.015
PEAK FLOW (cms)= 0.424 (1)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 34.907
TOTAL RAINFALL (mm)= 76.799
RUNOFF COEFFICIENT = 0.455

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| NASHYD (0150) | Area (ha)= 6.87 Curve Number (CN)= 82.0
| ID= 1 DT= 2.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.19

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38		
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38		
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38		
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38		
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38		
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38		
0.500	0.77	6.500	1.54	12.500	11.05	18.50	1.38		
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38		
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38		
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38		
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38		
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38		
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38		
1.000	0.77	7.000	1.54	13.000	5.67	19.00	1.38		
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38		
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38		
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38		
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38		
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38		
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38		
1.500	0.77	7.500	1.54	13.500	1.09	19.50	1.38		
1.533	0.77	7.533	1.54	13.533	6.30	19.53	1.38		
1.567	0.77	7.567	1.54	13.567	6.30	19.57	1.38		
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38		
1.633	0.77	7.633	1.54	13.633	6.30	19.63	1.38		
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38		
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38		
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38		
1.767	0.77	7.767	1.54	13.767	6.30	19.77	1.38		
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38		
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38		
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38		
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38		
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38		
1.967	1.38	7.967	1.54	13.967	6.30	19.97	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.033	1.00	8.033	2.07	14.033	2.30	20.03	0.92		
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92		
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92		
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92		
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.233	1.00	8.233	2.07	14.233	2.30	20.23	0.92		
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92		
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92		
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92		
2.367	1.00	8.367	2.07	14.367	2.30	20.37	0.92		

HRP8-EX_2-100 YEAR.OUT									
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.433	1.00	8.433	2.07	14.433	2.30	20.43	0.92		
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92		
2.567	1.00	8.567	2.07	14.567	2.30	20.57	0.92		
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92		
2.633	1.00	8.633	2.07	14.633	2.30	20.63	0.92		
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92		
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92		
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92		
2.767	1.00	8.767	2.07	14.767	2.30	20.77	0.92		
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92		
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92		
2.867	1.00	8.867	2.07	14.867	2.30	20.87	0.92		
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92		
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92		
2.967	1.00	8.967	2.07	14.967	2.30	20.97	0.92		
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92		
3.033	1.00	9.033	2.46	15.033	2.30	21.03	0.92		
3.067	1.00	9.067	2.46	15.067	2.30	21.07	0.92		
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92		
3.133	1.00	9.133	2.46	15.133	2.30	21.13	0.92		
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92		
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92		
3.233	1.00	9.233	2.46	15.233	2.30	21.23	0.92		
3.267	1.00	9.267	2.46	15.267	2.30	21.27	0.92		
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92		
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92		
3.367	1.00	9.367	2.46	15.367	2.30	21.37	0.92		
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92		
3.433	1.00	9.433	2.46	15.433	2.30	21.43	0.92		
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92		
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92		
3.533	1.00	9.533	2.76	15.533	2.30	21.53	0.92		
3.567	1.00	9.567	2.76	15.567	2.30	21.57	0.92		
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92		
3.633	1.00	9.633	2.76	15.633	2.30	21.63	0.92		
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92		
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92		
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92		
3.767	1.00	9.767	2.76	15.767	2.30	21.77	0.92		
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92		
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92		
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92		
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92		
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92		
3.967	1.00	9.967	2.76	15.967	2.30	21.97	0.92		
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92		
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92		
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92		
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92		
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92		
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92		
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92		
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92		
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92		
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92		
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92		
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92		
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92		
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92		
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92		
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92		
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92		
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92		
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92		
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92		
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92		
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92		
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92		
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92		
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92		
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92		
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92		
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92		
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92		
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92		
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92		
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92		
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92		
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92		
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92		
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92		
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92		
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92		
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92		

HRP8-EX_2-100 YEAR.OUT									
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92		
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92		
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92		
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92		
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92		
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92		
5.500	1.23	11.500	7.40	17.500	1.38	23.50	0.92		
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92		
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92		
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92		
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92		
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92		
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92		
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92		
5.767	1.23	11.767	58.44	17.767	1.38	23.77	0.92		
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92		
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92		
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92		
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92		
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92		
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92		
6.000	1.23	12.000	84.68	18.000	1.38	24.00	0.92		

Unit Hyd Qpeak (cms)= 1.346

PEAK FLOW (cms)= 0.703 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 40.413
TOTAL RAINFALL (mm)= 76.799
RUNOFF COEFFICIENT = 0.526

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (1050):	4.49	0.424	12.07	34.91	
+ ID2= 2 (0150):	6.87	0.703	12.07	40.41	
ID = 3 (0018):	11.36	1.127	12.07	38.24	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)					
IN= 2-->	OUT= 1	Routing time step (min)'= 2.00			
<----- DATA FOR SECTION (1.1) ----->					
Distance	Elevation	Manning			
0.00	101.00	0.0500			
1.00	100.67	0.0500			
2.00	100.33	0.0500 / 0.0300	Main Channel		
3.00	100.00	0.0300	Main Channel		
4.00	100.00	0.0300	Main Channel		
5.00	100.33	0.0300 / 0.0500	Main Channel		
6.00	100.67	0.0500			
7.00	101.00	0.0500			

TRAVEL TIME TABLE						→
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.05	100.05	.636E+02	0.0	0.33	58.96	
0.09	100.09	.143E+03	0.1	0.50	39.44	
0.14	100.14	.239E+03	0.1	0.63	31.47	
0.19	100.19	.350E+03	0.2	0.73	26.89	
0.24	100.24	.477E+03	0.3	0.83	23.81	
0.28	100.28	.620E+03	0.5	0.91	21.56	
0.33	100.33	.779E+03	0.7	0.99	19.82	
0.39	100.39	.906E+03	1.0	1.14	17.21	
0.44	100.44	.122E+04	1.3	1.27	15.53	
0.50	100.50	.147E+04	1.7	1.37	14.34	
0.55	100.55	.174E+04	2.2	1.46	13.44	
0.61	100.61	.204E+04	2.7	1.54	12.74	
0.66	100.66	.230E+04	3.2	1.62	12.17	
0.69	100.72	.266E+04	3.8	1.68	11.79	
0.78	100.78	.306E+04	4.5	1.74	11.32	
0.83	100.83	.344E+04	5.2	1.80	10.96	
0.89	100.89	.385E+04	6.0	1.85	10.65	
0.94	100.94	.427E+04	6.9	1.90	10.38	
1.00	101.00	.472E+04	7.8	1.94	10.14	

HRP8-EX_2-100 YEAR.OUT
INFLOW : ID= 2 (0018) 11.36 1.13 12.07 38.24 0.41 1.20
OUTFLOW: ID= 1 (0037) 11.36 0.75 12.20 38.21 0.35 1.04

CALIB
NASHYD (1051) Area (ha)= 50.34 Curve Number (CN)= 82.0
ID= 1 DT= 8.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.63

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.533	0.77	6.533	1.54	12.533	9.72	18.53	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38
1.067	0.77	7.067	1.54	13.067	3.38	19.07	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38
1.600	0.77	7.600	1.54	13.600	4.99	19.60	1.38
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38
1.867	1.31	7.867	1.54	13.867	6.30	19.87	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92
3.067	1.00	9.067	2.27	15.067	2.30	21.07	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92
3.600	1.00	9.600	2.69	15.600	2.30	21.60	0.92
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.533	1.23	10.533	3.84	16.533	1.38	22.53	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
5.067	1.23	11.067	6.07	17.067	1.38	23.07	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.600	1.23	11.600	25.80	17.600	1.38	23.60	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.867	1.23	11.867	78.18	17.867	1.38	23.87	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 2.325 (1)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 40.410
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.526

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0020)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs)
ID1= 1 (1051): 50.34 2.325 12.53 40.41
+ ID2= 2 (0037): 11.36 0.752 12.20 38.21
ID = 3 (0029): 61.70 2.920 12.40 40.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP8-EX_2-100 YEAR.OUT

CALIB
STANDHYD (0151) Area (ha)= 10.65
ID= 1 DT= 3.0 min Total Imp(%)= 29.00 Dir. Conn.(%)= 29.00
IMPERVIOUS PERVIOUS (1)
Surface Area (ha)= 3.00 7.56
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 272.00 272.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92

HRP8-EX_2-100 YEAR.OUT

3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 19.46
over (min) 6.00 48.00
Storage Coeff. (min)= 4.04 (ii) 46.94 (ii)
Unit Hyd. Tpeak (min)= 6.00 48.00
Unit Hyd. peak (cms)= 0.24 0.02

TOTALS

PEAK FLOW (cms)= 0.71 0.25 0.791 (iii)
TIME TO PEAK (hrs)= 12.00 12.70 12.00
RUNOFF VOLUME (mm)= 75.30 32.57 44.96
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.42 0.59

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0151):	10.65	0.791	12.00	44.96
+ ID2= 2 (0029):	61.70	2.920	12.40	40.00
=====				
ID = 3 (0031):	72.35	3.218	12.40	40.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0030)|
| IN= 2----> OUT= 1 | Routing time step (min)'= 2.00

HRP8-EX_2-100 YEAR.OUT

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 /0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 /0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.998E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.208E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.320E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

<---- hydrograph ---->					<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0031)	72.35	3.22	12.40	40.73	0.89	0.90
OUTFLOW: ID= 1 (0039)	72.35	3.11	12.53	40.73	0.87	0.98

| CALIB
| STANDHYD (0152)| Area (ha)= 15.40
ID= 1 DT= 3.0 min | Total Imp(%)= 43.00 Dir. Conn.(%)= 43.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.62	8.78
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	335.00	335.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	0.050	1.54	12.050	11.06	18.05	1.38
0.100	0.77	0.100	1.54	12.100	11.06	18.10	1.38
0.150	0.77	0.150	1.54	12.150	11.06	18.15	1.38
0.200	0.77	0.200	1.54	12.200	11.06	18.20	1.38
0.250	0.77	0.250	1.54	12.250	11.06	18.25	1.38
0.300	0.77	0.300	1.54	12.300	11.06	18.30	1.38
0.350	0.77	0.350	1.54	12.350	11.06	18.35	1.38
0.400	0.77	0.400	1.54	12.400	11.06	18.40	1.38
0.450	0.77	0.450	1.54	12.450	11.06	18.45	1.38
0.500	0.77	0.500	1.54	12.500	11.06	18.50	1.38
0.550	0.77	0.550	1.54	12.550	5.68	18.55	1.38
0.600	0.77	0.600	1.54	12.600	5.68	18.60	1.38
0.650	0.77	0.650	1.54	12.650	5.68	18.65	1.38
0.700	0.77	0.700	1.54	12.700	5.68	18.70	1.38
0.750	0.77	0.750	1.54	12.750	5.68	18.75	1.38
0.800	0.77	0.800	1.54	12.800	5.68	18.80	1.38
0.850	0.77	0.850	1.54	12.850	5.68	18.85	1.38
0.900	0.77	0.900	1.54	12.900	5.68	18.90	1.38
0.950	0.77	0.950	1.54	12.950	5.68	18.95	1.38
1.000	0.77	1.000	1.54	13.000	5.68	19.00	1.38
1.050	0.77	1.050	1.54	13.050	1.08	19.05	1.38
1.100	0.77	1.100	1.54	13.100	1.08	19.10	1.38
1.150	0.77	1.150	1.54	13.150	1.08	19.15	1.38
1.200	0.77	1.200	1.54	13.200	1.08	19.20	1.38
1.250	0.77	1.250	1.54	13.250	1.08	19.25	1.38

HRP8-EX_2-100 YEAR.OUT

HRP8-EX_2-100 YEAR.OUT

HRP8-EX_2-100 YEAR.OUT

0.817	0.77	0.817	1.54	12.817	5.68	18.82	1.38
0.833	0.77	0.833	1.54	12.833	5.68	18.83	1.38
0.850	0.77	0.850	1.54	12.850	5.68	18.85	1.38
0.867	0.77	0.867	1.54	12.867	5.68	18.87	1.38
0.883	0.77	0.883	1.54	12.883	5.68	18.88	1.38
0.900	0.77	0.900	1.54	12.900	5.68	18.90	1.38
0.917	0.77	0.917	1.54	12.917	5.68	18.92	1.38
0.933	0.77	0.933	1.54	12.933	5.68	18.93	1.38
0.950	0.77	0.950	1.54	12.950	5.68	18.95	1.38
0.967	0.77	0.967	1.54	12.967	5.68	18.97	1.38
0.983	0.77	0.983	1.54	12.983	5.68	18.98	1.38
1.000	0.77	0.900	1.54	13.000	5.68	19.00	1.38
1.017	0.77	0.017	1.54	13.017	1.08	19.02	1.38
1.033	0.77	0.033	1.54	13.033	1.08	19.03	1.38
1.050	0.77	0.050	1.54	13.050	1.08	19.05	1.38
1.067	0.77	0.067	1.54	13.067	1.08	19.07	1.38
1.083	0.77	0.083	1.54	13.083	1.08	19.08	1.38
1.100	0.77	0.100	1.54	13.100	1.08	19.10	1.38
1.117	0.77	0.117	1.54	13.117	1.08	19.12	1.38
1.133	0.77	0.133	1.54	13.133	1.08	19.13	1.38
1.150	0.77	0.150	1.54	13.150	1.08	19.15	1.38
1.167	0.77	0.167	1.54	13.167	1.08	19.17	1.38
1.183	0.77	0.183	1.54	13.183	1.08	19.18	1.38
1.200	0.77	0.200	1.54	13.200	1.08	19.20	1.38
1.217	0.77	0.217	1.54	13.217	1.08	19.22	1.38
1.233	0.77	0.233	1.54	13.233	1.08	19.23	1.38
1.250	0.77	0.250	1.54	13.250	1.08	19.25	1.38
1.267	0.77	0.267	1.54	13.267	1.08	19.27	1.38
1.283	0.77	0.283	1.54	13.283	1.08	19.28	1.38
1.300	0.77	0.300	1.54	13.300	1.08	19.30	1.38
1.317	0.77	0.317	1.54	13.317	1.08	19.32	1.38
1.333	0.77	0.333	1.54	13.333	1.08	19.33	1.38
1.350	0.77	0.350	1.54	13.350	1.08	19.35	1.38
1.367	0.77	0.367	1.54	13.367	1.08	19.37	1.38
1.383	0.77	0.383	1.54	13.383	1.08	19.38	1.38
1.400	0.77	0.400	1.54	13.400	1.08	19.40	1.38
1.417	0.77	0.417	1.54	13.417	1.08	19.42	1.38
1.433	0.77	0.433	1.54	13.433	1.08	19.43	1.38
1.450	0.77	0.450	1.54	13.450	1.08	19.45	1.38
1.467	0.77	0.467	1.54	13.467	1.08	19.47	1.38
1.483	0.77	0.483	1.54	13.483	1.08	19.48	1.38
1.500	0.77	0.500	1.54	13.500	1.08	19.50	1.38
1.517	0.77	0.517	1.54	13.517	6.29	19.52	1.38
1.533	0.77	0.533	1.54	13.533	6.30	19.53	1.38
1.550	0.77	0.550	1.54	13.550	6.30	19.55	1.38
1.567	0.77	0.567	1.54	13.567	6.30	19.57	1.38
1.583	0.77	0.583	1.54	13.583	6.30	19.58	1.38
1.600	0.77	0.600	1.54	13.600	6.30	19.60	1.38
1.617	0.77	0.617	1.54	13.617	6.30	19.62	1.38
1.633	0.77	0.633	1.54	13.633	6.30	19.63	1.38
1.650	0.77	0.650	1.54	13.650	6.30	19.65	1.38
1.667	0.77	0.667	1.54	13.667	6.30	19.67	1.38
1.683	0.77	0.683	1.54	13.683	6.30	19.68	1.38
1.700	0.77	0.700	1.54	13.700	6.30	19.70	1.38
1.717	0.77	0.717	1.54	13.717	6.30	19.72	1.38
1.733	0.77	0.733	1.54	13.733	6.30	19.73	1.38
1.750	0.77	0.750	1.54	13.750	6.30	19.75	1.38
1.767	1.38	0.767	1.54	13.767	6.30	19.77	1.38
1.783	1.38	0.783	1.54	13.783	6.30	19.78	1.38
1.800	1.38	0.800	1.54	13.800	6.30	19.80	1.38
1.817	1.38	0.817	1.54	13.817	6.30	19.82	1.38
1.833	1.38	0.833	1.54	13.833	6.30	19.83	1.38
1.850	1.38	0.850	1.54	13.850	6.30	19.85	1.38
1.867	1.38	0.867	1.54	13.867	6.30	19.87	1.38
1.883	1.38	0.883	1.54	13.883	6.30	19.88	1.38
1.900	1.38	0.900	1.54	13.900	6.30	19.90	1.38
1.917	1.38	0.917	1.54	13.917	6.30	19.92	1.38
1.933	1.38	0.933	1.54	13.933	6.30	19.93	1.38
1.950	1.38	0.950	1.54	13.950	6.30	19.95	1.38
1.967	1.38	0.967	1.54	13.967	6.30	19.97	1.38
1.983	1.38	0.983	1.54	13.983	6.30	19.98	1.38
2.000	1.38	0.000	1.54	14.000	6.30	20.00	1.38
2.017	1.00	0.017	2.07	14.017	2.31	20.02	0.93
2.033	1.00	0.033	2.07	14.033	2.30	20.03	0.92
2.050	1.00	0.050	2.07	14.050	2.30	20.05	0.93
2.067	1.00	0.067	2.07	14.067	2.30	20.07	0.92
2.083	1.00	0.083	2.07	14.083	2.30	20.08	0.93
2.100	1.00	0.100	2.07	14.100	2.30	20.10	0.92
2.117	1.00	0.117	2.07	14.117	2.30	20.12	0.92
2.133	1.00	0.133	2.07	14.133	2.30	20.13	0.92
2.150	1.00	0.150	2.07	14.150	2.30	20.15	0.92
2.167	1.00	0.167	2.07	14.167	2.30	20.17	0.92
2.183	1.00	0.183	2.07	14.183	2.30	20.18	0.92
2.200	1.00	0.200	2.07	14.200	2.30	20.20	0.92
2.217	1.00	0.217	2.07	14.217	2.30	20.22	0.92
2.233	1.00	0.233	2.07	14.233	2.30	20.23	0.92
2.250	1.00	0.250	2.07	14.250	2.30	20.25	0.92

HRP8-EX_2-100 YEAR.OUT						
2.267	1.00	8.267	2.07	14.267	2.30	20.27 0.92
2.283	1.00	8.283	2.07	14.283	2.30	20.28 0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30 0.92
2.317	1.00	8.317	2.07	14.317	2.30	20.32 0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33 0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35 0.92
2.367	1.00	8.367	2.07	14.367	2.30	20.37 0.92
2.383	1.00	8.383	2.07	14.383	2.30	20.38 0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40 0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42 0.92
2.433	1.00	8.433	2.07	14.433	2.30	20.43 0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45 0.92
2.467	1.00	8.467	2.07	14.467	2.30	20.47 0.92
2.483	1.00	8.483	2.07	14.483	2.30	20.48 0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50 0.92
2.517	1.00	8.517	2.07	14.517	2.30	20.52 0.92
2.533	1.00	8.533	2.07	14.533	2.30	20.53 0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55 0.92
2.567	1.00	8.567	2.07	14.567	2.30	20.57 0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58 0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60 0.92
2.617	1.00	8.617	2.07	14.617	2.30	20.62 0.92
2.633	1.00	8.633	2.07	14.633	2.30	20.63 0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65 0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67 0.92
2.683	1.00	8.683	2.07	14.683	2.30	20.68 0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70 0.92
2.717	1.00	8.717	2.07	14.717	2.30	20.72 0.92
2.733	1.00	8.733	2.07	14.733	2.30	20.73 0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75 0.92
2.767	1.00	8.767	2.07	14.767	2.30	20.77 0.92
2.783	1.00	8.783	2.07	14.783	2.30	20.78 0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80 0.92
2.817	1.00	8.817	2.07	14.817	2.30	20.82 0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83 0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85 0.92
2.867	1.00	8.867	2.07	14.867	2.30	20.87 0.92
2.883	1.00	8.883	2.07	14.883	2.30	20.88 0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90 0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92 0.92
2.933	1.00	8.933	2.07	14.933	2.30	20.93 0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95 0.92
2.967	1.00	8.967	2.07	14.967	2.30	20.97 0.92
2.983	1.00	8.983	2.07	14.983	2.30	20.98 0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00 0.92
3.017	1.00	9.017	2.46	15.017	2.30	21.02 0.92
3.033	1.00	9.033	2.46	15.033	2.30	21.03 0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05 0.92
3.067	1.00	9.067	2.46	15.067	2.30	21.07 0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08 0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10 0.92
3.117	1.00	9.117	2.46	15.117	2.30	21.12 0.92
3.133	1.00	9.133	2.46	15.133	2.30	21.13 0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15 0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17 0.92
3.183	1.00	9.183	2.46	15.183	2.30	21.18 0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20 0.92
3.217	1.00	9.217	2.46	15.217	2.30	21.22 0.92
3.233	1.00	9.233	2.46	15.233	2.30	21.23 0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25 0.92
3.267	1.00	9.267	2.46	15.267	2.30	21.27 0.92
3.283	1.00	9.283	2.46	15.283	2.30	21.28 0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30 0.92
3.317	1.00	9.317	2.46	15.317	2.30	21.32 0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33 0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35 0.92
3.367	1.00	9.367	2.46	15.367	2.30	21.37 0.92
3.383	1.00	9.383	2.46	15.383	2.30	21.38 0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40 0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42 0.92
3.433	1.00	9.433	2.46	15.433	2.30	21.43 0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45 0.92
3.467	1.00	9.467	2.46	15.467	2.30	21.47 0.92
3.483	1.00	9.483	2.46	15.483	2.30	21.48 0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50 0.92
3.517	1.00	9.517	2.76	15.517	2.30	21.52 0.92
3.533	1.00	9.533	2.76	15.533	2.30	21.53 0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55 0.92
3.567	1.00	9.567	2.76	15.567	2.30	21.57 0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58 0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60 0.92
3.617	1.00	9.617	2.76	15.617	2.30	21.62 0.92
3.633	1.00	9.633	2.76	15.633	2.30	21.63 0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65 0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67 0.92
3.683	1.00	9.683	2.76	15.683	2.30	21.68 0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70 0.92

HRP8-EX_2-100 YEAR.OUT							
3.717	1.00	9.717	2.76	15.717	2.30	21.72	0.92
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.767	1.00	9.767	2.76	15.767	2.30	21.77	0.92
3.783	1.00	9.783	2.76	15.783	2.30	21.78	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.817	1.00	9.817	2.76	15.817	2.30	21.82	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92
3.883	1.00	9.883	2.76	15.883	2.30	21.88	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
3.967	1.00	9.967	2.76	15.967	2.30	21.97	0.92
3.983	1.00	9.983	2.76	15.983	2.30	21.98	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.017	1.23	10.017	3.53	16.017	1.38	22.02	0.92
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.117	1.23	10.117	3.53	16.117	1.38	22.12	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.183	1.23	10.183	3.53	16.183	1.38	22.18	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.217	1.23	10.217	3.53	16.217	1.38	22.22	0.92
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.283	1.23	10.283	3.53	16.283	1.38	22.28	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.317	1.23	10.317	3.53	16.317	1.38	22.32	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92
4.383	1.23	10.383	3.53	16.383	1.38	22.38	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92
4.483	1.23	10.483	3.53	16.483	1.38	22.48	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.517	1.23	10.517	4.76	16.517	1.38	22.52	0.92
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.617	1.23	10.617	4.76	16.617	1.38	22.62	0.92
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.683	1.23	10.683	4.76	16.683	1.38	22.68	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.717	1.23	10.717	4.76	16.717	1.38	22.72	0.92
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92
4.783	1.23	10.783	4.76	16.783	1.38	22.78	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.817	1.23	10.817	4.76	16.817	1.38	22.82	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92
4.883	1.23	10.883	4.76	16.883	1.38	22.88	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92
4.983	1.23	10.983	4.76	16.983	1.38	22.98	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.017	1.23	11.017	7.37	17.017	1.38	23.02	0.92
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.117	1.23	11.117	7.37	17.117	1.38	23.12	0.92
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92

HRP8-EX_2-100 YEAR.OUT

5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.183	1.23	11.183	7.37	17.183	1.38	23.18	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.217	1.23	11.217	7.37	17.217	1.38	23.22	0.92
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92
5.283	1.23	11.283	7.37	17.283	1.38	23.28	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.317	1.23	11.317	7.37	17.317	1.38	23.32	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92
5.383	1.23	11.383	7.37	17.383	1.38	23.38	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.483	1.23	11.483	7.37	17.483	1.38	23.48	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.517	1.23	11.517	31.94	17.517	1.38	23.52	0.92
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.617	1.23	11.617	31.95	17.617	1.38	23.62	0.92
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.683	1.23	11.683	31.95	17.683	1.38	23.68	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.717	1.23	11.717	31.95	17.717	1.38	23.72	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.767	1.23	11.767	84.76	17.767	1.38	23.77	0.92
5.783	1.23	11.783	84.79	17.783	1.38	23.78	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.817	1.23	11.817	84.79	17.817	1.38	23.82	0.92
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92
5.883	1.23	11.883	84.79	17.883	1.38	23.88	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92
5.983	1.23	11.983	84.79	17.983	1.38	23.98	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.580

PEAK FLOW (cms)= 0.206 (i)
TIME TO PEAK (hrs)= 12.033
RUNOFF VOLUME (mm)= 30.592
TOTAL RAINFALL (mm)= 76.001
RUNOFF COEFFICIENT = 0.398

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0153):	1.70	0.206	12.03	30.59
+ ID2= 2 (0036):	87.75	3.240	12.80	41.92
=====				
ID = 3 (0035):	89.45	3.259	12.80	37.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0038)				
ID= 1 DT= 8.0 min	Area	(ha)= 87.75	Curve Number (CN)= 82.0	
	Ia	(mm)= 5.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)=	0.92		

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

HRP8-EX_2-100 YEAR.OUT

0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.533	0.77	6.533	1.54	12.533	9.72	18.53	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38
1.067	0.77	7.067	1.54	13.067	3.38	19.07	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38
1.600	0.77	7.600	1.54	13.600	4.99	19.60	1.38
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38
1.867	1.31	7.867	1.54	13.867	6.30	19.87	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92
3.067	1.00	9.067	2.27	15.067	2.30	21.07	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92
3.600	1.00	9.600	2.69	15.600	2.30	21.60	0.92
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.533	1.23	10.533	3.84	16.533	1.38	22.53	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
5.067	1.23	11.067	6.07	17.067	1.38	23.07	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.600	1.23	11.600	25.80	17.600	1.38	23.60	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.867	1.23	11.867	78.18	17.867	1.38	23.87	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 3.643

PEAK FLOW (cms)= 3.069 (i)
TIME TO PEAK (hrs)= 12.800
RUNOFF VOLUME (mm)= 40.414
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.526

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

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DATE: 03/24/2023

TIME: 11:05:54

USER:

HRP8-EX_2-100 YEAR.OUT

1.000	0.89	7.000	1.78	10.000	6.56	19.00	1.60
1.033	0.89	7.033	1.78	10.033	1.24	19.03	1.60
1.067	0.89	7.067	1.78	10.067	1.24	19.07	1.60
1.100	0.89	7.100	1.78	10.100	1.24	19.10	1.60
1.133	0.89	7.133	1.78	10.133	1.24	19.13	1.60
1.167	0.89	7.167	1.78	10.167	1.24	19.17	1.60
1.200	0.89	7.200	1.78	10.200	1.24	19.20	1.60
1.233	0.89	7.233	1.78	10.233	1.24	19.23	1.60
1.267	0.89	7.267	1.78	10.267	1.24	19.27	1.60
1.300	0.89	7.300	1.78	10.300	1.24	19.30	1.60
1.333	0.89	7.333	1.78	10.333	1.24	19.33	1.60
1.367	0.89	7.367	1.78	10.367	1.24	19.37	1.60
1.400	0.89	7.400	1.78	10.400	1.24	19.40	1.60
1.433	0.89	7.433	1.78	10.433	1.24	19.43	1.60
1.467	0.89	7.467	1.78	10.467	1.24	19.47	1.60
1.500	0.89	7.500	1.78	10.500	1.26	19.50	1.60
1.533	0.89	7.533	1.78	10.533	7.28	19.53	1.60
1.567	0.89	7.567	1.78	10.567	7.28	19.57	1.60
1.600	0.89	7.600	1.78	10.600	7.28	19.60	1.60
1.633	0.89	7.633	1.78	10.633	7.28	19.63	1.60
1.667	0.89	7.667	1.78	10.667	7.28	19.67	1.60
1.700	0.89	7.700	1.78	10.700	7.28	19.70	1.60
1.733	0.89	7.733	1.78	10.733	7.28	19.73	1.60
1.767	1.24	7.767	1.78	10.767	7.28	19.77	1.60
1.800	1.60	7.800	1.78	10.800	7.28	19.80	1.60
1.833	1.60	7.833	1.78	10.833	7.28	19.83	1.60
1.867	1.60	7.867	1.78	10.867	7.28	19.87	1.60
1.900	1.60	7.900	1.78	10.900	7.28	19.90	1.60
1.933	1.60	7.933	1.78	10.933	7.28	19.93	1.60
1.967	1.60	7.967	1.78	10.967	7.28	19.97	1.60
2.000	1.60	8.000	1.78	10.000	7.27	20.00	1.60
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.97
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.97
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.97
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.97
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.97
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.97
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.97
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.97
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.97
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.97
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.97
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.97
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.97
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.97
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.97
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.97
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.97
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.97
2.633	1.15	8.633	2.40	14.633	2.66	20.63	

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	ata\Local\Temp\
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Ptotal= 88.80 mm	Comments: Mass 24-Hour SCS Type II Design Storm

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.68
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.68
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.68
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.68
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.68
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.68
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.68
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.68
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.67
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.67
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.67
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.67
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.67
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.67
3.75	1.15	9.75	2.84	15.75	2.66	21.75	1.67
4.00	1.42	10.00	3.20	16.00	2.66	22.00	1.67
4.25	1.42	10.25	4.08	16.25	1.69	22.25	1.67
4.50	1.42	10.50	4.08	16.50	1.69	22.50	1.67
4.75	1.42	10.75	5.51	16.75	1.69	22.75	1.67
5.00	1.42	11.00	5.51	17.00	1.69	23.00	1.67
5.25	1.42	11.25	8.42	17.25	1.69	23.25	1.67
5.50	1.42	11.50	8.52	17.50	1.69	23.50	1.67
5.75	1.42	11.75	36.94	17.75	1.69	23.75	1.67
6.00	1.42	12.00	98.04	18.00	1.69	24.00	1.67

CALIB	Area (ha)=	4.49	Curve Number (CN)=	77.0
NASHYD (1050)	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 2.0 min	U.H. Tp(hrs)=	0.17		

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.89	6.833	1.78	12.033	12.79	18.03	1.60
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.16	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60

HRP8-EX_2-100 YEAR.OUT

3.900	1.15		9.900	3.20		15.900	2.66		21.90	1.07
3.933	1.15		9.933	3.20		15.933	2.66		21.93	1.07
3.967	1.15		9.967	3.20		15.967	2.66		21.97	1.07
4.000	1.15		10.000	3.20		16.000	2.66		22.00	1.07
4.033	1.42		10.033	4.08		16.033	1.60		22.03	1.07
4.067	1.42		10.067	4.08		16.067	1.60		22.07	1.07
4.100	1.42		10.100	4.08		16.100	1.60		22.10	1.07
4.133	1.42		10.133	4.08		16.133	1.60		22.13	1.07
4.167	1.42		10.167	4.08		16.167	1.60		22.17	1.07
4.200	1.42		10.200	4.08		16.200	1.60		22.20	1.07
4.233	1.42		10.233	4.08		16.233	1.60		22.23	1.07
4.267	1.42		10.267	4.08		16.267	1.60		22.27	1.07
4.300	1.42		10.300	4.08		16.300	1.60		22.30	1.07
4.333	1.42		10.333	4.08		16.333	1.60		22.33	1.07
4.367	1.42		10.367	4.08		16.367	1.60		22.37	1.07
4.400	1.42		10.400	4.08		16.400	1.60		22.40	1.07
4.433	1.42		10.433	4.08		16.433	1.60		22.43	1.07
4.467	1.42		10.467	4.08		16.467	1.60		22.47	1.07
4.500	1.42		10.500	4.09		16.500	1.60		22.50	1.07
4.533	1.42		10.533	5.51		16.533	1.60		22.53	1.07
4.567	1.42		10.567	5.51		16.567	1.60		22.57	1.07
4.600	1.42		10.600	5.51		16.600	1.60		22.60	1.07
4.633	1.42		10.633	5.51		16.633	1.60		22.63	1.07
4.667	1.42		10.667	5.51		16.667	1.60		22.67	1.07
4.700	1.42		10.700	5.51		16.700	1.60		22.70	1.07
4.733	1.42		10.733	5.51		16.733	1.60		22.73	1.07
4.767	1.42		10.767	5.51		16.767	1.60		22.77	1.07
4.800	1.42		10.800	5.51		16.800	1.60		22.80	1.07
4.833	1.42		10.833	5.51		16.833	1.60		22.83	1.07
4.867	1.42		10.867	5.51		16.867	1.60		22.87	1.07
4.900	1.42		10.900	5.51		16.900	1.60		22.90	1.07
4.933	1.42		10.933	5.51		16.933	1.60		22.93	1.07
4.967	1.42		10.967	5.51		16.967	1.60		22.97	1.07
5.000	1.42		11.000	5.51		17.000	1.60		23.00	1.07
5.033	1.42		11.033	8.52		17.033	1.60		23.03	1.07
5.067	1.42		11.067	8.52		17.067	1.60		23.07	1.07
5.100	1.42		11.100	8.52		17.100	1.60		23.10	1.07
5.133	1.42		11.133	8.52		17.133	1.60		23.13	1.07
5.167	1.42		11.167	8.52		17.167	1.60		23.17	1.07
5.200	1.42		11.200	8.52		17.200	1.60		23.20	1.07
5.233	1.42		11.233	8.52		17.233	1.60		23.23	1.07
5.267	1.42		11.267	8.52		17.267	1.60		23.27	1.07
5.300	1.42		11.300	8.52		17.300	1.60		23.30	1.07
5.333	1.42		11.333	8.52		17.333	1.60		23.33	1.07
5.367	1.42		11.367	8.52		17.367	1.60		23.37	1.07
5.400	1.42		11.400	8.52		17.400	1.60		23.40	1.07
5.433	1.42		11.433	8.52		17.433	1.60		23.43	1.07
5.467	1.42		11.467	8.52		17.467	1.60		23.47	1.07
5.500	1.42		11.500	8.56		17.500	1.60		23.50	1.07
5.533	1.42		11.533	36.94		17.533	1.60		23.53	1.07
5.567	1.42		11.567	36.94		17.567	1.60		23.57	1.07
5.600	1.42		11.600	36.94		17.600	1.60		23.60	1.07
5.633	1.42		11.633	36.94		17.633	1.60		23.63	1.07
5.667	1.42		11.667	36.94		17.667	1.60		23.67	1.07
5.700	1.42		11.700	36.94		17.700	1.60		23.70	1.07
5.733	1.42		11.733	36.94		17.733	1.60		23.73	1.07
5.767	1.42		11.767	67.57		17.767	1.60		23.77	1.07
5.800	1.42		11.800	98.04		17.800	1.60		23.80	1.07
5.833	1.42		11.833	98.04		17.833	1.60		23.83	1.07
5.867	1.42		11.867	98.04		17.867	1.60		23.87	1.07
5.900	1.42		11.900	98.04		17.900	1.60		23.90	1.07
5.933	1.42		11.933	98.04		17.933	1.60		23.93	1.07
5.967	1.42		11.967	98.04		17.967	1.60		23.97	1.07
6.000	1.42		12.000	97.92		18.000	1.60		24.00	1.07

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.536 (1)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 43.976
TOTAL RAINFALL (mm)= 88.799
RUNOFF COEFFICIENT = 0.495

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
NASHYD (0150)	Area (ha)=	6.87	Curve Number (CN)=	82.0
ID= 1 DT= 2.0 min	Id	5.00	# of Linear Res.(N)=	3.00
-----	U.H. Tp(hrs)=	0.19		

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

HRP8-EX_2-100 YEAR.OUT

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60
1.000	0.89	7.000	1.78	13.000	6.56	19.00	1.60
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60
1.500	0.89	7.500	1.78	13.500	1.26	19.50	1.60
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60
1.767	1.24	7.767	1.78	13.767	7.28	19.77	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60
2.000	1.60	8.000	1.78	14.000	7.27	20.00	1.60
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.60
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.60
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.60
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.60
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.60
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.60
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.60
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.60
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.60
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.60
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.60
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.60
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.60
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.60
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.60
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.60
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.60
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.60
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.60
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.60
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.60
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.60
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.60
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.60
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.60
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.60

HRP8-EX_2-100 YEAR.OUT

2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.033	1.15	9.033	2.40	15.033	2.66	21.03	1.07
3.067	1.15	9.067	2.40	15.067	2.66	21.07	1.07
3.100	1.15	9.100	2.40	15.100	2.66	21.10	1.07
3.133	1.15	9.133	2.40	15.133	2.66	21.13	1.07
3.167	1.15	9.167	2.40	15.167	2.66	21.17	1.07
3.200	1.15	9.200	2.40	15.200	2.66	21.20	1.07
3.233	1.15	9.233	2.40	15.233	2.66	21.23	1.07
3.267	1.15	9.267	2.40	15.267	2.66	21.27	1.07
3.300	1.15	9.300	2.40	15.300	2.66	21.30	1.07
3.333	1.15	9.333	2.40	15.333	2.66	21.33	1.07
3.367	1.15	9.367	2.40	15.367	2.66	21.37	1.07
3.400	1.15	9.400	2.40	15.400	2.66	21.40	1.07
3.433	1.15	9.433	2.40	15.433	2.66	21.43	1.07
3.467	1.15	9.467	2.40	15.467	2.66	21.47	1.07
3.500	1.15	9.500	2.40	15.500	2.66	21.50	1.07
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.367	1.42	11.367	8.52	17.367	1.60	23.37	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07
5.500	1.42	11.500	8.56	17.500	1.60	23.50	1.07
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07
5.767	1.42	11.767	67.57	17.767	1.60	23.77	1.07

HRP8-EX_2-100 YEAR.OUT

5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07
5.967	1.42	11.967	98.04	17.967	1.60	23.97	1.07
6.000	1.42	12.000	97.92	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.346

PEAK FLOW (cms)= 0.877 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 50.316
TOTAL RAINFALL (mm)= 88.799
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1050):	4.49	0.536	12.07	43.98	
+ ID2= 2 (0150):	6.87	0.877	12.07	50.32	
=====					
ID = 3 (0018):	11.36	1.413	12.07	47.81	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0037)|
| IN= 2---> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->							
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME		
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)		
0.05	100.05	.636E+02	0.0	0.33	58.96		
0.09	100.09	.143E+03	0.1	0.50	39.44		
0.14	100.14	.239E+03	0.1	0.63	31.47		
0.19	100.19	.350E+03	0.2	0.73	26.89		
0.24	100.24	.477E+03	0.3	0.83	23.81		
0.28	100.28	.620E+03	0.5	0.91	21.56		
0.33	100.33	.779E+03	0.7	0.99	19.82		
0.39	100.39	.988E+03	1.0	1.14	17.21		
0.44	100.44	.122E+04	1.3	1.27	15.53		
0.50	100.50	.147E+04	1.7	1.37	14.34		
0.55	100.55	.174E+04	2.2	1.46	13.44		
0.61	100.61	.204E+04	2.7	1.54	12.74		
0.66	100.66	.236E+04	3.2	1.62	12.17		
0.72	100.72	.269E+04	3.8	1.68	11.70		
0.78	100.78	.306E+04	4.5	1.74	11.30		
0.83	100.83	.344E+04	5.2	1.80	10.96		
0.89	100.89	.385E+04	6.0	1.85	10.65		
0.94	100.94	.427E+04	6.9	1.90	10.38		
1.00	101.00	.472E+04	7.8	1.94	10.14		

<---- hydrograph ---->							
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		(ha)	(cms)	(hrs)	(mm)	(ft)	(m/s)
INFLOW : ID= 2 (0018)	11.36	1.41	12.07	47.81	0.46	1.29	
OUTFLOW: ID= 1 (0037)	11.36	0.99	12.20	47.78	0.39	1.15	

| CALIB
| NASHYD (1051) | Area (ha)= 50.34 Curve Number (CN)= 82.0
| ID= 1 DT= 8.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.63

NOTE: RAINFALL WAS TRANSFORMED TO 8.

HRP8-EX_2-100 YEAR.OUT

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.533	0.89	6.533	1.78	12.533	11.23	18.53	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60
1.067	0.89	7.067	1.78	13.067	3.91	19.07	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60
1.600	0.89	7.600	1.78	13.600	5.77	19.60	1.60
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60
1.867	1.51	7.867	1.78	13.867	7.28	19.87	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07
3.067	1.15	9.067	2.62	15.067	2.66	21.07	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07
3.600	1.15	9.600	3.11	15.600	2.66	21.60	1.07
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.533	1.42	10.533	4.44	16.533	1.60	22.53	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07
5.067	1.42	11.067	7.02	17.067	1.60	23.07	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07
5.600	1.42	11.600	29.84	17.600	1.60	23.60	1.07
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07
5.867	1.42	11.867	98.40	17.867	1.60	23.87	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 2.906 (1)
 TIME TO PEAK (hrs)= 12.533
 RUNOFF VOLUME (mm)= 50.313
 TOTAL RAINFALL (mm)= 88.000
 RUNOFF COEFFICIENT = 0.567

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

----- ADD HYD (0029) -----				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1051):	50.34	2.906	12.53	50.31
+ ID2= 2 (0037):	11.36	0.989	12.20	47.78
=====				
ID = 3 (0029):	61.70	3.656	12.40	49.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

----- CALIB -----			
STANDHYD (0151)	Area	(ha)=	10.65
ID= 1 DT= 3.0 min	Total Imp(%)=	29.00	Dir. Conn.(%)= 29.00

	IMPERVIOUS	PERVIOUS (1)
Surface Area (ha)=	3.09	7.56
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	272.00	272.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP8-EX_2-100 YEAR.OUT

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07

HRP8-EX_2-100 YEAR.OUT

4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 27.20
over (min) 6.00 42.00
Storage Coeff. (min)= 3.81 (ii) 41.34 (iii)
Unit Hyd. Tpeak (min)= 6.00 42.00
Unit Hyd. peak (cms)= 0.24 0.03

TOTALS
0.952 (iii)
12.00
54.39
88.80
0.61

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0151):	10.65	0.952	12.00	54.39
+ ID2= 2 (0029):	61.70	3.656	12.40	49.85
=====				
ID = 3 (0031):	72.35	4.075	12.40	50.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0039)
| IN= 2---> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 /0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 /0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)

HRP8-EX_2-100 YEAR.OUT

0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.998E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

<---- hydrograph ---->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0031)	72.35	4.08	12.40	50.51	0.99
OUTFLOW: ID= 1 (0039)	72.35	3.94	12.53	50.51	0.97

| CALIB
| STANDHYD (0152)| Area (ha)= 15.40
|ID= 1 DT= 3.0 min| Total Imp(%)= 43.00 Dir. Conn.(%)= 43.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)= 6.62	8.78
Dep. Storage	(mm)= 1.50	1.50
Average Slope	(%)= 2.00	2.00
Length	(m)= 335.00	335.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60

HRP8-EX_2-100 YEAR.OUT

2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 21.65
over (min) 6.00 51.00
Storage Coeff. (min)= 4.32 (ii) 50.91 (ii)
Unit Hyd. Tpeak (min)= 6.00 51.00
Unit Hyd. peak (cms)= 0.23 0.02

TOTALS

HRP8-EX_2-100 YEAR.OUT

PEAK FLOW (cms)=	1.75	0.32	1.848 (iii)
TIME TO PEAK (hrs)=	12.00	12.75	12.00
RUNOFF VOLUME (mm)=	87.30	37.83	59.10
TOTAL RAINFALL (mm)=	88.80	88.80	88.80
RUNOFF COEFFICIENT =	0.98	0.43	0.67

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0152):	15.40	1.848	12.00	59.10
+ ID2= 2 (0039):	72.35	3.939	12.53	50.51
ID = 3 (0033):	87.75	4.447	12.50	52.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)	Routing time step (min)= 2.00
IN= 2----> OUT= 1	

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.296E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53
0.72	100.72	.655E+03	2.1	0.90	5.32
0.78	100.78	.743E+03	2.4	0.93	5.14
0.83	100.83	.836E+03	2.8	0.96	4.98
0.89	100.89	.934E+03	3.2	0.99	4.84
0.94	100.94	.104E+04	3.7	1.01	4.72
1.00	101.00	.115E+04	4.1	1.04	4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ---->		<-pipe / channel->				
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)	
INFLOW : ID= 2 (0033)	87.75	4.45	12.50	52.02	1.00	1.04
OUTFLOW: ID= 1 (0040)	87.75	4.40	12.57	52.02	1.00	1.04

RESERVOIR(0036)	OVERFLOW IS OFF
IN= 2----> OUT= 1	
DT= 4.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	1.5621	0.7845
0.0206	0.1029	3.2275	0.8811
0.0461	0.1764	5.2638	0.9799
0.0618	0.2539	7.6097	1.0811
0.0743	0.3353	10.2263	1.1844
0.0850	0.4205	13.0858	1.2900
0.0945	0.5081	16.1669	1.3979
0.1031	0.5980	19.5735	1.5082

HRP8-EX_2-100 YEAR.OUT

0.1071	0.6438	23.5541	1.6210
0.3892	0.6901	35.0828	1.9135
AREA	OPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	87.750	4.404	12.57
OUTFLOW: ID= 1 (0036)	87.750	4.259	12.73
			51.68

PEAK FLOW REDUCTION [Qout/Qin](%)= 96.71
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.9312

CALIB	Area (ha)=	1.70	Curve Number (CN)=	79.0
NASHYD (0153)	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 1.0 min	U.H. Tp(hrs)=	0.11		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.017	0.89	6.017	1.78	12.017	12.85	18.02	1.60		
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60		
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60		
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60		
0.083	0.89	6.083	1.78	12.083	12.79	18.08	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.117	0.89	6.117	1.78	12.117	12.79	18.12	1.60		
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60		
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60		
0.183	0.89	6.183	1.78	12.183	12.79	18.18	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.217	0.89	6.217	1.78	12.217	12.79	18.22	1.60		
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60		
0.283	0.89	6.283	1.78	12.283	12.79	18.28	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.317	0.89	6.317	1.78	12.317	12.79	18.32	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60		
0.383	0.89	6.383	1.78	12.383	12.79	18.38	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60		
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60		
0.483	0.89	6.483	1.78	12.483	12.79	18.48	1.60		
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60		
0.517	0.89	6.517	1.78	12.517	6.58	18.52	1.60		
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60		
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60		
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.617	0.89	6.617	1.78	12.617	6.57	18.62	1.60		
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.683	0.89	6.683	1.78	12.683	6.57	18.68	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.717	0.89	6.717	1.78	12.717	6.57	18.72	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60		
0.783	0.89	6.783	1.78	12.783	6.57	18.78	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.817	0.89	6.817	1.78	12.817	6.57	18.82	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.883	0.89	6.883	1.78	12.883	6.57	18.88	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60		
0.983	0.89	6.983	1.78	12.983	6.57	18.98	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.017	0.89	7.017	1.78	13.017	1.25	19.02	1.60		
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60		

HRP8-EX_2-100 YEAR.OUT

1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.117	0.89	7.117	1.78	13.117	1.24	19.12	1.60
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.183	0.89	7.183	1.78	13.183	1.24	19.18	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.217	0.89	7.217	1.78	13.217	1.24	19.22	1.60
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60
1.283	0.89	7.283	1.78	13.283	1.24	19.28	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.317	0.89	7.317	1.78	13.317	1.24	19.32	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60
1.383	0.89	7.383	1.78	13.383	1.24	19.38	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60
1.483	0.89	7.483	1.78	13.483	1.24	19.48	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.517	0.89	7.517	1.78	13.517	7.27	19.52	1.60
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.617	0.89	7.617	1.78	13.617	7.28	19.62	1.60
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.683	0.89	7.683	1.78	13.683	7.28	19.68	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.717	0.89	7.717	1.78	13.717	7.28	19.72	1.60
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.767	1.60	7.767	1.78	13.767	7.28	19.77	1.60
1.783	1.60	7.783	1.78	13.783	7.28	19.78	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.817	1.60	7.817	1.78	13.817	7.28	19.82	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60
1.883	1.60	7.883	1.78	13.883	7.28	19.88	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60
1.983	1.60	7.983	1.78	13.983	7.28	19.98	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.017	1.15	8.017	2.40	14.017	2.68	20.02	1.07
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.117	1.15	8.117	2.40	14.117	2.66	20.12	1.07
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.183	1.15	8.183	2.40	14.183	2.66	20.18	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.217	1.15	8.217	2.40	14.217	2.66	20.22	1.07
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07
2.283	1.15	8.283	2.40	14.283	2.66	20.28	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.317	1.15	8.317	2.40	14.317	2.66	20.32	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07
2.383	1.15	8.383	2.40	14.383	2.66	20.38	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07
2.483	1.15	8.483	2.40	14.483	2.66	20.48	1.07

HRP8-EX_2-100 YEAR.OUT						
2.500	1.15	8.500	2.40	14.500	2.66	20.50 1.07
2.517	1.15	8.517	2.40	14.517	2.66	20.52 1.07
2.533	1.15	8.533	2.40	14.533	2.66	20.53 1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55 1.07
2.567	1.15	8.567	2.40	14.567	2.66	20.57 1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58 1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60 1.07
2.617	1.15	8.617	2.40	14.617	2.66	20.62 1.07
2.633	1.15	8.633	2.40	14.633	2.66	20.63 1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65 1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67 1.07
2.683	1.15	8.683	2.40	14.683	2.66	20.68 1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70 1.07
2.717	1.15	8.717	2.40	14.717	2.66	20.72 1.07
2.733	1.15	8.733	2.40	14.733	2.66	20.73 1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75 1.07
2.767	1.15	8.767	2.40	14.767	2.66	20.77 1.07
2.783	1.15	8.783	2.40	14.783	2.66	20.78 1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80 1.07
2.817	1.15	8.817	2.40	14.817	2.66	20.82 1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83 1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85 1.07
2.867	1.15	8.867	2.40	14.867	2.66	20.87 1.07
2.883	1.15	8.883	2.40	14.883	2.66	20.88 1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90 1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92 1.07
2.933	1.15	8.933	2.40	14.933	2.66	20.93 1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95 1.07
2.967	1.15	8.967	2.40	14.967	2.66	20.97 1.07
2.983	1.15	8.983	2.40	14.983	2.66	20.98 1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00 1.07
3.017	1.15	9.017	2.84	15.017	2.66	21.02 1.07
3.033	1.15	9.033	2.84	15.033	2.66	21.03 1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05 1.07
3.067	1.15	9.067	2.84	15.067	2.66	21.07 1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08 1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10 1.07
3.117	1.15	9.117	2.84	15.117	2.66	21.12 1.07
3.133	1.15	9.133	2.84	15.133	2.66	21.13 1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15 1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17 1.07
3.183	1.15	9.183	2.84	15.183	2.66	21.18 1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20 1.07
3.217	1.15	9.217	2.84	15.217	2.66	21.22 1.07
3.233	1.15	9.233	2.84	15.233	2.66	21.23 1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25 1.07
3.267	1.15	9.267	2.84	15.267	2.66	21.27 1.07
3.283	1.15	9.283	2.84	15.283	2.66	21.28 1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30 1.07
3.317	1.15	9.317	2.84	15.317	2.66	21.32 1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33 1.07
3.350	1.15	9.350	2.84	15.350	2.66	21.35 1.07
3.367	1.15	9.367	2.84	15.367	2.66	21.37 1.07
3.383	1.15	9.383	2.84	15.383	2.66	21.38 1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40 1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42 1.07
3.433	1.15	9.433	2.84	15.433	2.66	21.43 1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45 1.07
3.467	1.15	9.467	2.84	15.467	2.66	21.47 1.07
3.483	1.15	9.483	2.84	15.483	2.66	21.48 1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50 1.07
3.517	1.15	9.517	3.20	15.517	2.66	21.52 1.07
3.533	1.15	9.533	3.20	15.533	2.66	21.53 1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55 1.07
3.567	1.15	9.567	3.20	15.567	2.66	21.57 1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58 1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60 1.07
3.617	1.15	9.617	3.20	15.617	2.66	21.62 1.07
3.633	1.15	9.633	3.20	15.633	2.66	21.63 1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65 1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67 1.07
3.683	1.15	9.683	3.20	15.683	2.66	21.68 1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70 1.07
3.717	1.15	9.717	3.20	15.717	2.66	21.72 1.07
3.733	1.15	9.733	3.20	15.733	2.66	21.73 1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75 1.07
3.767	1.15	9.767	3.20	15.767	2.66	21.77 1.07
3.783	1.15	9.783	3.20	15.783	2.66	21.78 1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80 1.07
3.817	1.15	9.817	3.20	15.817	2.66	21.82 1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83 1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85 1.07
3.867	1.15	9.867	3.20	15.867	2.66	21.87 1.07
3.883	1.15	9.883	3.20	15.883	2.66	21.88 1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90 1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92 1.07
3.933	1.15	9.933	3.20	15.933	2.66	21.93 1.07

HRP8-EX_2-100 YEAR.OUT						
3.950	1.15	9.950	3.20	15.950	2.66	21.95 1.07
3.967	1.15	9.967	3.20	15.967	2.66	21.97 1.07
3.983	1.15	9.983	3.20	15.983	2.66	21.98 1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00 1.07
4.017	1.42	10.017	4.08	16.017	1.60	22.02 1.07
4.033	1.42	10.033	4.08	16.033	1.60	22.03 1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05 1.07
4.067	1.42	10.067	4.08	16.067	1.60	22.07 1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08 1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10 1.07
4.117	1.42	10.117	4.08	16.117	1.60	22.12 1.07
4.133	1.42	10.133	4.08	16.133	1.60	22.13 1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15 1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17 1.07
4.183	1.42	10.183	4.08	16.183	1.60	22.18 1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20 1.07
4.217	1.42	10.217	4.08	16.217	1.60	22.22 1.07
4.233	1.42	10.233	4.08	16.233	1.60	22.23 1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25 1.07
4.267	1.42	10.267	4.08	16.267	1.60	22.27 1.07
4.283	1.42	10.283	4.08	16.283	1.60	22.28 1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30 1.07
4.317	1.42	10.317	4.08	16.317	1.60	22.32 1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33 1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35 1.07
4.367	1.42	10.367	4.08	16.367	1.60	22.37 1.07
4.383	1.42	10.383	4.08	16.383	1.60	22.38 1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40 1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42 1.07
4.433	1.42	10.433	4.08	16.433	1.60	22.43 1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45 1.07
4.467	1.42	10.467	4.08	16.467	1.60	22.47 1.07
4.483	1.42	10.483	4.08	16.483	1.60	22.48 1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50 1.07
4.517	1.42	10.517	5.51	16.517	1.60	22.52 1.07
4.533	1.42	10.533	5.51	16.533	1.60	22.53 1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55 1.07
4.567	1.42	10.567	5.51	16.567	1.60	22.57 1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58 1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60 1.07
4.617	1.42	10.617	5.51	16.617	1.60	22.62 1.07
4.633	1.42	10.633	5.51	16.633	1.60	22.63 1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65 1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67 1.07
4.683	1.42	10.683	5.51	16.683	1.60	22.68 1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70 1.07
4.717	1.42	10.717	5.51	16.717	1.60	22.72 1.07
4.733	1.42	10.733	5.51	16.733	1.60	22.73 1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75 1.07
4.767	1.42	10.767	5.51	16.767	1.60	22.77 1.07
4.783	1.42	10.783	5.51	16.783	1.60	22.78 1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80 1.07
4.817	1.42	10.817	5.51	16.817	1.60	22.82 1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83 1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85 1.07
4.867	1.42	10.867	5.51	16.867	1.60	22.87 1.07
4.883	1.42	10.883	5.51	16.883	1.60	22.88 1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90 1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92 1.07
4.933	1.42	10.933	5.51	16.933	1.60	22.93 1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95 1.07
4.967	1.42	10.967	5.51	16.967	1.60	22.97 1.07
4.983	1.42	10.983	5.51	16.983	1.60	22.98 1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00 1.07
5.017	1.42	11.017	8.52	17.017	1.60	23.02 1.07
5.033	1.42	11.033	8.52	17.033	1.60	23.03 1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05 1.07
5.067	1.42	11.067	8.52	17.067	1.60	23.07 1.07

HRP8-EX_2-100 YEAR.OUT									
5.400	1.42	[11.400	8.52	[17.400	1.60	[23.40	1.07		
5.417	1.42	[11.417	8.52	[17.417	1.60	[23.42	1.07		
5.433	1.42	[11.433	8.52	[17.433	1.60	[23.43	1.07		
5.450	1.42	[11.450	8.52	[17.450	1.60	[23.45	1.07		
5.467	1.42	[11.467	8.52	[17.467	1.60	[23.47	1.07		
5.483	1.42	[11.483	8.52	[17.483	1.60	[23.48	1.07		
5.500	1.42	[11.500	8.52	[17.500	1.60	[23.50	1.07		
5.517	1.42	[11.517	36.93	[17.517	1.60	[23.52	1.07		
5.533	1.42	[11.533	36.94	[17.533	1.60	[23.53	1.07		
5.550	1.42	[11.550	36.94	[17.550	1.60	[23.55	1.07		
5.567	1.42	[11.567	36.94	[17.567	1.60	[23.57	1.07		
5.583	1.42	[11.583	36.94	[17.583	1.60	[23.58	1.07		
5.600	1.42	[11.600	36.94	[17.600	1.60	[23.60	1.07		
5.617	1.42	[11.617	36.94	[17.617	1.60	[23.62	1.07		
5.633	1.42	[11.633	36.94	[17.633	1.60	[23.63	1.07		
5.650	1.42	[11.650	36.94	[17.650	1.60	[23.65	1.07		
5.667	1.42	[11.667	36.94	[17.667	1.60	[23.67	1.07		
5.683	1.42	[11.683	36.94	[17.683	1.60	[23.68	1.07		
5.700	1.42	[11.700	36.94	[17.700	1.60	[23.70	1.07		
5.717	1.42	[11.717	36.94	[17.717	1.60	[23.72	1.07		
5.733	1.42	[11.733	36.94	[17.733	1.60	[23.73	1.07		
5.750	1.42	[11.750	36.94	[17.750	1.60	[23.75	1.07		
5.767	1.42	[11.767	98.01	[17.767	1.60	[23.77	1.07		
5.783	1.42	[11.783	98.04	[17.783	1.60	[23.78	1.07		
5.800	1.42	[11.800	98.04	[17.800	1.60	[23.80	1.07		
5.817	1.42	[11.817	98.04	[17.817	1.60	[23.82	1.07		
5.833	1.42	[11.833	98.04	[17.833	1.60	[23.83	1.07		
5.850	1.42	[11.850	98.04	[17.850	1.60	[23.85	1.07		
5.867	1.42	[11.867	98.04	[17.867	1.60	[23.87	1.07		
5.883	1.42	[11.883	98.04	[17.883	1.60	[23.88	1.07		
5.900	1.42	[11.900	98.04	[17.900	1.60	[23.90	1.07		
5.917	1.42	[11.917	98.04	[17.917	1.60	[23.92	1.07		
5.933	1.42	[11.933	98.04	[17.933	1.60	[23.93	1.07		
5.950	1.42	[11.950	98.04	[17.950	1.60	[23.95	1.07		
5.967	1.42	[11.967	98.04	[17.967	1.60	[23.97	1.07		
5.983	1.42	[11.983	98.04	[17.983	1.60	[23.98	1.07		
6.000	1.42	[12.000	98.04	[18.000	1.60	[24.00	1.07		

Unit Hyd Qpeak (cms)= 0.580

PEAK FLOW (cms)= 0.250 (i)
TIME TO PEAK (hrs)= 12.033
RUNOFF VOLUME (mm)= 38.628
TOTAL RAINFALL (mm)= 88.801
RUNOFF COEFFICIENT = 0.435

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0153):	1.70	0.250	12.03	38.63
+ ID2= 2 (0036):	87.75	4.259	12.73	51.68
ID = 3 (0035):	89.45	4.286	12.73	47.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (0038)	Area	(ha)=	87.75
ID= 1 DT= 8.0 min	Ia	(mm)=	5.00
	U.H. Tp(hrs)=		0.92

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60		
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.533	0.89	6.533	1.78	12.533	11.23	18.53	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
1.067	0.89	7.067	1.78	13.067	3.91	19.07	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.600	0.89	7.600	1.78	13.600	5.77	19.60	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.867	1.51	7.867	1.78	13.867	7.28	19.87	1.60		

HRP8-EX_2-100 YEAR.OUT									
2.000	1.60	[8.000	1.78	[14.000	7.28	[20.00	1.60		
2.133	1.15	[8.133	2.40	[14.133	2.66	[20.13	1.07		
2.267	1.15	[8.267	2.40	[14.267	2.66	[20.27	1.07		
2.400	1.15	[8.400	2.40	[14.400	2.66	[20.40	1.07		
2.533	1.15	[8.533	2.40	[14.533	2.66	[20.53	1.07		
2.667	1.15	[8.667	2.40	[14.667	2.66	[20.67	1.07		
2.800	1.15	[8.800	2.40	[14.800	2.66	[20.80	1.07		
2.933	1.15	[8.933	2.40	[14.933	2.66	[20.93	1.07		
3.067	1.15	[9.067	2.62	[15.067	2.66	[21.07	1.07		
3.200	1.15	[9.200	2.84	[15.200	2.66	[21.20	1.07		
3.333	1.15	[9.333	2.84	[15.333	2.66	[21.33	1.07		
3.467	1.15	[9.467	2.84	[15.467	2.66	[21.47	1.07		
3.600	1.15	[9.600	3.11	[15.600	2.66	[21.60	1.07		
3.733	1.15	[9.733	3.20	[15.733	2.66	[21.73	1.07		
3.867	1.15	[9.867	3.20	[15.867	2.66	[21.87	1.07		
4.000	1.15	[10.000	3.20	[16.000	2.66	[22.00	1.07		
4.133	1.42	[10.133	4.08	[16.133	1.60	[22.13	1.07		
4.267	1.42	[10.267	4.08	[16.267	1.60	[22.27	1.07		
4.400	1.42	[10.400	4.08	[16.400	1.60	[22.40	1.07		
4.533	1.42	[10.533	4.44	[16.533	1.60	[22.53	1.07		
4.667	1.42	[10.667	5.51	[16.667	1.60	[22.67	1.07		
4.800	1.42	[10.800	5.51	[16.800	1.60	[22.80	1.07		
4.933	1.42	[10.933	5.51	[16.933	1.60	[22.93	1.07		
5.067	1.42	[11.067	7.02	[17.067	1.60	[23.07	1.07		
5.200	1.42	[11.200	8.52	[17.200	1.60	[23.20	1.07		
5.333	1.42	[11.333	8.52	[17.333	1.60	[23.33	1.07		
5.467	1.42	[11.467	8.52	[17.467	1.60	[23.47	1.07		
5.600	1.42	[11.600	29.84	[17.600	1.60	[23.60	1.07		
5.733	1.42	[11.733	36.94	[17.733	1.60	[23.73	1.07		
5.867	1.42	[11.867	98.40	[17.867	1.60	[23.87	1.07		
6.000	1.42	[12.000	98.04	[18.000	1.60	[24.00	1.07		

Unit Hyd Qpeak (cms)= 3.643

PEAK FLOW (cms)= 3.841 (i)
TIME TO PEAK (hrs)= 12.800
RUNOFF VOLUME (mm)= 50.318
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

FINISH

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL
000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\53a1e0f6-f461-442c-9fa8-37e4adceff18\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\53a1e0f6-f461-442c-9fa8-37e4adceff18\scenar

DATE: 03/24/2023 TIME: 11:05:53

USER:

COMMENTS: _____

** SIMULATION : Run 04 **

HRP8-EX_2-100 YEAR.OUT

MASS STORM
Filename: C:\Users\Abira\AppData\Local\Temp\73a4457d-d469-437c-91dc-11b99a0fcb4f\cdfb3d47
Ptotal=103.20 mm
Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86	
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86	
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86	
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86	
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86	
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86	
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86	
2.00	1.86	8.00	2.06	14.00	8.46	20.00	1.86	
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24	
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24	
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24	
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24	
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24	
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24	
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24	
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24	
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24	
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24	
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24	
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24	
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24	
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24	
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24	
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24	

NASHYD (1050) Area (ha)= 4.49 Curve Number (CN)= 77.0
ID= 1 DT= 2.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86	
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86	
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86	
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86	
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86	
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86	
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86	
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86	
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86	
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86	
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86	
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86	
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86	
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86	
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86	
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86	
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86	
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86	
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86	
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86	
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86	
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86	
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86	
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86	
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86	
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86	
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86	
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86	
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86	
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86	
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86	
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86	
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86	
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86	
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86	
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86	
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86	
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86	
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86	

HRP8-EX_2-100 YEAR.OUT

1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24

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4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24
5.500	1.65	11.500	9.95	17.500	1.86	23.50	1.24
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.676 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 55.392
TOTAL RAINFALL (mm)= 103.199
RUNOFF COEFFICIENT = 0.537

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
NASHYD (0150)			
ID= 1 DT= 2.0 min		Area (ha)= 6.87	Curve Number (CN)= 82.0
		Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
-----		U.H. Tp(hrs)= 0.19	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86

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0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86
0.500	1.03	6.500	2.06	12.500	14.85	18.50	1.86
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.767	1.03	7.767	2.06	13.767	8.46	19.77	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24

HRP8-EX_2-100 YEAR.OUT

1.067	1.03	7.067	2.06	13.067	4.54	19.07	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.600	1.03	7.600	2.06	13.600	6.71	19.60	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.867	1.75	7.867	2.06	13.867	8.46	19.87	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24
3.067	1.34	9.067	3.04	15.067	3.10	21.07	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24
3.600	1.34	9.600	3.61	15.600	3.10	21.60	1.24
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.533	1.65	10.533	5.16	16.533	1.86	22.53	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
5.067	1.65	11.067	8.15	17.067	1.86	23.07	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24
5.600	1.65	11.600	34.67	17.600	1.86	23.60	1.24
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24
5.867	1.65	11.867	105.05	17.867	1.86	23.87	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 3.626 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 62.628
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.607

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1051):	50.34	3.626	12.53	62.63
+ ID2= 2 (0037):	11.36	1.279	12.20	59.74
=====				
ID = 3 (0029):	61.70	4.500	12.40	62.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (0151)			
Area (ha)= 10.65			
ID= 1 DT= 3.0 min	Total Imp(%)= 29.00	Dir. Conn.(%)= 29.00	

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	3.00	7.56		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	272.00	272.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86

HRP8-EX_2-100 YEAR.OUT

0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24

HRP8-EX_2-100 YEAR.OUT									
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)= 113.93 38.98
over (min) 6.00 39.00
Storage Coeff. (min)= 3.59 (ii) 36.09 (ii)
Unit Hyd. Tpeak (min)= 6.00 39.00
Unit Hyd. peak (cms)= 0.25 0.03

TOTALS
PEAK FLOW (cms)= 0.96 0.47 1.152 (iii)
TIME TO PEAK (hrs)= 12.00 12.50 12.00
RUNOFF VOLUME (mm)= 101.70 51.59 66.12
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.50 0.64

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)				
1	2	3		
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0151):	10.65	1.152	12.00	66.12
+ ID2= 2 (0029):	61.70	4.500	12.40	62.10
=====				
ID = 3 (0031):	72.35	5.156	12.40	62.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0039)
IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.990E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22

HRP8-EX_2-100 YEAR.OUT					
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<--- hydrograph --->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0031)	72.35	5.16	12.40	62.69	1.00
OUTFLOW: ID= 1 (0039)	72.35	5.00	12.53	62.68	1.00

CALIB
STANDHYD (0151) | Area (ha)= 15.40
ID= 1 DT= 3.0 min | Total Imp(%)= 43.00 Dir. Conn.(%)= 43.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 6.62		8.78
Dep. Storage	(mm)= 1.50		1.50
Average Slope	(%)= 2.00		2.00
Length	(m)= 335.00		335.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24

HRP8-EX_2-100 YEAR.OUT

TIME SHIFT OF PEAK FLOW (min)= 8.00
MAXIMUM STORAGE USED (ha.m.)= 0.9899

| CALIB |
| NASHYD (0153) | Area (ha)= 1.70 Curve Number (CN)= 79.0
| ID= 1 DT= 1.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.11

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	1.03	6.017	2.06	12.017	14.93	18.02	1.86
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86
0.083	1.03	6.083	2.06	12.083	14.86	18.08	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.117	1.03	6.117	2.06	12.117	14.86	18.12	1.86
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.183	1.03	6.183	2.06	12.183	14.86	18.18	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.217	1.03	6.217	2.06	12.217	14.86	18.22	1.86
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86
0.283	1.03	6.283	2.06	12.283	14.86	18.28	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.317	1.03	6.317	2.06	12.317	14.86	18.32	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86
0.383	1.03	6.383	2.06	12.383	14.86	18.38	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86
0.483	1.03	6.483	2.06	12.483	14.86	18.48	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.517	1.03	6.517	2.06	12.517	7.64	18.52	1.86
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.617	1.03	6.617	2.06	12.617	7.64	18.62	1.86
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.683	1.03	6.683	2.06	12.683	7.64	18.68	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.717	1.03	6.717	2.06	12.717	7.64	18.72	1.86
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86
0.783	1.03	6.783	2.06	12.783	7.64	18.78	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.817	1.03	6.817	2.06	12.817	7.64	18.82	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86
0.883	1.03	6.883	2.06	12.883	7.64	18.88	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86
0.983	1.03	6.983	2.06	12.983	7.64	18.98	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.017	1.03	7.017	2.06	13.017	1.45	19.02	1.86
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86
1.083	1.03	7.083	2.06	13.083	1.44	19.08	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.117	1.03	7.117	2.06	13.117	1.44	19.12	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.183	1.03	7.183	2.06	13.183	1.44	19.18	1.86

HRP8-EX_2-100 YEAR.OUT

1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.217	1.03	7.217	2.06	13.217	1.44	19.22	1.86
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.283	1.03	7.283	2.06	13.283	1.44	19.28	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.317	1.03	7.317	2.06	13.317	1.44	19.32	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.383	1.03	7.383	2.06	13.383	1.44	19.38	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.483	1.03	7.483	2.06	13.483	1.44	19.48	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.517	1.03	7.517	2.06	13.517	8.45	19.52	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.617	1.03	7.617	2.06	13.617	8.46	19.62	1.86
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.683	1.03	7.683	2.06	13.683	8.46	19.68	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.717	1.03	7.717	2.06	13.717	8.46	19.72	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.767	1.86	7.767	2.06	13.767	8.46	19.77	1.86
1.783	1.86	7.783	2.06	13.783	8.46	19.78	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.817	1.86	7.817	2.06	13.817	8.46	19.82	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.883	1.86	7.883	2.06	13.883	8.46	19.88	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86
1.983	1.86	7.983	2.06	13.983	8.46	19.98	1.86
2.000	1.86	8.000	2.07	14.000	8.46	20.00	1.86
2.017	1.34	8.017	2.79	14.017	3.11	20.02	1.24
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.117	1.34	8.117	2.79	14.117	3.10	20.12	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.183	1.34	8.183	2.79	14.183	3.10	20.18	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.217	1.34	8.217	2.79	14.217	3.10	20.22	1.24
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.283	1.34	8.283	2.79	14.283	3.10	20.28	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.317	1.34	8.317	2.79	14.317	3.10	20.32	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.383	1.34	8.383	2.79	14.383	3.10	20.38	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.483	1.34	8.483	2.79	14.483	3.10	20.48	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.517	1.34	8.517	2.79	14.517	3.10	20.52	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.617	1.34	8.617	2.79	14.617	3.10	20.62	1.24
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24

HRP8-EX_2-100 YEAR.OUT									
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.683	1.34	8.683	2.79	14.683	3.10	20.68	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.717	1.34	8.717	2.79	14.717	3.10	20.72	1.24		
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24		
2.783	1.34	8.783	2.79	14.783	3.10	20.78	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.817	1.34	8.817	2.79	14.817	3.10	20.82	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.883	1.34	8.883	2.79	14.883	3.10	20.88	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24		
2.983	1.34	8.983	2.79	14.983	3.10	20.98	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.017	1.34	9.017	3.30	15.017	3.10	21.02	1.24		
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.117	1.34	9.117	3.30	15.117	3.10	21.12	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.183	1.34	9.183	3.30	15.183	3.10	21.18	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.217	1.34	9.217	3.30	15.217	3.10	21.22	1.24		
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.283	1.34	9.283	3.30	15.283	3.10	21.28	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.317	1.34	9.317	3.30	15.317	3.10	21.32	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.383	1.34	9.383	3.30	15.383	3.10	21.38	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.483	1.34	9.483	3.30	15.483	3.10	21.48	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.517	1.34	9.517	3.72	15.517	3.10	21.52	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.617	1.34	9.617	3.72	15.617	3.10	21.62	1.24		
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.683	1.34	9.683	3.72	15.683	3.10	21.68	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.717	1.34	9.717	3.72	15.717	3.10	21.72	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.783	1.34	9.783	3.72	15.783	3.10	21.78	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.817	1.34	9.817	3.72	15.817	3.10	21.82	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.883	1.34	9.883	3.72	15.883	3.10	21.88	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
3.983	1.34	9.983	3.72	15.983	3.10	21.98	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.017	1.65	10.017	4.75	16.017	1.86	22.02	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24		

HRP8-EX_2-100 YEAR.OUT							
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.117	1.65	10.117	4.75	16.117	1.86	22.12	1.24
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.183	1.65	10.183	4.75	16.183	1.86	22.18	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.217	1.65	10.217	4.75	16.217	1.86	22.22	1.24
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24
4.283	1.65	10.283	4.75	16.283	1.86	22.28	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.317	1.65	10.317	4.75	16.317	1.86	22.32	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24
4.383	1.65	10.383	4.75	16.383	1.86	22.38	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24
4.483	1.65	10.483	4.75	16.483	1.86	22.48	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.517	1.65	10.517	6.40	16.517	1.86	22.52	1.24
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.617	1.65	10.617	6.40	16.617	1.86	22.62	1.24
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.683	1.65	10.683	6.40	16.683	1.86	22.68	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.717	1.65	10.717	6.40	16.717	1.86	22.72	1.24
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24
4.783	1.65	10.783	6.40	16.783	1.86	22.78	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.817	1.65	10.817	6.40	16.817	1.86	22.82	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24
4.883	1.65	10.883	6.40	16.883	1.86	22.88	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24
4.983	1.65	10.983	6.40	16.983	1.86	22.98	1.24
4.999	1.65	10.999	6.40	16.999	1.86	22.99	1.24
5.017	1.65	11.017	9.91	17.017	1.86	23.02	1.24
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.117	1.65	11.117	9.91	17.117	1.86	23.12	1.24
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.183	1.65	11.183	9.91	17.183	1.86	23.18	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.217	1.65	11.217	9.91	17.217	1.86	23.22	1.24
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24
5.283	1.65	11.283	9.91	17.283	1.86	23.28	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.317	1.65	11.317	9.91	17.317	1.86	23.32	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24
5.383	1.65	11.383	9.91	17.383	1.86	23.38	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24
5.483	1.65	11.483	9.91	17.483	1.86	23.48	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.517	1.65	11.517	42.92	17.517	1.86	23.52	1.24
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24

HRP8-EX_2-100 YEAR.OUT									
5.550	1.65	[11.550	42.93	[17.550	1.86		23.55	1.24	
5.567	1.65	[11.567	42.93	[17.567	1.86		23.57	1.24	
5.583	1.65	[11.583	42.93	[17.583	1.86		23.58	1.24	
5.600	1.65	[11.600	42.93	[17.600	1.86		23.60	1.24	
5.617	1.65	[11.617	42.93	[17.617	1.86		23.62	1.24	
5.633	1.65	[11.633	42.93	[17.633	1.86		23.63	1.24	
5.650	1.65	[11.650	42.93	[17.650	1.86		23.65	1.24	
5.667	1.65	[11.667	42.93	[17.667	1.86		23.67	1.24	
5.683	1.65	[11.683	42.93	[17.683	1.86		23.68	1.24	
5.700	1.65	[11.700	42.93	[17.700	1.86		23.70	1.24	
5.717	1.65	[11.717	42.93	[17.717	1.86		23.72	1.24	
5.733	1.65	[11.733	42.93	[17.733	1.86		23.73	1.24	
5.750	1.65	[11.750	42.93	[17.750	1.86		23.75	1.24	
5.767	1.65	[11.767	42.93	[17.767	1.86		23.77	1.24	
5.783	1.65	[11.783	42.93	[17.783	1.86		23.78	1.24	
5.800	1.65	[11.800	42.93	[17.800	1.86		23.80	1.24	
5.817	1.65	[11.817	42.93	[17.817	1.86		23.82	1.24	
5.833	1.65	[11.833	42.93	[17.833	1.86		23.83	1.24	
5.850	1.65	[11.850	42.93	[17.850	1.86		23.85	1.24	
5.867	1.65	[11.867	42.93	[17.867	1.86		23.87	1.24	
5.883	1.65	[11.883	42.93	[17.883	1.86		23.88	1.24	
5.900	1.65	[11.900	42.93	[17.900	1.86		23.90	1.24	
5.917	1.65	[11.917	42.93	[17.917	1.86		23.92	1.24	
5.933	1.65	[11.933	42.93	[17.933	1.86		23.93	1.24	
5.950	1.65	[11.950	42.93	[17.950	1.86		23.95	1.24	
5.967	1.65	[11.967	42.93	[17.967	1.86		23.97	1.24	
5.983	1.65	[11.983	42.93	[17.983	1.86		23.98	1.24	
6.000	1.65	[12.000	42.93	[18.000	1.86		24.00	1.24	

Unit Hyd Qpeak (cms)= 0.580

PEAK FLOW (cms)= 0.323 (i)
TIME TO PEAK (hrs)= 12.017
RUNOFF VOLUME (mm)= 48.750
TOTAL RAINFALL (mm)= 103.201
RUNOFF COEFFICIENT = 0.472

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)				
1	2	3	AREA	QPEAK
			(ha)	(cms)
ID1= 1 (0153):	1.70	0.323	12.02	48.75
+ ID2= 2 (0036):	87.75	5.495	12.70	63.81
=====				
ID = 3 (0035):	89.45	5.530	12.70	59.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (0038)	Area (ha)=	87.75	Curve Number (CN)= 82.0
ID= 1 DT= 8.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00

	U.H. Tp(hrs)=	0.92	

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	1.03	6.133	2.06	12.133	14.07	18.13	1.86		
0.267	1.03	6.267	2.06	12.267	14.06	18.27	1.86		
0.400	1.03	6.400	2.06	12.400	14.06	18.40	1.86		
0.533	1.03	6.533	2.06	12.533	13.06	18.53	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
1.067	1.03	7.067	2.06	13.067	4.54	19.07	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86		
1.600	1.03	7.600	2.06	13.600	6.71	19.60	1.86		
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86		
1.867	1.75	7.867	2.06	13.867	8.46	19.87	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
3.067	1.34	9.067	3.04	15.067	3.10	21.07	1.24		

HRP8-EX_2-100 YEAR.OUT									
3.200	1.34		9.200	3.30		15.200	3.10		21.20
3.333	1.34		9.333	3.30		15.333	3.10		21.33
3.467	1.34		9.467	3.30		15.467	3.10		21.47
3.600	1.34		9.600	3.61		15.600	3.10		21.60
3.733	1.34		9.733	3.72		15.733	3.10		21.73
3.867	1.34		9.867	3.72		15.867	3.10		21.87
4.000	1.34		10.000	3.72		16.000	3.10		22.00
4.133	1.65		10.133	4.75		16.133	1.86		22.13
4.267	1.65		10.267	4.75		16.267	1.86		22.27
4.400	1.65		10.400	4.75		16.400	1.86		22.40
4.533	1.65		10.533	5.16		16.533	1.86		22.53
4.667	1.65		10.667	6.40		16.667	1.86		22.67
4.800	1.65		10.800	6.40		16.800	1.86		22.80
4.933	1.65		10.933	6.40		16.933	1.86		22.93
5.067	1.65		11.067	8.15		17.067	1.86		23.07
5.200	1.65		11.200	9.91		17.200	1.86		23.20
5.333	1.65		11.333	9.91		17.333	1.86		23.33
5.467	1.65		11.467	9.91		17.467	1.86		23.47
5.600	1.65		11.600	34.67		17.600	1.86		23.60
5.733	1.65		11.733	42.93		17.733	1.86		23.73
5.867	1.65		11.867	105.05		17.867	1.86		23.87
6.000	1.65		12.000	113.93		18.000	1.86		24.00

Unit Hyd Qpeak (cms)= 3.643

PEAK FLOW (cms)= 4.800 (i)
TIME TO PEAK (hrs)= 12.800
RUNOFF VOLUME (mm)= 62.634
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.607

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\vo1n.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\071c0e2d-486f-48b2-9efb-191cfa03da0e\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\071c0e2d-486f-48b2-9efb-191cfa03da0e\scenar

DATE: 03/24/2023

TIME: 11:05:52

USER:

COMMENTS: _____

** SIMULATION : Run 05

MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\73a4457d-d469-437c-91dc-11b99a0fcb4f\95accb52
| Ptotal=115.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07

HRP8-EX_2-100 YEAR.OUT

1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38

HRP8-EX_2-100 YEAR.OUT

1.767	1.61	7.767	2.30	13.767	9.45	19.77	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38

CALIB
NASHYD (1050) | Area (ha)= 4.49 Curve Number (CN)= 77.0
ID= 1 DT= 2.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07
1.000	1.15	7.000	2.30	13.000	8.51	19.00	2.07
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07
1.533	1.15	7.533	2.30	13.533	1.54	19.53	2.07
1.567	1.15	7.567	2.30	13.567	1.54	19.57	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07

--- TRANSFORMED HYETOGRAPH ---							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.67
0.067	1.15	6.067	2.30	12.067	16.59	18.03	2.67
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.67
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.67
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.67
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.67
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.67
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.67
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.67
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.67
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.67
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.67
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.67
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.67
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.67
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.67
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.67
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.67
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.67
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.67
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.67
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.67

HRPQ-EX_2-100 Year, OUT									
0.767	1.15	1.6767	2.30	12.767	8.52	18.77	2.07		
0.800	1.15	1.6800	2.30	12.800	8.52	18.80	2.07		
0.833	1.15	1.6833	2.30	12.833	8.52	18.83	2.07		
0.867	1.15	1.6867	2.30	12.867	8.52	18.87	2.07		
0.900	1.15	1.6900	2.30	12.900	8.52	18.90	2.07		
0.933	1.15	1.6933	2.30	12.933	8.52	18.93	2.07		
0.967	1.15	1.6967	2.30	12.967	8.52	18.97	2.07		
1.000	1.15	1.7000	2.30	13.000	8.51	19.00	2.07		
1.033	1.15	1.7033	2.30	13.033	1.61	19.03	2.07		
1.067	1.15	1.7067	2.30	13.067	1.61	19.07	2.07		
1.100	1.15	1.7100	2.30	13.100	1.61	19.10	2.07		
1.133	1.15	1.7133	2.30	13.133	1.61	19.13	2.07		
1.167	1.15	1.7167	2.30	13.167	1.61	19.17	2.07		
1.200	1.15	1.7200	2.30	13.200	1.61	19.20	2.07		
1.233	1.15	1.7233	2.30	13.233	1.61	19.23	2.07		
1.267	1.15	1.7267	2.30	13.267	1.61	19.27	2.07		
1.300	1.15	1.7300	2.30	13.300	1.61	19.30	2.07		
1.333	1.15	1.7333	2.30	13.333	1.61	19.33	2.07		
1.367	1.15	1.7367	2.30	13.367	1.61	19.37	2.07		
1.400	1.15	1.7400	2.30	13.400	1.61	19.40	2.07		
1.433	1.15	1.7433	2.30	13.433	1.61	19.43	2.07		
1.467	1.15	1.7467	2.30	13.467	1.61	19.47	2.07		
1.500	1.15	1.7500	2.30	13.500	1.63	19.50	2.07		
1.533	1.15	1.7533	2.30	13.533	1.95	19.53	2.07		
1.567	1.15	1.7567	2.30	13.567	1.95	19.57	2.07		
1.600	1.15	1.7600	2.30	13.600	1.95	19.60	2.07		
1.633	1.15	1.7633	2.30	13.633	1.95	19.63	2.07		
1.667	1.15	1.7667	2.30	13.667	1.95	19.67	2.07		
1.700	1.15	1.7700	2.30	13.700	1.95	19.70	2.07		
1.733	1.15	1.7733	2.30	13.733	1.95	19.73	2.07		
1.767	1.61	1.7767	2.30	13.767	1.95	19.77	2.07		
1.800	2.07	1.7800	2.30	13.800	1.95	19.80	2.07		
1.833	2.07	1.7833	2.30	13.833	1.95	19.83	2.07		
1.867	2.07	1.7867	2.30	13.867	1.95	19.87	2.07		
1.900	2.07	1.7900	2.30	13.900	1.95	19.90	2.07		
1.933	2.07	1.7933	2.30	13.933	1.95	19.93	2.07		
1.967	2.07	1.7967	2.30	13.967	1.95	19.97	2.07		
2.000	2.07	1.8000	2.30	14.000	1.95	20.00	2.07		
2.033	1.50	1.8033	3.11	14.033	3.46	20.03	1.38		
2.067	1.50	1.8067	3.11	14.067	3.46	20.07	1.38		
2.100	1.50	1.8100	3.11	14.100	3.46	20.10	1.38		
2.133	1.50	1.8133	3.11	14.133	3.46	20.13	1.38		
2.167	1.50	1.8167	3.11	14.167	3.46	20.17	1.38		
2.200	1.50	1.8200	3.11	14.200	3.46	20.20	1.38		
2.233	1.50	1.8233	3.11	14.233	3.46	20.23	1.38		
2.267	1.50	1.8267	3.11	14.267	3.46	20.27	1.38		
2.300	1.50	1.8300	3.11	14.300	3.46	20.30	1.38		
2.333	1.50	1.8333	3.11	14.333	3.46	20.33	1.38		
2.367	1.50	1.8367	3.11	14.367	3.46	20.37	1.38		
2.400	1.50	1.8400	3.11	14.400	3.46	20.40	1.38		
2.433	1.50	1.8433	3.11	14.433	3.46	20.43	1.38		
2.467	1.50	1.8467	3.11	14.467	3.46	20.47	1.38		
2.500	1.50	1.8500	3.11	14.500	3.46	20.50	1.38		
2.533	1.50	1.8533	3.11	14.533	3.46	20.53	1.38		
2.567	1.50	1.8567	3.11	14.567	3.46	20.57	1.38		
2.600	1.50	1.8600	3.11	14.600	3.46	20.60	1.38		
2.633	1.50	1.8633	3.11	14.633	3.46	20.63	1.38		
2.667	1.50	1.8667	3.11	14.667	3.46	20.67	1.38		
2.700	1.50	1.8700	3.11	14.700	3.46	20.70	1.38		
2.733	1.50	1.8733	3.11	14.733	3.46	20.73	1.38		
2.767	1.50	1.8767	3.11	14.767	3.46	20.77	1.38		
2.800	1.50	1.8800	3.11	14.800	3.46	20.80	1.38		
2.833	1.50	1.8833	3.11	14.833	3.46	20.83	1.38		
2.867	1.50	1.8867	3.11	14.867	3.46	20.87	1.38		
2.900	1.50	1.8900	3.11	14.900	3.46	20.90	1.38		
2.933	1.50	1.8933	3.11	14.933	3.46	20.93	1.38		
2.967	1.50	1.8967	3.11	14.967	3.46	20.97	1.38		
3.000	1.50	1.9000	3.11	15.000	3.46	21.00	1.38		
3.033	1.50	1.9033	3.69	15.033	3.46	21.03	1.38		
3.067	1.50	1.9067	3.69	15.067	3.46	21.07	1.38		
3.100	1.50	1.9100	3.69	15.100	3.46	21.10	1.38		
3.133	1.50	1.9133	3.69	15.133	3.46	21.13	1.38		
3.167	1.50	1.9167	3.69	15.167	3.46	21.17	1.38		
3.200	1.50	1.9200	3.69	15.200	3.46	21.20	1.38		
3.233	1.50	1.9233	3.69	15.233	3.46	21.23	1.38		
3.267	1.50	1.9267	3.69	15.267	3.46	21.27	1.38		
3.300	1.50	1.9300	3.69	15.300	3.46	21.30	1.38		
3.333	1.50	1.9333	3.69	15.333	3.46	21.33	1.38		
3.367	1.50	1.9367	3.69	15.367	3.46	21.37	1.38		
3.400	1.50	1.9400	3.69	15.400	3.46	21.40	1.38		
3.433	1.50	1.9433	3.69	15.433	3.46	21.43	1.38		
3.467	1.50	1.9467	3.69	15.467	3.46	21.47	1.38		
3.500	1.50	1.9500	3.69	15.500	3.46	21.50	1.38		
3.533	1.50	1.9533	4.15	15.533	3.46	21.53	1.38		
3.567	1.50	1.9567	4.15	15.567	3.46	21.57	1.38		
3.600	1.50	1.9600	4.15	15.600	3.46	21.60	1.38		
3.633	1.50	1.9633	4.15	15.633	3.46	21.63	1.38		

HRP8-EX_2-100 YEAR.OUT

3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.500	1.84	11.500	11.10	17.500	2.07	23.50	1.38
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.767	1.84	11.767	87.66	17.767	2.07	23.77	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38
6.000	1.84	12.000	127.03	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.346

PEAK FLOW (cms)= 1.275 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 73.172
TOTAL RAINFALL (mm)= 115.199
RUNOFF COEFFICIENT = 0.635

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.

HRP8-EX_2-100 YEAR.OUT

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1050):	4.49	0.797	12.07	65.26
+ ID2= 2 (0150):	6.87	1.275	12.07	73.17
=====				
ID = 3 (0018):	11.36	2.073	12.07	70.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)		Routing time step (min)'= 2.00	
IN= 2--> OUT= 1			
<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

<---- hydrograph ---->					
<-pipe / channel->					
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0018)	11.36	2.07	12.07	70.04	0.54
OUTFLOW: ID= 1 (0037)	11.36	1.52	12.20	70.01	0.47

CALIB |
NASHYD (1051) | Area (ha)= 50.34 Curve Number (CN)= 82.0
ID= 1 DT= 8.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.63

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07		
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.533	1.15	6.533	2.30	12.533	14.57	18.53	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
1.067	1.15	7.067	2.30	13.067	5.07	19.07	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.600	1.15	7.600	2.30	13.600	7.49	19.60	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.867	1.96	7.867	2.30	13.867	9.45	19.87	2.07		
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		

HRP8-EX_2-100 YEAR.OUT

2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38
3.067	1.50	9.067	3.40	15.067	3.46	21.07	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.600	1.50	9.600	4.03	15.600	3.46	21.60	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.533	1.84	10.533	5.76	16.533	2.07	22.53	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
5.067	1.84	11.067	9.10	17.067	2.07	23.07	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.600	1.84	11.600	38.71	17.600	2.07	23.60	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.867	1.84	11.867	117.27	17.867	2.07	23.87	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 4.241 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 73.166
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.635

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1051):	50.34	4.241	12.53	73.17
+ ID2= 2 (0037):	11.36	1.525	12.20	70.01
=====				
ID = 3 (0029):	61.70	5.379	12.33	72.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0151)			
ID= 1 DT= 3.0 min			
	Area (ha)=	10.65	
	Total Imp(%)=	29.00	Dir. Conn.(%)= 29.00
=====			
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	3.09	7.56	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	272.00	272.00	
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07

HRP8-EX_2-100 YEAR.OUT

1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38

HRP8-EX_2-100 YEAR.OUT									
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38		
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38		
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38		
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38		

Max.Eff.Inten.(mm/hr)= 127.18 49.68
over (min) 6.00 33.00
Storage Coeff. (min)= 3.44 (ii) 32.93 (iii)
Unit Hyd. Tpeak (min)= 6.00 33.00
Unit Hyd. peak (cms)= 0.26 0.03

TOTALS
PEAK FLOW (cms)= 1.07 0.60 1.358 (iii)
TIME TO PEAK (hrs)= 12.00 12.00
RUNOFF VOLUME (mm)= 113.70 60.84 76.17
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53 0.66

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CW= 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0151):	10.65	1.358	12.00	76.17
+ ID2= 2 (0029):	61.70	5.379	12.33	72.59
=====				
ID = 3 (0031):	72.35	6.116	12.37	73.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0039)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.ft.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.998E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL

HRP8-EX_2-100 YEAR.OUT						
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0031)	72.35	6.12	12.37	73.11	1.00	1.04
OUTFLOW: ID= 1 (0039)	72.35	5.92	12.50	73.11	1.00	1.04

CALIB
STANDHYD (0152)
ID= 1 DT= 3.0 min
Area (ha)= 15.40
Total Imp(%)= 43.00
Dir. Conn.(%)= 43.00

IMPERVIOUS PERVIOUS (l)
Surface Area (ha)= 6.62 8.78
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 335.00 335.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		

HRP8-EX_2-100 YEAR.OUT

HRP8-EX_2-100 YEAR.OUT

ID = 3 (0033): 87.75 6.778 12.50 74.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)			Routing time step (min)'= 2.00				
IN= 2--> OUT= 1							
<----- DATA FOR SECTION (1.1) ----->							
Distance	Elevation	Manning					
0.00	101.00	0.0500					
1.00	100.67	0.0500					
2.00	100.33	0.0500 / 0.0300	Main Channel				
3.00	100.00	0.0300	Main Channel				
4.00	100.00	0.0300	Main Channel				
5.00	100.33	0.0300 / 0.0500	Main Channel				
6.00	100.67	0.0500					
7.00	101.00	0.0500					

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.155E+02	0.0	0.18	26.00
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.296E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53
0.72	100.72	.655E+03	2.1	0.90	5.32
0.78	100.78	.743E+03	2.4	0.93	5.14
0.83	100.83	.836E+03	2.8	0.96	4.98
0.89	100.89	.934E+03	3.2	0.99	4.84
0.94	100.94	.104E+04	3.7	1.01	4.72
1.00	101.00	.115E+04	4.1	1.04	4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED

		<---- hydrograph ---->			<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0033)	87.75	6.78	12.50	74.53	0.99	1.03
OUTFLOW: ID= 1 (0040)	87.75	6.70	12.57	74.53	1.00	1.04

RESERVOIR(0036)		OVERFLOW IS OFF			
IN= 2--> OUT= 1					
DT= 4.0 min					
		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	1.5621	0.7845
		0.0206	0.1029	3.2275	0.8811
		0.0461	0.1764	5.2638	0.9799
		0.0618	0.2539	7.6097	1.0811
		0.0743	0.3353	10.2263	1.1844
		0.0850	0.4205	13.0858	1.2900
		0.0945	0.5081	16.1669	1.3979
		0.1031	0.5980	19.5735	1.5082
		0.1071	0.6438	23.5541	1.6210
		0.3892	0.6901	35.0828	1.9135

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	87.750	6.702	12.57	74.53
OUTFLOW: ID= 1 (0036)	87.750	6.544	12.67	74.19

PEAK FLOW REDUCTION [Qout/Qin](%)= 97.65
TIME SHIFT OF PEAK FLOW (min)= 6.00
MAXIMUM STORAGE USED (ha.m.)= 1.0352

CALIB					
NASHYD (0153)		Area	(ha)=	1.70	Curve Number (CN)= 79.0
ID= 1 DT= 1.0 min		Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
		U.H. Tp(hrs)=	0.11		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)=	127.18	37.84
over (min)	6.00	42.00
Storage Coeff. (min)=	3.89 (ii)	41.16 (iii)
Unit Hyd. Tpeak (min)=	6.00	42.00
Unit Hyd. peak (cms)=	0.24	0.03

TOTALS			
PEAK FLOW (cms)=	2.29	0.56	2.497 (iii)
TIME TO PEAK (hrs)=	12.00	12.55	12.00
RUNOFF VOLUME (mm)=	113.70	56.74	81.23
TOTAL RAINFALL (mm)=	115.20	115.20	115.20
RUNOFF COEFFICIENT =	0.99	0.49	0.71

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0152):	15.40	2.497	12.00	81.23
+ ID2= 2 (0039):	72.35	5.924	12.50	73.11

HRP8-EX_2-100 YEAR.OUT									
---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	1.15	6.917	2.30	12.017	16.06	18.02	2.07		
0.033	1.15	6.933	2.30	12.033	16.59	18.03	2.07		
0.050	1.15	6.950	2.30	12.050	16.59	18.05	2.07		
0.067	1.15	6.967	2.30	12.067	16.59	18.07	2.07		
0.083	1.15	6.983	2.30	12.083	16.59	18.08	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.117	1.15	6.117	2.30	12.117	16.59	18.12	2.07		
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07		
0.183	1.15	6.183	2.30	12.183	16.59	18.18	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.217	1.15	6.217	2.30	12.217	16.59	18.22	2.07		
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07		
0.283	1.15	6.283	2.30	12.283	16.59	18.28	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.317	1.15	6.317	2.30	12.317	16.59	18.32	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07		
0.383	1.15	6.383	2.30	12.383	16.59	18.38	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07		
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07		
0.483	1.15	6.483	2.30	12.483	16.59	18.48	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.517	1.15	6.517	2.30	12.517	8.53	18.52	2.07		
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07		
0.583	1.15	6.583	2.30	12.583	8.52	18.58	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.617	1.15	6.617	2.30	12.617	8.52	18.62	2.07		
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.683	1.15	6.683	2.30	12.683	8.52	18.68	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.717	1.15	6.717	2.30	12.717	8.52	18.72	2.07		
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07		
0.783	1.15	6.783	2.30	12.783	8.52	18.78	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.817	1.15	6.817	2.30	12.817	8.52	18.82	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07		
0.883	1.15	6.883	2.30	12.883	8.52	18.88	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07		
0.983	1.15	6.983	2.30	12.983	8.52	18.98	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.017	1.15	7.017	2.30	13.017	1.61	19.02	2.07		
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07		
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.117	1.15	7.117	2.30	13.117	1.61	19.12	2.07		
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.183	1.15	7.183	2.30	13.183	1.61	19.18	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.217	1.15	7.217	2.30	13.217	1.61	19.22	2.07		
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07		
1.283	1.15	7.283	2.30	13.283	1.61	19.28	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.317	1.15	7.317	2.30	13.317	1.61	19.32	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07		
1.383	1.15	7.383	2.30	13.383	1.61	19.38	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		

HRP8-EX_2-100 YEAR.OUT									
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07		
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.483	1.15	7.483	2.30	13.483	1.61	19.48	2.07		
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07		
1.517	1.15	7.517	2.30	13.517	9.43	19.52	2.07		
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07		
1.583	1.15	7.583	2.30	13.583	9.45	19.58	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.617	1.15	7.617	2.30	13.617	9.45	19.62	2.07		
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.683	1.15	7.683	2.30	13.683	9.45	19.68	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.717	1.15	7.717	2.30	13.717	9.45	19.72	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.767	2.07	7.767	2.30	13.767	9.45	19.77	2.07		
1.783	2.07	7.783	2.30	13.783	9.45	19.78	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.817	2.07	7.817	2.30	13.817	9.45	19.82	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.883	2.07	7.883	2.30	13.883	9.45	19.88	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
1.983	2.07	7.983	2.30	13.983	9.45	19.98	2.07		
2.000	2.07	8.000	2.31	14.000	9.45	20.00	2.07		
2.017	1.50	8.017	3.11	14.017	3.47	20.02	1.38		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.117	1.50	8.117	3.11	14.117	3.46	20.12	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.183	1.50	8.183	3.11	14.183	3.46	20.18	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.217	1.50	8.217	3.11	14.217	3.46	20.22	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.283	1.50	8.283	3.11	14.283	3.46	20.28	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.317	1.50	8.317	3.11	14.317	3.46	20.32	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.383	1.50	8.383	3.11	14.383	3.46	20.38	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.483	1.50	8.483	3.11	14.483	3.46	20.48	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.517	1.50	8.517	3.11	14.517	3.46	20.52	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.617	1.50	8.617	3.11	14.617	3.46	20.62	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.683	1.50	8.683	3.11	14.683	3.46	20.68	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.717	1.50	8.717	3.11	14.717	3.46	20.72	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.783	1.50	8.783	3.11	14.783	3.46	20.78	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.817	1.50	8.817	3.11	14.817	3.46	20.82	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		

HRP8-EX_2-100 YEAR.OUT									
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.883	1.50	8.883	3.11	14.883	3.46	20.88	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
2.983	1.50	8.983	3.11	14.983	3.46	20.98	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.017	1.50	9.017	3.69	15.017	3.46	21.02	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.117	1.50	9.117	3.69	15.117	3.46	21.12	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.183	1.50	9.183	3.69	15.183	3.46	21.18	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.217	1.50	9.217	3.69	15.217	3.46	21.22	1.38		
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38		
3.283	1.50	9.283	3.69	15.283	3.46	21.28	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.317	1.50	9.317	3.69	15.317	3.46	21.32	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38		
3.383	1.50	9.383	3.69	15.383	3.46	21.38	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38		
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.483	1.50	9.483	3.69	15.483	3.46	21.48	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.517	1.50	9.517	4.15	15.517	3.46	21.52	1.38		
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38		
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.617	1.50	9.617	4.15	15.617	3.46	21.62	1.38		
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38		
3.683	1.50	9.683	4.15	15.683	3.46	21.68	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.717	1.50	9.717	4.15	15.717	3.46	21.72	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38		
3.783	1.50	9.783	4.15	15.783	3.46	21.78	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.817	1.50	9.817	4.15	15.817	3.46	21.82	1.38		
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
3.883	1.50	9.883	4.15	15.883	3.46	21.88	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38		
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38		
3.983	1.50	9.983	4.15	15.983	3.46	21.98	1.38		
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38		
4.017	1.84	10.017	5.30	16.017	2.07	22.02	1.38		
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38		
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.117	1.84	10.117	5.30	16.117	2.07	22.12	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38		
4.183	1.84	10.183	5.30	16.183	2.07	22.18	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.217	1.84	10.217	5.30	16.217	2.07	22.22	1.38		
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.283	1.84	10.283	5.30	16.283	2.07	22.28	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		

HRP8-EX_2-100 YEAR.OUT									
4.317	1.84	10.317	5.30	16.317	2.07	22.32	1.38		
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38		
4.383	1.84	10.383	5.30	16.383	2.07	22.38	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38		
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38		
4.483	1.84	10.483	5.30	16.483	2.07	22.48	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.517	1.84	10.517	7.14	16.517	2.07	22.52	1.38		
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38		
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.617	1.84	10.617	7.14	16.617	2.07	22.62	1.38		
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38		
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		
4.683	1.84	10.683	7.14	16.683	2.07	22.68	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.717	1.84	10.717	7.14	16.717	2.07	22.72	1.38		
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38		
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38		
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38		
4.783	1.84	10.783	7.14	16.783	2.07	22.78	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.817	1.84	10.817	7.14	16.817	2.07	22.82	1.38		
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38		
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38		
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38		
4.883	1.84	10.883	7.14	16.883	2.07	22.88	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38		
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38		
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38		
4.983	1.84	10.983	7.14	16.983	2.07	22.98	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.017	1.84	11.017	11.06	17.017	2.07	23.02	1.38		
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38		
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38		
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38		
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.117	1.84	11.117	11.06	17.117	2.07	23.12	1.38		
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38		
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38		
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38		
5.183	1.84	11.183	11.06	17.183	2.07	23.18	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.217	1.84	11.217	11.06	17.217	2.07	23.22	1.38		
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38		
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38		
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38		
5.283	1.84	11.283	11.06	17.283	2.07	23.28	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.317	1.84	11.317	11.06	17.317	2.07	23.32	1.38		
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38		
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38		
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38		
5.383	1.84	11.383	11.06	17.383	2.07	23.38	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38		
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38		
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38		
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38		
5.483	1.84	11.483	11.06	17.483	2.07	23.48	1.38		
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38		
5.517	1.84	11.517	47.92	17.517	2.07	23.52	1.38		
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38		
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38		
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38		
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.617	1.84	11.617	47.92	17.617	2.07	23.62	1.38		
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38		
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38		
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38		
5.683	1.84	11.683	47.92	17.683	2.07	23.68	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.717	1.84	11.717	47.92	17.717	2.07	23.72	1.38		
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38		
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38		

HRP8-EX_2-100 YEAR.OUT									
5.767	1.84	11.767	127.14	17.767	2.07	23.77	1.38		
5.783	1.84	11.783	127.18	17.783	2.07	23.78	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.817	1.84	11.817	127.18	17.817	2.07	23.82	1.38		
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38		
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38		
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38		
5.883	1.84	11.883	127.18	17.883	2.07	23.88	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38		
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38		
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38		
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38		
5.983	1.84	11.983	127.18	17.983	2.07	23.98	1.38		
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38		

Unit Hyd Qpeak (cms)= 0.580

PEAK FLOW (cms)= 0.378 (1)
TIME TO PEAK (hrs)= 12.017
RUNOFF VOLUME (mm)= 57.582
TOTAL RAINFALL (mm)= 115.201
RUNOFF COEFFICIENT = 0.499

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)					
1	2	3	AREA	QPEAK	TPEAK
			(ha)	(cms)	(hrs)
ID1= 1 (0153):			1.70	0.378	12.02
+ ID2= 2 (0036):			87.75	6.544	12.67
					74.19
=====					
ID = 3 (0035):			89.45	6.588	12.67
					69.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0038)	Area	(ha)=	Curve Number	(CN)=
ID= 1 DT= 8.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.92		

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07		
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.533	1.15	6.533	2.30	12.533	14.57	18.53	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
1.067	1.15	7.067	2.30	13.067	5.07	19.07	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.600	1.15	7.600	2.30	13.600	7.49	19.60	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.867	1.96	7.867	2.30	13.867	9.45	19.87	2.07		
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
3.067	1.50	9.067	3.40	15.067	3.46	21.07	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.600	1.50	9.600	4.03	15.600	3.46	21.60	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.533	1.84	10.533	5.76	16.533	2.07	22.53	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		

HRP8-EX_2-100 YEAR.OUT									
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
5.067	1.84	11.067	9.10	17.067	2.07	23.07	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38		
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38		
5.600	1.84	11.600	38.71	17.600	2.07	23.60	1.38		
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38		
5.867	1.84	11.867	117.27	17.867	2.07	23.87	1.38		
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38		

Unit Hyd Qpeak (cms)= 3.643

PEAK FLOW (cms)= 5.618 (1)
TIME TO PEAK (hrs)= 12.800
RUNOFF VOLUME (mm)= 73.174
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.635

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\d793bdc2-7048-42f8-b9e4-f9cf29571315\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\d793bdc2-7048-42f8-b9e4-f9cf29571315\scenar

DATE: 03/24/2023 TIME: 11:05:53

USER:

COMMENTS:

** SIMULATION : Run 06 **

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\73a457d-0469-437c-91dc-11b99a0fcb4f\2985551a
Ptotal=127.20 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29	
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29	
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29	
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29	
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29	
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29	
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29	
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29	
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53	
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53	
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53	
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53	
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53	
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53	
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53	
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53	

HRP8-EX_2-100 YEAR.OUT									
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53		
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53		
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53		
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53		
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53		
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53		
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53		
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53		

CALIB									
NASHYD (1050)	Area	(ha)=	4.49	Curve Number (CN)=	77.0				
IDC- 1 DT= 2.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00				
	U.H. Tp(hrs)=	0.17							

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29		
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29		
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29		
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29		
0.500	1.27	6.500	2.54	12.500	18.39	18.50	2.29		
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29		
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29		
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29		
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29		
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29		
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29		
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29		
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29		
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29		
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29		
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29		
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29		
1.767	1.78	7.767	2.54	13.767	10.43	19.77	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29		
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29		
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29		
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53		
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		

HRP8-EX_2-100 YEAR.OUT									
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53		
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53		
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53		
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53		
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53		
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53		
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53		
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53		
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53		
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53		
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53		
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53		
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53		
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53		
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53		
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53		
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53		
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53		
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53		

HRP8-EX_2-100 YEAR.OUT

5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.921 (i)
 TIME TO PEAK (hrs)= 12.067
 RUNOFF VOLUME (mm)= 75.383
 TOTAL RAINFALL (mm)= 127.199
 RUNOFF COEFFICIENT = 0.593

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP8-EX_2-100 YEAR.OUT

1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.767	1.78	7.767	2.54	13.767	10.43	19.77	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29
0.500	1.27	6.500	2.54	12.500	18.30	18.50	2.29
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29

HRP8-EX_2-100 YEAR.OUT

HRP8-EX_2-100 YEAR.OUT

4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.346

PEAK FLOW (cms)= 1.461 (1)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 83.987
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.660

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3				

ID1= 1 (1050):	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
+ ID2= 2 (0150):	4.49	0.921	12.07	75.38
	6.87	1.461	12.07	83.91
=====				
ID = 3 (0018):	11.36	2.382	12.07	80.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0037) |
| IN= 2--> OUT= 1 | Routing time step (min)= 2.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning
0.00	101.00	0.0500
1.00	100.67	0.0500
2.00	100.33	0.0500 / 0.0300
3.00	100.00	0.0300
4.00	100.00	0.0300
5.00	100.33	0.0300 / 0.0500
6.00	100.67	0.0500
7.00	101.00	0.0500

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

<---- hydrograph ---->					
<-pipe / channel->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0018)	11.36	2.38	12.07	80.54	0.58
OUTFLOW: ID= 1 (0037)	11.36	1.78	12.20	80.51	0.51

CALIB				
NASHYD (1051)				
ID= 1 DT= 8.0 min	Area	(ha)=	50.34	Curve Number (CN)= 82.0
	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=		0.63	

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.533	1.27	6.533	2.54	12.533	16.09	18.53	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29
1.067	1.27	7.067	2.54	13.067	5.60	19.07	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29
1.600	1.27	7.600	2.54	13.600	8.27	19.60	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.867	2.16	7.867	2.54	13.867	10.43	19.87	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
3.067	1.65	9.067	3.75	15.067	3.82	21.07	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53
3.600	1.65	9.600	4.45	15.600	3.82	21.60	1.53
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53

HRP8-EX_2-100 YEAR.OUT									
4.533	2.04	10.533	6.36	16.533	2.29	22.53	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53		
5.067	2.04	11.067	10.05	17.067	2.29	23.07	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53		
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53		
5.600	2.04	11.600	42.74	17.600	2.29	23.60	1.53		
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53		
5.867	2.04	11.867	129.49	17.867	2.29	23.87	1.53		
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53		

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 4.864 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 83.902
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.660

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1	+	2	=	3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1051):	56.34	4.864	12.53	83.90
+ ID2= 2 (0037):	11.36	1.778	12.20	80.51
=====				
ID = 3 (0029):	61.70	6.197	12.30	83.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		Area (ha)= 10.65	
STANDHYD (0151)		Total Imp(%)= 29.00	
ID= 1 DT= 3.0 min		Dir. Conn.(%)= 29.00	
Surface Area	(ha)=	IMPERVIOUS	PERVIOUS (i)
	3.00	7.56	
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	272.00	272.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		

HRP8-EX_2-100 YEAR.OUT									
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		

HRP8-EX_2-100 YEAR.OUT

Max.Eff.Inten.(mm/hr)= 140.43 57.70
over (min)= 6.00 33.00
Storage Coeff. (min)= 3.30 (ii) 31.08 (iii)
Unit Hyd. Tpeak (min)= 6.00 33.00
Unit Hyd. peak (cms)= 0.26 0.04

PEAK FLOW (cms)= 1.19 0.72 1.531 (iii)
TIME TO PEAK (hrs)= 12.00 12.40 12.00
RUNOFF VOLUME (mm)= 125.70 70.38 86.43
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.55 0.68

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0151):	10.65	1.531	12.00	86.43
+ ID2= 2 (0029):	61.70	6.197	12.30	83.28
=====				
ID = 3 (0031):	72.35	7.054	12.40	83.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0039) |
| IN= 2--> OUT= 1 | Routing time step (min)= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.998E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.250E+03	0.3	0.49	16.87
0.33	100.33	.320E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<--- hydrograph --->					<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0031)	72.35	7.05	12.40	83.74	0.99	1.03
OUTFLOW: ID= 1 (0039)	72.35	6.82	12.50	83.73	1.00	1.04

CALIB			
STANDHYD (0152)	Area (ha)= 15.40		
ID= 1 DT= 3.0 min	Total Imp(%)= 43.00	Dir. Conn.(%)= 43.00	

	IMPERVIOUS	PERVIOUS (i)	

HRP8-EX_2-100 YEAR.OUT

Surface Area (ha)= 6.62 8.78
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 335.00 335.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.27	0.050	2.54	12.050	18.32	18.05	2.29
0.100	1.27	0.100	2.54	12.100	18.32	18.10	2.29
0.150	1.27	0.150	2.54	12.150	18.32	18.15	2.29
0.200	1.27	0.200	2.54	12.200	18.32	18.20	2.29
0.250	1.27	0.250	2.54	12.250	18.32	18.25	2.29
0.300	1.27	0.300	2.54	12.300	18.32	18.30	2.29
0.350	1.27	0.350	2.54	12.350	18.32	18.35	2.29
0.400	1.27	0.400	2.54	12.400	18.32	18.40	2.29
0.450	1.27	0.450	2.54	12.450	18.32	18.45	2.29
0.500	1.27	0.500	2.54	12.500	18.31	18.50	2.29
0.550	1.27	0.550	2.54	12.550	9.41	18.55	2.29
0.600	1.27	0.600	2.54	12.600	9.41	18.60	2.29
0.650	1.27	0.650	2.54	12.650	9.41	18.65	2.29
0.700	1.27	0.700	2.54	12.700	9.41	18.70	2.29
0.750	1.27	0.750	2.54	12.750	9.41	18.75	2.29
0.800	1.27	0.800	2.54	12.800	9.41	18.80	2.29
0.850	1.27	0.850	2.54	12.850	9.41	18.85	2.29
0.900	1.27	0.900	2.54	12.900	9.41	18.90	2.29
0.950	1.27	0.950	2.54	12.950	9.41	18.95	2.29
1.000	1.27	1.000	2.54	13.000	9.41	19.00	2.29
1.050	1.27	1.050	2.54	13.050	1.78	19.05	2.29
1.100	1.27	1.100	2.54	13.100	1.78	19.10	2.29
1.150	1.27	1.150	2.54	13.150	1.78	19.15	2.29
1.200	1.27	1.200	2.54	13.200	1.78	19.20	2.29
1.250	1.27	1.250	2.54	13.250	1.78	19.25	2.29
1.300	1.27	1.300	2.54	13.300	1.78	19.30	2.29
1.350	1.27	1.350	2.54	13.350	1.78	19.35	2.29
1.400	1.27	1.400	2.54	13.400	1.78	19.40	2.29
1.450	1.27	1.450	2.54	13.450	1.78	19.45	2.29
1.500	1.27	1.500	2.54	13.500	1.79	19.50	2.29
1.550	1.27	1.550	2.54	13.550	10.43	19.55	2.29
1.600	1.27	1.600	2.54	13.600	10.43	19.60	2.29
1.650	1.27	1.650	2.54	13.650	10.43	19.65	2.29
1.700	1.27	1.700	2.54	13.700	10.43	19.70	2.29
1.750	1.27	1.750	2.54	13.750	10.43	19.75	2.29
1.800	2.29	1.800	2.54	13.800	10.43	19.80	2.29
1.850	2.29	1.850	2.54	13.850	10.43	19.85	2.29
1.900	2.29	1.900	2.54	13.900	10.43	19.90	2.29
1.950	2.29	1.950	2.54	13.950	10.43	19.95	2.29
2.000	2.29	2.000	2.54	14.000	10.43	20.00	2.29
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53

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3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 46.75
over (min) 6.00 39.00
Storage Coeff. (min)= 3.74 (ii) 37.98 (iii)
Unit Hyd. Tpeak (min)= 6.00 39.00
Unit Hyd. peak (cms)= 0.24 0.03

TOTALS
PEAK FLOW (cms)= 2.53 0.68 2.810 (iii)
TIME TO PEAK (hrs)= 12.00 12.50 12.00
RUNOFF VOLUME (mm)= 125.70 65.00 91.60
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.52 0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0152):	15.40	2.810	12.00	91.60
+ ID2= 2 (0039):	72.35	6.820	12.50	83.73
=====				
ID = 3 (0033):	87.75	7.842	12.50	85.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0040) |
| IN= 2--> OUT= 1 | Routing time step (min)= 2.00

<----- DATA FOR SECTION (1.1) ----->		
Distance	Elevation	Manning
0.00	101.00	0.0500
1.00	100.67	0.0500
2.00	100.33	0.0500 /0.0300 Main Channel

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3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 /0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.296E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53
0.72	100.72	.655E+03	2.1	0.90	5.32
0.78	100.78	.743E+03	2.4	0.93	5.14
0.83	100.83	.836E+03	2.8	0.96	4.98
0.89	100.89	.934E+03	3.2	0.99	4.84
0.94	100.94	.104E+04	3.7	1.01	4.72
1.00	101.00	.115E+04	4.1	1.04	4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m) (m/s)
INFLOW : ID= 2 (0033)	87.75	7.84	12.50	85.11	0.98 1.03
OUTFLOW: ID= 1 (0040)	87.75	7.75	12.57	85.11	1.00 1.04

RESERVOIR(0036)				
IN= 2--> OUT= 1				
DT= 4.0 min				

OVERFLOW IS OFF				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	1.5621	0.7845
	0.0206	0.1029	3.2275	0.8811
	0.0461	0.1764	5.2638	0.9799
	0.0618	0.2539	7.6097	1.0811
	0.0743	0.3353	10.2263	1.1844
	0.0850	0.4205	13.0858	1.2900
	0.0945	0.5081	16.1669	1.3979
	0.1031	0.5980	19.5735	1.5082
	0.1071	0.6438	23.5541	1.6210
	0.3892	0.6991	35.0828	1.9135

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	87.750	7.749	12.57	85.11
OUTFLOW: ID= 1 (0036)	87.750	7.566	12.67	84.77

PEAK FLOW REDUCTION [Qout/Qin](%)= 97.63
TIME SHIFT OF PEAK FLOW (min)= 6.00
MAXIMUM STORAGE USED (ha.m.)= 1.0793

CALIB				
NASHYD (0153)				
ID= 1 DT= 1.0 min				

	Area	(ha)=	1.70	Curve Number (CN)= 79.0
	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.11		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH ---->									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	1.27	6.017	2.54	12.017	18.40	18.02	2.29		
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29		
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29		
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29		
0.083	1.27	6.083	2.54	12.083	18.32	18.08	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.117	1.27	6.117	2.54	12.117	18.32	18.12	2.29		
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		

HRP8-EX_2-100 YEAR.OUT									
0.183	1.27	6.183	2.54	12.183	18.32	18.18	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.217	1.27	6.217	2.54	12.217	18.32	18.22	2.29		
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29		
0.283	1.27	6.283	2.54	12.283	18.32	18.28	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.317	1.27	6.317	2.54	12.317	18.32	18.32	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29		
0.383	1.27	6.383	2.54	12.383	18.32	18.38	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29		
0.483	1.27	6.483	2.54	12.483	18.32	18.48	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.517	1.27	6.517	2.54	12.517	9.42	18.52	2.29		
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.617	1.27	6.617	2.54	12.617	9.41	18.62	2.29		
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.683	1.27	6.683	2.54	12.683	9.41	18.68	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.717	1.27	6.717	2.54	12.717	9.41	18.72	2.29		
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29		
0.783	1.27	6.783	2.54	12.783	9.41	18.78	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.817	1.27	6.817	2.54	12.817	9.41	18.82	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29		
0.883	1.27	6.883	2.54	12.883	9.41	18.88	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29		
0.983	1.27	6.983	2.54	12.983	9.41	18.98	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.017	1.27	7.017	2.54	13.017	1.79	19.02	2.29		
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.117	1.27	7.117	2.54	13.117	1.78	19.12	2.29		
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.183	1.27	7.183	2.54	13.183	1.78	19.18	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.217	1.27	7.217	2.54	13.217	1.78	19.22	2.29		
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29		
1.283	1.27	7.283	2.54	13.283	1.78	19.28	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.317	1.27	7.317	2.54	13.317	1.78	19.32	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29		
1.383	1.27	7.383	2.54	13.383	1.78	19.38	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29		
1.483	1.27	7.483	2.54	13.483	1.78	19.48	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.517	1.27	7.517	2.54	13.517	10.41	19.52	2.29		
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.617	1.27	7.617	2.54	13.617	10.43	19.62	2.29		

HRP8-EX_2-100 YEAR.OUT									
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.683	1.27	7.683	2.54	13.683	10.43	19.68	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.717	1.27	7.717	2.54	13.717	10.43	19.72	2.29		
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.767	2.29	7.767	2.54	13.767	10.43	19.77	2.29		
1.783	2.29	7.783	2.54	13.783	10.43	19.78	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.817	2.29	7.817	2.54	13.817	10.43	19.82	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29		
1.883	2.29	7.883	2.54	13.883	10.43	19.88	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29		
1.983	2.29	7.983	2.54	13.983	10.43	19.98	2.29		
2.000	2.29	8.000	2.55	14.000	10.43	20.00	2.29		
2.017	1.65	8.017	3.43	14.017	3.83	20.02	1.53		
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.117	1.65	8.117	3.43	14.117	3.82	20.12	1.53		
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.183	1.65	8.183	3.43	14.183	3.82	20.18	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.217	1.65	8.217	3.43	14.217	3.82	20.22	1.53		
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53		
2.283	1.65	8.283	3.43	14.283	3.82	20.28	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.317	1.65	8.317	3.43	14.317	3.82	20.32	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53		
2.383	1.65	8.383	3.43	14.383	3.82	20.38	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53		
2.483	1.65	8.483	3.43	14.483	3.82	20.48	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.517	1.65	8.517	3.43	14.517	3.82	20.52	1.53		
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.617	1.65	8.617	3.43	14.617	3.82	20.62	1.53		
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.683	1.65	8.683	3.43	14.683	3.82	20.68	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.717	1.65	8.717	3.43	14.717	3.82	20.72	1.53		
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53		
2.783	1.65	8.783	3.43	14.783	3.82	20.78	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.817	1.65	8.817	3.43	14.817	3.82	20.82	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53		
2.883	1.65	8.883	3.43	14.883	3.82	20.88	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53		
2.983	1.65	8.983	3.43	14.983	3.82	20.98	1.53		
3.000	1.65	9.000	3.44	15.000	3.82	21.00	1.53		
3.017	1.65	9.017	4.07	15.017	3.82	21.02	1.53		
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53		

HRP8-EX_2-100 YEAR.OUT									
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.117	1.65	9.117	4.07	15.117	3.82	21.12	1.53		
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.183	1.65	9.183	4.07	15.183	3.82	21.18	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.217	1.65	9.217	4.07	15.217	3.82	21.22	1.53		
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53		
3.283	1.65	9.283	4.07	15.283	3.82	21.28	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.317	1.65	9.317	4.07	15.317	3.82	21.32	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53		
3.383	1.65	9.383	4.07	15.383	3.82	21.38	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53		
3.483	1.65	9.483	4.07	15.483	3.82	21.48	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.517	1.65	9.517	4.58	15.517	3.82	21.52	1.53		
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53		
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.617	1.65	9.617	4.58	15.617	3.82	21.62	1.53		
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.683	1.65	9.683	4.58	15.683	3.82	21.68	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.717	1.65	9.717	4.58	15.717	3.82	21.72	1.53		
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53		
3.783	1.65	9.783	4.58	15.783	3.82	21.78	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.817	1.65	9.817	4.58	15.817	3.82	21.82	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53		
3.883	1.65	9.883	4.58	15.883	3.82	21.88	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53		
3.983	1.65	9.983	4.58	15.983	3.82	21.98	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.017	2.04	10.017	5.85	16.017	2.30	22.02	1.53		
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.117	2.04	10.117	5.85	16.117	2.29	22.12	1.53		
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.183	2.04	10.183	5.85	16.183	2.29	22.18	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.217	2.04	10.217	5.85	16.217	2.29	22.22	1.53		
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53		
4.283	2.04	10.283	5.85	16.283	2.29	22.28	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.317	2.04	10.317	5.85	16.317	2.29	22.32	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53		
4.383	2.04	10.383	5.85	16.383	2.29	22.38	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53		
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53		
4.483	2.04	10.483	5.85	16.483	2.29	22.48	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.517	2.04	10.517	7.89	16.517	2.29	22.52	1.53		

HRP8-EX_2-100 YEAR.OUT							
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.617	2.04	10.617	7.89	16.617	2.29	22.62	1.53
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.683	2.04	10.683	7.89	16.683	2.29	22.68	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.717	2.04	10.717	7.89	16.717	2.29	22.72	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.783	2.04	10.783	7.89	16.783	2.29	22.78	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.817	2.04	10.817	7.89	16.817	2.29	22.82	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.883	2.04	10.883	7.89	16.883	2.29	22.88	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
4.983	2.04	10.983	7.89	16.983	2.29	22.98	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.017	2.04	11.017	12.21	17.017	2.29	23.02	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.117	2.04	11.117	12.21	17.117	2.29	23.12	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.183	2.04	11.183	12.21	17.183	2.29	23.18	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.217	2.04	11.217	12.21	17.217	2.29	23.22	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.283	2.04	11.283	12.21	17.283	2.29	23.28	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.317	2.04	11.317	12.21	17.317	2.29	23.31	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53
5.383	2.04	11.383	12.21	17.383	2.29	23.38	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.483	2.04	11.483	12.21	17.483	2.29	23.48	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.517	2.04	11.517	52.91	17.517	2.29	23.52	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.583	2.04	11.583	52.92	17.583	2.29	23.58	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.617	2.04	11.617	52.92	17.617	2.29	23.62	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.683	2.04	11.683	52.92	17.683	2.29	23.68	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.717	2.04	11.717	52.92	17.717	2.29	23.72	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.767	2.04	11.767	140.39	17.767	2.29	23.77	1.53
5.783	2.04	11.783	140.43	17.783	2.29	23.78	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.817	2.04	11.817	140.43	17.817	2.29	23.82	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.883	2.04	11.883	140.43	17.883	2.29	23.88	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53

5.983 2.04 |11.983 140.43 |17.983 2.29 | 23.98 1.53
6.000 2.04 |12.000 140.43 |18.000 2.29 | 24.00 1.53

Unit Hyd Qpeak (cms)= 0.580

PEAK FLOW (cms)= 0.435 (1)
TIME TO PEAK (hrs)= 12.017
RUNOFF VOLUME (mm)= 66.487
TOTAL RAINFALL (mm)= 127.201
RUNOFF COEFFICIENT = 0.523

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0153): 1.70 0.435 12.02 66.49
+ ID2= 2 (0036): 87.75 7.566 12.67 84.77
=====

ID = 3 (0035): 89.45 7.615 12.67 80.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0038)
ID= 1 DT= 8.0 min
Area (ha)= 87.75 Curve Number (CN)= 82.0
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.92

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr
0.133 1.27 | 6.133 2.54 | 12.133 18.32 | 18.13 2.29
0.267 1.27 | 6.267 2.54 | 12.267 18.32 | 18.27 2.29
0.400 1.27 | 6.400 2.54 | 12.400 18.32 | 18.40 2.29
0.533 1.27 | 6.533 2.54 | 12.533 16.09 | 18.53 2.29
0.667 1.27 | 6.667 2.54 | 12.667 9.41 | 18.67 2.29
0.800 1.27 | 6.800 2.54 | 12.800 9.41 | 18.80 2.29
0.933 1.27 | 6.933 2.54 | 12.933 9.41 | 18.93 2.29
1.067 1.27 | 7.067 2.54 | 13.067 5.00 | 19.07 2.29
1.200 1.27 | 7.200 2.54 | 13.200 1.78 | 19.20 2.29
1.333 1.27 | 7.333 2.54 | 13.333 1.78 | 19.33 2.29
1.467 1.27 | 7.467 2.54 | 13.467 1.78 | 19.47 2.29
1.600 1.27 | 7.600 2.54 | 13.600 8.27 | 19.60 2.29
1.733 1.27 | 7.733 2.54 | 13.733 10.43 | 19.73 2.29
1.867 2.16 | 7.867 2.54 | 13.867 10.43 | 19.87 2.29
2.000 2.29 | 8.000 2.54 | 14.000 10.43 | 20.00 2.29
2.133 1.65 | 8.133 3.43 | 14.133 3.82 | 20.13 1.53
2.267 1.65 | 8.267 3.43 | 14.267 3.82 | 20.27 1.53
2.400 1.65 | 8.400 3.43 | 14.400 3.82 | 20.40 1.53
2.533 1.65 | 8.533 3.43 | 14.533 3.82 | 20.53 1.53
2.667 1.65 | 8.667 3.43 | 14.667 3.82 | 20.67 1.53
2.800 1.65 | 8.800 3.43 | 14.800 3.82 | 20.80 1.53
2.933 1.65 | 8.933 3.43 | 14.933 3.82 | 20.93 1.53
3.067 1.65 | 9.067 3.75 | 15.067 3.82 | 21.07 1.53
3.200 1.65 | 9.200 4.07 | 15.200 3.82 | 21.20 1.53
3.333 1.65 | 9.333 4.07 | 15.333 3.82 | 21.33 1.53
3.467 1.65 | 9.467 4.07 | 15.467 3.82 | 21.47 1.53
3.600 1.65 | 9.600 4.45 | 15.600 3.82 | 21.60 1.53
3.733 1.65 | 9.733 4.58 | 15.733 3.82 | 21.73 1.53
3.867 1.65 | 9.867 4.58 | 15.867 3.82 | 21.87 1.53
4.000 1.65 | 10.000 4.58 | 16.000 3.82 | 22.00 1.53
4.133 2.04 | 10.133 5.85 | 16.133 2.29 | 22.13 1.53
4.267 2.04 | 10.267 5.85 | 16.267 2.29 | 22.27 1.53
4.400 2.04 | 10.400 5.85 | 16.400 2.29 | 22.40 1.53
4.533 2.04 | 10.533 6.36 | 16.533 2.29 | 22.53 1.53
4.667 2.04 | 10.667 7.89 | 16.667 2.29 | 22.67 1.53
4.800 2.04 | 10.800 7.89 | 16.800 2.29 | 22.80 1.53
4.933 2.04 | 10.933 7.89 | 16.933 2.29 | 22.93 1.53
5.067 2.04 | 11.067 10.05 | 17.067 2.29 | 23.07 1.53
5.200 2.04 | 11.200 12.21 | 17.200 2.29 | 23.20 1.53
5.333 2.04 | 11.333 12.21 | 17.333 2.29 | 23.33 1.53
5.467 2.04 | 11.467 12.21 | 17.467 2.29 | 23.47 1.53
5.600 2.04 | 11.600 42.74 | 17.600 2.29 | 23.60 1.53
5.733 2.04 | 11.733 52.92 | 17.733 2.29 | 23.73 1.53
5.867 2.04 | 11.867 129.49 | 17.867 2.29 | 23.87 1.53
6.000 2.04 | 12.000 140.43 | 18.000 2.29 | 24.00 1.53

Unit Hyd Qpeak (cms)= 3.643

PEAK FLOW (cms)= 6.448 (1)

HRP8-EX_2-100 YEAR.OUT

TIME TO PEAK (hrs)= 12.800
RUNOFF VOLUME (mm)= 83.911
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.660

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP9-EX_2-100 YEAR.OUT

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y M M O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\bdaf341f-283c-4837-90c6-214fb0a7542d\scenar
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DATE: 03/24/2023 TIME: 11:18:11

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\5689c38b-e18c-428b-92ad-ffa68111e63c\571fbdef
Ptotal= 57.60 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04	
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04	
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04	
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04	
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04	
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04	
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04	
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04	
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04	
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04	
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04	
1.800	0.81	7.800	1.15	13.800	4.72	19.80	1.04	
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69	
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69	
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69	
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69	
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69	
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69	
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69	
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69	
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69	
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69	
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69	
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69	
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69	
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69	
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69	
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69	
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69	
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69	
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69	
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69	
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69	
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69	
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69	
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69	
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69	
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69	
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69	
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69	
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69	
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69	
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69	
5.800	0.92	11.800	43.78	17.800	1.04	23.80	0.69	
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69	
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69	

Unit Hyd Ppeak (cms)= 4.149

PEAK FLOW (cms)= 1.812 (i)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 25.531
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.443

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0160) | Area (ha)= 9.15
ID= 1 DT= 3.0 min | Total Imp(%)= 48.00 Dir. Conn.(%)= 48.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.39
Dep. Storage (mm)= 1.50
Average Slope (%)= 2.00
Length (m)= 246.98
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP9-EX_2-100 YEAR.OUT

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69

HRP9-EX_2-100 YEAR.OUT

4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 21.82
over (min) 6.00 15.00
Storage Coeff. (min)= 4.28 (ii) 13.01 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

TOTALS

PEAK FLOW (cms)= 0.75 0.18 0.893 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 56.10 16.60 35.56
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.29 0.62

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1	2	3	4	5
		AREA	QPEAK	TPEAK
		(ha)	(cms)	(hrs)
ID1= 1 (1060):	51.71	1.812	12.30	25.53
+ ID2= 2 (0160):	9.15	0.893	12.00	35.56
ID = 3 (0003):	60.86	2.053	12.05	27.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0009)				
OVERFLOW IS OFF				
IN= 2----> OUT= 1				
DT= 5.0 min				
OUTFLOW	STORAGE	OUTFLOW	STORAGE	
(cms)	(ha.m.)	(cms)	(ha.m.)	
0.0000	0.0000	0.4500	0.5700	
0.0200	0.0400	0.9300	0.5750	
0.0350	0.1540	1.5000	0.6500	
0.0450	0.2340	2.0000	0.7300	
0.0540	0.3160	5.2000	1.0200	
0.0610	0.4000	7.7000	1.2000	
0.0680	0.5000	0.0000	0.0000	
INFLOW : ID= 2 (0003)	60.860	2.053	12.05	27.04
OUTFLOW: ID= 1 (0009)	60.860	1.315	12.85	27.03

HRP9-EX_2-100 YEAR.OUT

PEAK FLOW REDUCTION [Qout/qin](%)= 64.06
TIME SHIFT OF PEAK FLOW (min)= 48.00
MAXIMUM STORAGE USED (ha.m.)= 0.6259

CALIB	
STANDHYD (0161)	
ID= 1 DT= 2.0 min	

Area	(ha)=	3.49
Total Imp(%)=		35.00
Dir. Conn.(%)=		35.00
IMPERVIOUS		
PERVIOUS (i)		
Surface Area	(ha)=	1.22
Dep. Storage	(mm)=	1.50
Average Slope	(%)=	2.00
Length	(m)=	152.53
Mannings n	=	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04		
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04		
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04		
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04		
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04		
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04		
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04		
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04		
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04		
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04		
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04		
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04		
1.767	0.81	7.767	1.15	13.767	4.72	19.77	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04		
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04		
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69		
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		

HRP9-EX_2-100 YEAR.OUT

2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69

HRP9-EX_2-100 YEAR.OUT

5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 23.45
over (min) 5.00 16.00
Storage Coeff. (min)= 3.20 (ii) 15.81 (ii)
Unit Hyd. Tpeak (min)= 4.00 16.00
Unit Hyd. peak (cms)= 0.32 0.07

PEAK FLOW (cms)= 0.21 0.08 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.17 0.270 (iii)
RUNOFF VOLUME (mm)= 56.10 18.28 31.51
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.32 0.55

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN= 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0161):	3.49	0.276	12.00	31.51	
+ ID2= 2 (0009):	60.86	1.315	12.85	27.03	
ID = 3 (0005):	64.35	1.353	12.83	27.21	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0162)	Area	(ha)=	1.29	Curve Number	(CN)= 75.0
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=		0.40		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04

HRP9-EX_2-100 YEAR.OUT

1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 0.124

PEAK FLOW (cms)= 0.040 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 20.153
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.350

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0162):	1.29	0.040	12.25	20.15	
+ ID2= 2 (0005):	64.35	1.353	12.83	27.21	
ID = 3 (0007):	65.64	1.375	12.80	27.07	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

HRP9-EX_2-100 YEAR.OUT

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V V I SSSS U U A L (V 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voind.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\37cb142-a341-419d-8b82-71c0ff35d680\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\37cb142-a341-419d-8b82-71c0ff35d680\scenar

DATE: 03/24/2023 TIME: 11:18:10

USER:

COMMENTS: _____

** SIMULATION : Run 02

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| MASS STORM | Filename: C:\Users\AbirA\AppData
| | ata\Local\Temp\
| | 5689c38b-e18c-428b-92ad-ffa68111e63c\fb8e60ca
| Ptotal= 76.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm
-----
Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min
```

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.77	6.25	1.54	12.25	11.06	18.25	1.38	
0.50	0.77	6.50	1.54	12.50	11.06	18.50	1.38	
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38	
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38	
1.25	0.77	7.25	1.54	13.25	1.08	19.25	1.38	
1.50	0.77	7.50	1.54	13.50	1.08	19.50	1.38	
1.75	0.77	7.75	1.54	13.75	6.30	19.75	1.38	
2.00	1.38	8.00	1.54	14.00	6.30	20.00	1.38	
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92	
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92	
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92	
3.00	1.00	9.00	2.07	15.00	2.30	21.00	0.92	
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92	
3.50	1.00	9.50	2.46	15.50	2.30	21.50	0.92	
3.75	1.00	9.75	2.76	15.75	2.30	21.75	0.92	
4.00	1.00	10.00	2.76	16.00	2.30	22.00	0.92	
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92	
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92	
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92	
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92	
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92	
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92	
5.75	1.23	11.75	31.95	17.75	1.38	23.75	0.92	
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92	

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| CALIB |
| STANDHYD ( 1060) | Area (ha)= 51.71 Curve Number (CN)= 82.0
| ID= 1 DT= 6.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| U.H. Tp(hrs)= 0.48 |
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NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38	
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38	
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38	
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38	
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38	
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38	
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38	
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38	
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38	
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38	
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38	
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38	
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38	
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38	
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38	
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38	
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38	
1.800	1.08	7.800	1.54	13.800	6.30	19.80	1.38	
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38	
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38	
2.100	1.08	8.100	2.07	14.100	2.30	20.10	0.92	
2.200	1.08	8.200	2.07	14.200	2.30	20.20	0.92	
2.300	1.08	8.300	2.07	14.300	2.30	20.30	0.92	
2.400	1.08	8.400	2.07	14.400	2.30	20.40	0.92	
2.500	1.08	8.500	2.07	14.500	2.30	20.50	0.92	
2.600	1.08	8.600	2.07	14.600	2.30	20.60	0.92	
2.700	1.08	8.700	2.07	14.700	2.30	20.70	0.92	
2.800	1.08	8.800	2.07	14.800	2.30	20.80	0.92	
2.900	1.08	8.900	2.07	14.900	2.30	20.90	0.92	
3.000	1.08	9.000	2.07	15.000	2.30	21.00	0.92	
3.100	1.08	9.100	2.46	15.100	2.30	21.10	0.92	
3.200	1.08	9.200	2.46	15.200	2.30	21.20	0.92	
3.300	1.08	9.300	2.46	15.300	2.30	21.30	0.92	
3.400	1.08	9.400	2.46	15.400	2.30	21.40	0.92	
3.500	1.08	9.500	2.46	15.500	2.30	21.50	0.92	
3.600	1.08	9.600	2.76	15.600	2.30	21.60	0.92	
3.700	1.08	9.700	2.76	15.700	2.30	21.70	0.92	
3.800	1.08	9.800	2.76	15.800	2.30	21.80	0.92	
3.900	1.08	9.900	2.76	15.900	2.30	21.90	0.92	
4.000	1.08	10.000	2.76	16.000	2.30	22.00	0.92	
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92	
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92	
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92	
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92	
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92	
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92	
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92	
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92	
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92	
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92	
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92	
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92	
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92	
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92	
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92	
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92	
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92	
5.800	1.23	11.800	58.37	17.800	1.38	23.80	0.92	
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92	
6.000	1.23	12.000	84.78	18.000	1.38	24.00	0.92	

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 2.912 (i)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 40.410
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.526

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB |
| STANDHYD ( 0160) | Area (ha)= 9.15
| ID= 1 DT= 3.0 min | Total Imp(%)= 48.00 Dir. Conn.(%)= 48.00
|-----|
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	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.39	4.76
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	246.98	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP9-EX_2-100 YEAR.OUT

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.550	0.77	7.550	1.54	13.550	6.38	19.55	1.38
1.600	0.77	7.600	1.54	13.600	6.38	19.60	1.38
1.650	0.77	7.650	1.54	13.650	6.38	19.65	1.38
1.700	0.77	7.700	1.54	13.700	6.38	19.70	1.38
1.750	0.77	7.750	1.54	13.750	6.38	19.75	1.38
1.800	1.38	7.800	1.54	13.800	6.38	19.80	1.38
1.850	1.38	7.850	1.54	13.850	6.38	19.85	1.38
1.900	1.38	7.900	1.54	13.900	6.38	19.90	1.38
1.950	1.38	7.950	1.54	13.950	6.38	19.95	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.050	1.00	8.050	2.07	14.050	2.38	20.05	0.92
2.100	1.00	8.100	2.07	14.100	2.38	20.10	0.92
2.150	1.00	8.150	2.07	14.150	2.38	20.15	0.92
2.200	1.00	8.200	2.07	14.200	2.38	20.20	0.92
2.250	1.00	8.250	2.07	14.250	2.38	20.25	0.92
2.300	1.00	8.300	2.07	14.300	2.38	20.30	0.92
2.350	1.00	8.350	2.07	14.350	2.38	20.35	0.92
2.400	1.00	8.400	2.07	14.400	2.38	20.40	0.92
2.450	1.00	8.450	2.07	14.450	2.38	20.45	0.92
2.500	1.00	8.500	2.07	14.500	2.38	20.50	0.92
2.550	1.00	8.550	2.07	14.550	2.38	20.55	0.92
2.600	1.00	8.600	2.07	14.600	2.38	20.60	0.92
2.650	1.00	8.650	2.07	14.650	2.38	20.65	0.92
2.700	1.00	8.700	2.07	14.700	2.38	20.70	0.92
2.750	1.00	8.750	2.07	14.750	2.38	20.75	0.92
2.800	1.00	8.800	2.07	14.800	2.38	20.80	0.92
2.850	1.00	8.850	2.07	14.850	2.38	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.38	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.38	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.38	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.38	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.38	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.38	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.38	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.38	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.38	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.38	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.38	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.38	21.45	0.92
3.500	1.00	9.500	2.46	15.500	2.38	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.38	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.38	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.38	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.38	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.38	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.38	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.38	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.38	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.38	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.38	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92

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4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 36.56
over (min) 6.00 12.00
Storage Coeff. (min)= 3.81 (ii) 11.60 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.24 0.10

TOTALS
PEAK FLOW (cms)= 1.01 0.32 1.303 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 75.30 27.73 50.56
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.36 0.66

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

[ADD HYD (0003)]					
[1 + 2 = 3]					
=====					
ID1= 1 (1060):	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
+ ID2= 2 (0160):	51.71	2.912	12.30	40.41	
	9.15	1.303	12.00	50.56	
=====					
ID = 3 (0003):	60.86	3.238	12.30	41.94	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0009)		OVERFLOW IS OFF			
IN= 2-->> OUT= 1					
DT= 5.0 min					
	OUTFLOW	STORAGE	OUTFLOW	STORAGE	
	(cms)	(ha.m.)	(cms)	(ha.m.)	

	0.0000	0.0000	0.4500	0.5700	
	0.0200	0.0400	0.9300	0.5750	
	0.0350	0.1540	1.5000	0.6500	
	0.0450	0.2340	2.6000	0.7300	
	0.0540	0.3160	5.2000	1.0200	
	0.0610	0.4000	7.7000	1.2000	
	0.0680	0.5000	0.0000	0.0000	

	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0003)	60.860	3.238	12.30	41.94	

OUTFLOW: ID= 1 (0009) 60.860 2.689 12.60 HRP9-EX_2-100 YEAR.OUT
41.93

PEAK FLOW REDUCTION [Qout/Qin](%)= 83.06
TIME SHIFT OF PEAK FLOW (min)= 18.08
MAXIMUM STORAGE USED (ha.m.)= 0.7492

CALIB
STANDHYD (0161)
ID= 1 DT= 2.0 min
Area (ha)= 3.49
Total Imp(%)= 35.00
Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.22 2.27
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 152.53 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.033 0.77 | 6.033 1.54 | 12.033 11.06 | 18.03 1.38
0.067 0.77 | 6.067 1.54 | 12.067 11.06 | 18.07 1.38
0.100 0.77 | 6.100 1.54 | 12.100 11.06 | 18.10 1.38
0.133 0.77 | 6.133 1.54 | 12.133 11.06 | 18.13 1.38
0.167 0.77 | 6.167 1.54 | 12.167 11.06 | 18.17 1.38
0.200 0.77 | 6.200 1.54 | 12.200 11.06 | 18.20 1.38
0.233 0.77 | 6.233 1.54 | 12.233 11.06 | 18.23 1.38
0.267 0.77 | 6.267 1.54 | 12.267 11.06 | 18.27 1.38
0.300 0.77 | 6.300 1.54 | 12.300 11.06 | 18.30 1.38
0.333 0.77 | 6.333 1.54 | 12.333 11.06 | 18.33 1.38
0.367 0.77 | 6.367 1.54 | 12.367 11.06 | 18.37 1.38
0.400 0.77 | 6.400 1.54 | 12.400 11.06 | 18.40 1.38
0.433 0.77 | 6.433 1.54 | 12.433 11.06 | 18.43 1.38
0.467 0.77 | 6.467 1.54 | 12.467 11.06 | 18.47 1.38
0.500 0.77 | 6.500 1.54 | 12.500 11.05 | 18.50 1.38
0.533 0.77 | 6.533 1.54 | 12.533 5.68 | 18.53 1.38
0.567 0.77 | 6.567 1.54 | 12.567 5.68 | 18.57 1.38
0.600 0.77 | 6.600 1.54 | 12.600 5.68 | 18.60 1.38
0.633 0.77 | 6.633 1.54 | 12.633 5.68 | 18.63 1.38
0.667 0.77 | 6.667 1.54 | 12.667 5.68 | 18.67 1.38
0.700 0.77 | 6.700 1.54 | 12.700 5.68 | 18.70 1.38
0.733 0.77 | 6.733 1.54 | 12.733 5.68 | 18.73 1.38
0.767 0.77 | 6.767 1.54 | 12.767 5.68 | 18.77 1.38
0.800 0.77 | 6.800 1.54 | 12.800 5.68 | 18.80 1.38
0.833 0.77 | 6.833 1.54 | 12.833 5.68 | 18.83 1.38
0.867 0.77 | 6.867 1.54 | 12.867 5.68 | 18.87 1.38
0.900 0.77 | 6.900 1.54 | 12.900 5.68 | 18.90 1.38
0.933 0.77 | 6.933 1.54 | 12.933 5.68 | 18.93 1.38
0.967 0.77 | 6.967 1.54 | 12.967 5.68 | 18.97 1.38
1.000 0.77 | 7.000 1.54 | 13.000 5.67 | 19.00 1.38
1.033 0.77 | 7.033 1.54 | 13.033 1.08 | 19.03 1.38
1.067 0.77 | 7.067 1.54 | 13.067 1.08 | 19.07 1.38
1.100 0.77 | 7.100 1.54 | 13.100 1.08 | 19.10 1.38
1.133 0.77 | 7.133 1.54 | 13.133 1.08 | 19.13 1.38
1.167 0.77 | 7.167 1.54 | 13.167 1.08 | 19.17 1.38
1.200 0.77 | 7.200 1.54 | 13.200 1.08 | 19.20 1.38
1.233 0.77 | 7.233 1.54 | 13.233 1.08 | 19.23 1.38
1.267 0.77 | 7.267 1.54 | 13.267 1.08 | 19.27 1.38
1.300 0.77 | 7.300 1.54 | 13.300 1.08 | 19.30 1.38
1.333 0.77 | 7.333 1.54 | 13.333 1.08 | 19.33 1.38
1.367 0.77 | 7.367 1.54 | 13.367 1.08 | 19.37 1.38
1.400 0.77 | 7.400 1.54 | 13.400 1.08 | 19.40 1.38
1.433 0.77 | 7.433 1.54 | 13.433 1.08 | 19.43 1.38
1.467 0.77 | 7.467 1.54 | 13.467 1.08 | 19.47 1.38
1.500 0.77 | 7.500 1.54 | 13.500 1.09 | 19.50 1.38
1.533 0.77 | 7.533 1.54 | 13.533 6.39 | 19.53 1.38
1.567 0.77 | 7.567 1.54 | 13.567 6.39 | 19.57 1.38
1.600 0.77 | 7.600 1.54 | 13.600 6.39 | 19.60 1.38
1.633 0.77 | 7.633 1.54 | 13.633 6.39 | 19.63 1.38
1.667 0.77 | 7.667 1.54 | 13.667 6.39 | 19.67 1.38
1.700 0.77 | 7.700 1.54 | 13.700 6.39 | 19.70 1.38
1.733 0.77 | 7.733 1.54 | 13.733 6.39 | 19.73 1.38
1.767 1.08 | 7.767 1.54 | 13.767 6.39 | 19.77 1.38
1.800 1.38 | 7.800 1.54 | 13.800 6.39 | 19.80 1.38
1.833 1.38 | 7.833 1.54 | 13.833 6.39 | 19.83 1.38
1.867 1.38 | 7.867 1.54 | 13.867 6.39 | 19.87 1.38
1.900 1.38 | 7.900 1.54 | 13.900 6.39 | 19.90 1.38
1.933 1.38 | 7.933 1.54 | 13.933 6.39 | 19.93 1.38
1.967 1.38 | 7.967 1.54 | 13.967 6.39 | 19.97 1.38
2.000 1.38 | 8.000 1.54 | 14.000 6.29 | 20.00 1.38
2.033 1.00 | 8.033 2.07 | 14.033 2.39 | 20.03 0.92
2.067 1.00 | 8.067 2.07 | 14.067 2.39 | 20.07 0.92

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2.100 1.00 | 8.100 2.07 | 14.100 2.39 | 20.10 0.92
2.133 1.00 | 8.133 2.07 | 14.133 2.39 | 20.13 0.92
2.167 1.00 | 8.167 2.07 | 14.167 2.39 | 20.17 0.92
2.200 1.00 | 8.200 2.07 | 14.200 2.39 | 20.20 0.92
2.233 1.00 | 8.233 2.07 | 14.233 2.39 | 20.23 0.92
2.267 1.00 | 8.267 2.07 | 14.267 2.39 | 20.27 0.92
2.300 1.00 | 8.300 2.07 | 14.300 2.39 | 20.30 0.92
2.333 1.00 | 8.333 2.07 | 14.333 2.39 | 20.33 0.92
2.367 1.00 | 8.367 2.07 | 14.367 2.39 | 20.37 0.92
2.400 1.00 | 8.400 2.07 | 14.400 2.39 | 20.40 0.92
2.433 1.00 | 8.433 2.07 | 14.433 2.39 | 20.43 0.92
2.467 1.00 | 8.467 2.07 | 14.467 2.39 | 20.47 0.92
2.500 1.00 | 8.500 2.07 | 14.500 2.39 | 20.50 0.92
2.533 1.00 | 8.533 2.07 | 14.533 2.39 | 20.53 0.92
2.567 1.00 | 8.567 2.07 | 14.567 2.39 | 20.57 0.92
2.600 1.00 | 8.600 2.07 | 14.600 2.39 | 20.60 0.92
2.633 1.00 | 8.633 2.07 | 14.633 2.39 | 20.63 0.92
2.667 1.00 | 8.667 2.07 | 14.667 2.39 | 20.67 0.92
2.700 1.00 | 8.700 2.07 | 14.700 2.39 | 20.70 0.92
2.733 1.00 | 8.733 2.07 | 14.733 2.39 | 20.73 0.92
2.767 1.00 | 8.767 2.07 | 14.767 2.39 | 20.77 0.92
2.800 1.00 | 8.800 2.07 | 14.800 2.39 | 20.80 0.92
2.833 1.00 | 8.833 2.07 | 14.833 2.39 | 20.83 0.92
2.867 1.00 | 8.867 2.07 | 14.867 2.39 | 20.87 0.92
2.900 1.00 | 8.900 2.07 | 14.900 2.39 | 20.90 0.92
2.933 1.00 | 8.933 2.07 | 14.933 2.39 | 20.93 0.92
2.967 1.00 | 8.967 2.07 | 14.967 2.39 | 20.97 0.92
3.000 1.00 | 9.000 2.07 | 15.000 2.39 | 21.00 0.92
3.033 1.00 | 9.033 2.46 | 15.033 2.39 | 21.03 0.92
3.067 1.00 | 9.067 2.46 | 15.067 2.39 | 21.07 0.92
3.100 1.00 | 9.100 2.46 | 15.100 2.39 | 21.10 0.92
3.133 1.00 | 9.133 2.46 | 15.133 2.39 | 21.13 0.92
3.167 1.00 | 9.167 2.46 | 15.167 2.39 | 21.17 0.92
3.200 1.00 | 9.200 2.46 | 15.200 2.39 | 21.20 0.92
3.233 1.00 | 9.233 2.46 | 15.233 2.39 | 21.23 0.92
3.267 1.00 | 9.267 2.46 | 15.267 2.39 | 21.27 0.92
3.300 1.00 | 9.300 2.46 | 15.300 2.39 | 21.30 0.92
3.333 1.00 | 9.333 2.46 | 15.333 2.39 | 21.33 0.92
3.367 1.00 | 9.367 2.46 | 15.367 2.39 | 21.37 0.92
3.400 1.00 | 9.400 2.46 | 15.400 2.39 | 21.40 0.92
3.433 1.00 | 9.433 2.46 | 15.433 2.39 | 21.43 0.92
3.467 1.00 | 9.467 2.46 | 15.467 2.39 | 21.47 0.92
3.500 1.00 | 9.500 2.46 | 15.500 2.39 | 21.50 0.92
3.533 1.00 | 9.533 2.76 | 15.533 2.39 | 21.53 0.92
3.567 1.00 | 9.567 2.76 | 15.567 2.39 | 21.57 0.92
3.600 1.00 | 9.600 2.76 | 15.600 2.39 | 21.60 0.92
3.633 1.00 | 9.633 2.76 | 15.633 2.39 | 21.63 0.92
3.667 1.00 | 9.667 2.76 | 15.667 2.39 | 21.67 0.92
3.700 1.00 | 9.700 2.76 | 15.700 2.39 | 21.70 0.92
3.733 1.00 | 9.733 2.76 | 15.733 2.39 | 21.73 0.92
3.767 1.00 | 9.767 2.76 | 15.767 2.39 | 21.77 0.92
3.800 1.00 | 9.800 2.76 | 15.800 2.39 | 21.80 0.92
3.833 1.00 | 9.833 2.76 | 15.833 2.39 | 21.83 0.92
3.867 1.00 | 9.867 2.76 | 15.867 2.39 | 21.87 0.92
3.900 1.00 | 9.900 2.76 | 15.900 2.39 | 21.90 0.92
3.933 1.00 | 9.933 2.76 | 15.933 2.39 | 21.93 0.92
3.967 1.00 | 9.967 2.76 | 15.967 2.39 | 21.97 0.92
4.000 1.00 | 10.000 2.77 | 16.000 2.39 | 22.00 0.92
4.033 1.23 | 10.033 3.53 | 16.033 1.38 | 22.03 0.92
4.067 1.23 | 10.067 3.53 | 16.067 1.38 | 22.07 0.92
4.100 1.23 | 10.100 3.53 | 16.100 1.38 | 22.10 0.92
4.133 1.23 | 10.133 3.53 | 16.133 1.38 | 22.13 0.92
4.167 1.23 | 10.167 3.53 | 16.167 1.38 | 22.17 0.92
4.200 1.23 | 10.200 3.53 | 16.200 1.38 | 22.20 0.92
4.233 1.23 | 10.233 3.53 | 16.233 1.38 | 22.23 0.92
4.267 1.23 | 10.267 3.53 | 16.267 1.38 | 22.27 0.92
4.300 1.23 | 10.300 3.53 | 16.300 1.38 | 22.30 0.92
4.333 1.23 | 10.333 3.53 | 16.333 1.38 | 22.33 0.92
4.367 1.23 | 10.367 3.53 | 16.367 1.38 | 22.37 0.92
4.400 1.23 | 10.400 3.53 | 16.400 1.38 | 22.40 0.92
4.433 1.23 | 10.433 3.53 | 16.433 1.38 | 22.43 0.92
4.467 1.23 | 10.467 3.53 | 16.467 1.38 | 22.47 0.92
4.500 1.23 | 10.500 3.53 | 16.500 1.38 | 22.50 0.92
4.533 1.23 | 10.533 4.76 | 16.533 1.38 | 22.53 0.92
4.567 1.23 | 10.567 4.76 | 16.567 1.38 | 22.57 0.92
4.600 1.23 | 10.600 4.76 | 16.600 1.38 | 22.60 0.92
4.633 1.23 | 10.633 4.76 | 16.633 1.38 | 22.63 0.92
4.667 1.23 | 10.667 4.76 | 16.667 1.38 | 22.67 0.92
4.700 1.23 | 10.700 4.76 | 16.700 1.38 | 22.70 0.92
4.733 1.23 | 10.733 4.76 | 16.733 1.38 | 22.73 0.92
4.767 1.23 | 10.767 4.76 | 16.767 1.38 | 22.77 0.92
4.800 1.23 | 10.800 4.76 | 16.800 1.38 | 22.80 0.92
4.833 1.23 | 10.833 4.76 | 16.833 1.38 | 22.83 0.92
4.867 1.23 | 10.867 4.76 | 16.867 1.38 | 22.87 0.92
4.900 1.23 | 10.900 4.76 | 16.900 1.38 | 22.90 0.92
4.933 1.23 | 10.933 4.76 | 16.933 1.38 | 22.93 0.92
4.967 1.23 | 10.967 4.76 | 16.967 1.38 | 22.97 0.92

HRP9-EX_2-100 YEAR.OUT

5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.500	1.23	11.500	7.40	17.500	1.38	23.50	0.92
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.767	1.23	11.767	58.44	17.767	1.38	23.77	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92
6.000	1.23	12.000	84.68	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 40.02
over (min) 5.00 14.00
Storage Coeff. (min)= 2.86 (ii) 13.04 (ii)
Unit Hyd. Tpeak (min)= 4.00 14.00
Unit Hyd. peak (cms)= 0.34 0.08

PEAK FLOW (cms)= 0.29 0.16 0.415 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 75.30 30.22 46.00
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.39 0.60

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0005)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0161): 3.49 0.415 12.00 46.00
+ ID2= 2 (0009): 60.86 2.689 12.60 41.93
=====

ID = 3 (0005): 64.35 2.766 12.60 42.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| NASHYD (0162)| Area (ha)= 1.29 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.40

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.083 0.77 | 6.083 1.54 | 12.083 11.07 | 18.08 1.38
0.167 0.77 | 6.167 1.54 | 12.167 11.06 | 18.17 1.38
0.250 0.77 | 6.250 1.54 | 12.250 11.06 | 18.25 1.38
0.333 0.77 | 6.333 1.54 | 12.333 11.06 | 18.33 1.38
0.417 0.77 | 6.417 1.54 | 12.417 11.06 | 18.42 1.38
0.500 0.77 | 6.500 1.54 | 12.500 11.06 | 18.50 1.38
0.583 0.77 | 6.583 1.54 | 12.583 5.68 | 18.58 1.38
0.667 0.77 | 6.667 1.54 | 12.667 5.68 | 18.67 1.38
0.750 0.77 | 6.750 1.54 | 12.750 5.68 | 18.75 1.38
0.833 0.77 | 6.833 1.54 | 12.833 5.68 | 18.83 1.38
0.917 0.77 | 6.917 1.54 | 12.917 5.68 | 18.92 1.38

HRP9-EX_2-100 YEAR.OUT

1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.124

PEAK FLOW (cms)= 0.066 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 32.943
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.429

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0007)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0162): 1.29 0.066 12.25 32.94
+ ID2= 2 (0005): 64.35 2.766 12.60 42.08
=====

ID = 3 (0007): 65.64 2.815 12.60 41.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP9-EX_2-100 YEAR.OUT
(v 6.1.2002)

V V I SSSS U U A L
V V I SS U U A A L
V V I SS U U A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y M M O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb48ca06caf\964b9c32-6026-4ca7-b05a-446ae204a494\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb48ca06caf\964b9c32-6026-4ca7-b05a-446ae204a494\scenar

DATE: 03/24/2023 TIME: 11:18:10

USER:

COMMENTS: _____

** SIMULATION : Run 03 **

| MASS STORM | Filename: C:\Users\AbirA\AppData
| | ata\Local\Temp\
| | 5689c38b-e18c-428b-92ad-ffa68111e63c\1913d010
| Ptotal= 88.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	'	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60	
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60	
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60	
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60	
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60	
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60	
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60	
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60	
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07	
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07	
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07	
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07	
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07	
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07	
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07	
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07	
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07	
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07	
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07	
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07	
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07	
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07	
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07	
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07	

| CALIB |
| NASHYD (1060) | Area (ha)= 51.71 Curve Number (CN)= 82.0
| ID= 1 DT= 6.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| | U.H. Tp(hrs)= 0.48

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN |' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr |' hrs mm/hr | hrs mm/hr
0.100 0.89 | 6.100 1.78 |12.100 12.79 | 18.10 1.60

HRP9-EX_2-100 YEAR.OUT

0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.800	1.24	7.800	1.78	13.800	7.28	19.80	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.500	1.42	11.500	8.53	17.500	1.60	23.50	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.800	1.42	11.800	67.49	17.800	1.60	23.80	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
6.000	1.42	12.000	98.03	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 3.645 (l)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 50.313
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.567

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0160) | Area (ha)= 9.15
| ID= 1 DT= 3.0 min | Total Imp(%)= 48.00 Dir. Conn.(%)= 48.00

	IMPERVIOUS	PERVIOUS (l)
Surface Area (ha)=	4.39	4.76
Dep. Storage (mm)=	1.50	5.00
Average Slope (k)=	2.00	2.00
Length (m)=	246.98	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

HRP9-EX_2-100 YEAR.OUT									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07		
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07		
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07		
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07		
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07		
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07		
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07		

HRP9-EX_2-100 YEAR.OUT									
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07		
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07		
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07		
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07		
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07		
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07		
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07		
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07		
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07		
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07		
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07		
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07		
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07		
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07		
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07		
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07		
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07		
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07		
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07		
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07		
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07		
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07		
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07		
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07		
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07		
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07		
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07		
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07		
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07		
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07		
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07		
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07		

Max.Eff.Inten.(mm/hr)=	98.04	46.81	
over (min)	6.00	12.00	
Storage Coeff. (min)=	3.60 (ii)	10.94 (iii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.25	0.10	
			TOTALS
PEAK FLOW (cms)=	1.18	0.42	1.561 (iii)
TIME TO PEAK (hrs)=	12.00	12.10	12.00
RUNOFF VOLUME (mm)=	87.30	35.48	60.35
TOTAL RAINFALL (mm)=	88.80	88.80	88.80
RUNOFF COEFFICIENT =	0.98	0.40	0.68

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1	+	2	=	3
		AREA	QPEAK	TPEAK
		(ha)	(cms)	(hrs)
ID1= 1 (1060):		51.71	3.645	12.30
+ ID2= 2 (0160):		9.15	1.561	12.00
=====				
ID = 3 (0003):		60.86	4.036	12.30
				51.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0009)				
OVERFLOW IS OFF				
IN= 2---> OUT= 1				

HRP9-EX_2-100 YEAR.OUT

TIME SHIFT OF PEAK FLOW (min)= 18.00
MAXIMUM STORAGE USED (ha.m.)= 0.8200

| CALIB |
| STANDHYD (0161) | Area (ha)= 3.49
| ID= 1 DT= 2.0 min | Total Imp(%)= 35.00 Dir. Conn.(%)= 35.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.22	2.27
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	152.53	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60		
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60		
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60		
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60		
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60		
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60		
1.000	0.89	7.000	1.78	13.000	6.56	19.00	1.60		
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.500	0.89	7.500	1.78	13.500	1.26	19.50	1.60		
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60		
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.767	1.24	7.767	1.78	13.767	7.28	19.77	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60		
2.000	1.60	8.000	1.78	14.000	7.27	20.00	1.60		
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		

HRP9-EX_2-100 YEAR.OUT

2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07

HRP9-EX_2-100 YEAR.OUT

5.100	1.42	[11.100	8.52	[17.100	1.60	[23.10	1.07
5.133	1.42	[11.133	8.52	[17.133	1.60	[23.13	1.07
5.167	1.42	[11.167	8.52	[17.167	1.60	[23.17	1.07
5.200	1.42	[11.200	8.52	[17.200	1.60	[23.20	1.07
5.233	1.42	[11.233	8.52	[17.233	1.60	[23.23	1.07
5.267	1.42	[11.267	8.52	[17.267	1.60	[23.27	1.07
5.300	1.42	[11.300	8.52	[17.300	1.60	[23.30	1.07
5.333	1.42	[11.333	8.52	[17.333	1.60	[23.33	1.07
5.367	1.42	[11.367	8.52	[17.367	1.60	[23.37	1.07
5.400	1.42	[11.400	8.52	[17.400	1.60	[23.40	1.07
5.433	1.42	[11.433	8.52	[17.433	1.60	[23.43	1.07
5.467	1.42	[11.467	8.52	[17.467	1.60	[23.47	1.07
5.500	1.42	[11.500	8.56	[17.500	1.60	[23.50	1.07
5.533	1.42	[11.533	36.94	[17.533	1.60	[23.53	1.07
5.567	1.42	[11.567	36.94	[17.567	1.60	[23.57	1.07
5.600	1.42	[11.600	36.94	[17.600	1.60	[23.60	1.07
5.633	1.42	[11.633	36.94	[17.633	1.60	[23.63	1.07
5.667	1.42	[11.667	36.94	[17.667	1.60	[23.67	1.07
5.700	1.42	[11.700	36.94	[17.700	1.60	[23.70	1.07
5.733	1.42	[11.733	36.94	[17.733	1.60	[23.73	1.07
5.767	1.42	[11.767	67.57	[17.767	1.60	[23.77	1.07
5.800	1.42	[11.800	98.04	[17.800	1.60	[23.80	1.07
5.833	1.42	[11.833	98.04	[17.833	1.60	[23.83	1.07
5.867	1.42	[11.867	98.04	[17.867	1.60	[23.87	1.07
5.900	1.42	[11.900	98.04	[17.900	1.60	[23.90	1.07
5.933	1.42	[11.933	98.04	[17.933	1.60	[23.93	1.07
5.967	1.42	[11.967	98.04	[17.967	1.60	[23.97	1.07
6.000	1.42	[12.000	97.92	[18.000	1.60	[24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 52.06
over (min) 5.00 12.00
Storage Coeff. (min)= 2.69 (ii) 11.86 (iii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.35 0.09

PEAK FLOW (cms)= 0.33 0.21 0.519 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 87.30 38.46 55.55
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.43 0.63

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0005)|
1 + 2 = 3
ID1= 1 (0161): AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
+ ID2= 2 (0009): 60.86 3.404 12.60 51.81
=====

ID = 3 (0005): 64.35 3.494 12.57 51.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0162) | Area (ha)= 1.29 Curve Number (CN)= 75.0
|ID= 1 DT= 5.0 min| Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.40

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60

HRP9-EX_2-100 YEAR.OUT

1.250	0.89	7.250	1.78	[13.250	1.24	[19.25	1.60
1.333	0.89	7.333	1.78	[13.333	1.24	[19.33	1.60
1.417	0.89	7.417	1.78	[13.417	1.24	[19.42	1.60
1.500	0.89	7.500	1.78	[13.500	1.24	[19.50	1.60
1.583	0.89	7.583	1.78	[13.583	7.28	[19.58	1.60
1.667	0.89	7.667	1.78	[13.667	7.28	[19.67	1.60
1.750	0.89	7.750	1.78	[13.750	7.28	[19.75	1.60
1.833	1.60	7.833	1.78	[13.833	7.28	[19.83	1.60
1.917	1.60	7.917	1.78	[13.917	7.28	[19.92	1.60
2.000	1.60	8.000	1.78	[14.000	7.28	[20.00	1.60
2.083	1.15	8.083	2.40	[14.083	2.66	[20.08	1.07
2.167	1.15	8.167	2.40	[14.167	2.66	[20.17	1.07
2.250	1.15	8.250	2.40	[14.250	2.66	[20.25	1.07
2.333	1.15	8.333	2.40	[14.333	2.66	[20.33	1.07
2.417	1.15	8.417	2.40	[14.417	2.66	[20.42	1.07
2.500	1.15	8.500	2.40	[14.500	2.66	[20.50	1.07
2.583	1.15	8.583	2.40	[14.583	2.66	[20.58	1.07
2.667	1.15	8.667	2.40	[14.667	2.66	[20.67	1.07
2.750	1.15	8.750	2.40	[14.750	2.66	[20.75	1.07
2.833	1.15	8.833	2.40	[14.833	2.66	[20.83	1.07
2.917	1.15	8.917	2.40	[14.917	2.66	[20.92	1.07
3.000	1.15	9.000	2.40	[15.000	2.66	[21.00	1.07
3.083	1.15	9.083	2.84	[15.083	2.66	[21.08	1.07
3.167	1.15	9.167	2.84	[15.167	2.66	[21.17	1.07
3.250	1.15	9.250	2.84	[15.250	2.66	[21.25	1.07
3.333	1.15	9.333	2.84	[15.333	2.66	[21.33	1.07
3.417	1.15	9.417	2.84	[15.417	2.66	[21.42	1.07
3.500	1.15	9.500	2.84	[15.500	2.66	[21.50	1.07
3.583	1.15	9.583	3.20	[15.583	2.66	[21.58	1.07
3.667	1.15	9.667	3.20	[15.667	2.66	[21.67	1.07
3.750	1.15	9.750	3.20	[15.750	2.66	[21.75	1.07
3.833	1.15	9.833	3.20	[15.833	2.66	[21.83	1.07
3.917	1.15	9.917	3.20	[15.917	2.66	[21.92	1.07
4.000	1.15	10.000	3.20	[16.000	2.66	[22.00	1.07
4.083	1.42	[10.083	4.08	[16.083	1.60	[22.08	1.07
4.167	1.42	[10.167	4.08	[16.167	1.60	[22.17	1.07
4.250	1.42	[10.250	4.08	[16.250	1.60	[22.25	1.07
4.333	1.42	[10.333	4.08	[16.333	1.60	[22.33	1.07
4.417	1.42	[10.417	4.08	[16.417	1.60	[22.42	1.07
4.500	1.42	[10.500	4.08	[16.500	1.60	[22.50	1.07
4.583	1.42	[10.583	5.51	[16.583	1.60	[22.58	1.07
4.667	1.42	[10.667	5.51	[16.667	1.60	[22.67	1.07
4.750	1.42	[10.750	5.51	[16.750	1.60	[22.75	1.07
4.833	1.42	[10.833	5.51	[16.833	1.60	[22.83	1.07
4.917	1.42	[10.917	5.51	[16.917	1.60	[22.92	1.07
5.000	1.42	[11.000	5.51	[17.000	1.60	[23.00	1.07
5.083	1.42	[11.083	8.52	[17.083	1.60	[23.08	1.07
5.167	1.42	[11.167	8.52	[17.167	1.60	[23.17	1.07
5.250	1.42	[11.250	8.52	[17.250	1.60	[23.25	1.07
5.333	1.42	[11.333	8.52	[17.333	1.60	[23.33	1.07
5.417	1.42	[11.417	8.52	[17.417	1.60	[23.42	1.07
5.500	1.42	[11.500	8.52	[17.500	1.60	[23.50	1.07
5.583	1.42	[11.583	36.94	[17.583	1.60	[23.58	1.07
5.667	1.42	[11.667	36.94	[17.667	1.60	[23.67	1.07
5.750	1.42	[11.750	36.94	[17.750	1.60	[23.75	1.07
5.833	1.42	[11.833	98.03	[17.833	1.60	[23.83	1.07
5.917	1.42	[11.917	98.04	[17.917	1.60	[23.92	1.07
6.000	1.42	[12.000	98.04	[18.000	1.60	[24.00	1.07

Unit Hyd Qpeak (cms)= 0.124

PEAK FLOW (cms)= 0.084 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 41.678
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.469

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0007)|
1 + 2 = 3
ID1= 1 (0162): AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
+ ID2= 2 (0005): 64.35 3.494 12.57 51.93
=====

ID = 3 (0007): 65.64 3.560 12.57 51.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L

HRP9-EX_2-100 YEAR.OUT

V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y M M O O
O O T T H H Y Y M M O O
000 T T H H Y Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voim.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ad914737-3334-4a47-8ee1-833b8074a6fb\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ad914737-3334-4a47-8ee1-833b8074a6fb\scenar

DATE: 03/24/2023 TIME: 11:18:11

USER:

COMMENTS: _____

** SIMULATION : Run 04 **

MASS STORM Filename: C:\Users\AbirA\AppData\Local\Temp\5689c39b-e18c-428b-92ad-ffa68111e63c\cddf3d47
Ptotal=103.20 mm Comments: Mass 24-Hour SCS Type II Design Storm
Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86	
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86	
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86	
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86	
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86	
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86	
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86	
2.00	1.86	8.00	2.06	14.00	8.46	20.00	1.86	
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24	
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24	
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24	
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24	
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24	
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24	
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24	
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24	
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24	
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24	
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24	
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24	
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24	
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24	
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24	
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24	

CALIB
NASHYD (1060) Area (ha)= 51.71 Curve Number (CN)= 82.0
ID= 1 DT= 6.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.48

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86	
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86	
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86	
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86	

HRP9-EX_2-100 YEAR.OUT

0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86	
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86	
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86	
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86	
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86	
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86	
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86	
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86	
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86	
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86	
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86	
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86	
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86	
1.800	1.44	7.800	2.06	13.800	8.46	19.80	1.86	
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86	
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86	
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24	
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24	
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24	
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24	
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24	
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24	
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24	
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24	
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24	
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24	
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24	
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24	
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24	
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24	
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24	
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24	
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24	
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24	
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24	
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24	
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24	
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24	
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24	
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24	
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24	
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24	
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24	
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24	
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24	
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24	
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24	
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24	
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24	
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24	
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24	
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24	
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24	
5.800	1.65	11.800	78.44	17.800	1.86	23.80	1.24	
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24	
6.000	1.65	12.000	113.92	18.000	1.86	24.00	1.24	

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 4.554 (i)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 62.628
TOTAL RAINFALL (mm)= 163.200
RUNOFF COEFFICIENT = 0.607

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0160) Area (ha)= 9.15
ID= 1 DT= 3.0 min Total Imp(%)= 48.00 Dir. Conn.(%)= 48.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.39 4.76
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 246.98 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86	

HRP9-EX_2-100 YEAR.OUT									
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		

HRP9-EX_2-100 YEAR.OUT						
4.450	1.65	10.450	4.75	16.450	1.86	22.45 1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50 1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55 1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60 1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65 1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70 1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75 1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80 1.24
4.850	1.65	10.850	6.40	16.850	1.86	22.85 1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90 1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95 1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00 1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05 1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10 1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15 1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20 1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25 1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30 1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35 1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40 1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45 1.24
5.500	1.65	11.500	9.92	17.500	1.86	23.50 1.24
5.550	1.65	11.550	42.93	17.550	1.86	23.55 1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60 1.24
5.650	1.65	11.650	42.93	17.650	1.86	23.65 1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70 1.24
5.750	1.65	11.750	42.97	17.750	1.86	23.75 1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80 1.24
5.850	1.65	11.850	113.93	17.850	1.86	23.85 1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90 1.24
5.950	1.65	11.950	113.93	17.950	1.86	23.95 1.24
6.000	1.65	12.000	113.88	18.000	1.86	24.00 1.24
Max.Eff.Inten.(mm/hr)= 113.93 59.92						
over (min) 6.00 12.00						
Storage Coeff. (min)= 3.39 (ii) 10.31 (iii)						
Unit Hyd. Tpeak (min)= 6.00 12.00						
Unit Hyd. peak (cms)= 0.26 0.10						
PEAK FLOW (cms)= 1.37 0.56 *TOTALS* 1.882 (iii)						
TIME TO PEAK (hrs)= 12.00 12.05 12.00						
RUNOFF VOLUME (mm)= 101.70 45.42 72.43						
TOTAL RAINFALL (mm)= 103.20 103.20 103.20						
RUNOFF COEFFICIENT = 0.99 0.44 0.70						
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:						
CN* = 69.0 Ia = Dep. Storage (Above)						
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.						
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.						

ADD HYD (0003)						
1 + 2 = 3						

ID1= 1 (0060):		51.71	4.554	12.30	62.63	
+ ID2= 2 (0160):		9.15	1.882	12.00	72.43	
=====						
ID = 3 (0003):		60.86	5.025	12.30	64.10	
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.						

RESERVOIR(0009)						
IN= 2 ---> OUT= 1						
DT= 5.0 min						

OVERFLOW IS OFF						
OUTFLOW (cms)		STORAGE (ha.m.)		OUTFLOW (cms)		STORAGE (ha.m.)
0.0000		0.0000		0.4500		0.5700
0.0200		0.0400		0.9300		0.5750
0.0350		0.1540		1.5000		0.6500
0.0450		0.2340		2.6000		0.7300
0.0540		0.3160		3.7000		1.0200
0.0610		0.4000		4.7000		1.2000
0.0680		0.5000		0.0000		0.0000
AREA (ha)		QPEAK (cms)		TPEAK (hrs)		R.V. (mm)
INFLOW : ID= 2 (0003)		60.860		5.025		12.30 64.10
OUTFLOW: ID= 1 (0009)		60.860		4.324		12.55 64.09
PEAK FLOW REDUCTION [Qout/Qin](%)= 86.06						
TIME SHIFT OF PEAK FLOW (min)= 15.00						
MAXIMUM STORAGE USED (ha.m.)= 0.9230						

HRP9-EX_2-100 YEAR.OUT

CALIB
STANDHYD (0161)
ID= 1 DT= 2.0 min |

Area (ha)= 3.49
Total Imp(%)= 35.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.22 2.27
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 152.53 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86		
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.500	1.03	6.500	2.06	12.500	14.85	18.50	1.86		
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86		
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86		
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86		
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86		
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86		
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86		
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86		
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86		
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86		
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86		
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86		
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86		
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86		
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24		
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		

HRP9-EX_2-100 YEAR.OUT

2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24

HRP9-EX_2-100 YEAR.OUT									
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24		
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24		
5.500	1.65	11.500	9.95	17.500	1.86	23.50	1.24		
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24		
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24		
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24		
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24		
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)= 113.93 66.06
over (min) 5.00 12.00
Storage Coeff. (min)= 2.54 (ii) 10.87 (iii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.36 0.10

PEAK FLOW (cms)= 0.39 0.28
TIME TO PEAK (hrs)= 12.00 12.07
RUNOFF VOLUME (mm)= 101.70 48.96
TOTAL RAINFALL (mm)= 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.47

TOTALS
0.637 (iii)
0.65

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0161):	3.49	0.637	12.00	67.41
+ ID2= 2 (0009):	60.86	4.324	12.55	64.09
=====				
ID = 3 (0005):	64.35	4.444	12.53	64.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0162)				
ID= 1 DT= 5.0 min	Area	(ha)=	1.29	Curve Number (CN)= 75.0
	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.40		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr		
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86		

HRP9-EX_2-100 YEAR.OUT									
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86		
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86		
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24		
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24		
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24		
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24		

Unit Hyd Qpeak (cms)= 0.124

PEAK FLOW (cms)= 0.107 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 52.727
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.511

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0162):	1.29	0.107	12.25	52.73
+ ID2= 2 (0005):	64.35	4.444	12.53	64.19
=====				
ID = 3 (0007):	65.64	4.530	12.53	63.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

HRP9-EX_2-100 YEAR.OUT

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\Abir\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\44307dfd-7f96-4c18-910d-ae7f249c393f\scenar
Summary filename: C:\Users\Abir\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\44307dfd-7f96-4c18-910d-ae7f249c393f\scenar

DATE: 03/24/2023 TIME: 11:18:10

USER:

COMMENTS: _____

** SIMULATION : Run 05

MASS STORM
Filename: C:\Users\Abir\AppData\Local\Temp\5689c38b-e18c-428b-92ad-ffa68111e63c\95accb52
Ptotal=115.20 mm
Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07	
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07	
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07	
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07	
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07	
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07	
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07	
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07	
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38	
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38	
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38	
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38	
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38	
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38	
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38	
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38	
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38	
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38	
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38	
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38	
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38	
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38	
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38	
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38	

CALIB
NASHYD (1060)
ID= 1 DT= 6.0 min
Area (ha)= 51.71
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.48
Curve Number (CN)= 82.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07	
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07	
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07	
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07	
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07	
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07	
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07	

HRP9-EX_2-100 YEAR.OUT

0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07	
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07	
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07	
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07	
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07	
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07	
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07	
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07	
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07	
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07	
1.800	1.61	7.800	2.30	13.800	9.45	19.80	2.07	
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07	
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07	
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38	
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38	
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38	
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38	
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38	
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38	
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38	
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38	
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38	
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38	
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38	
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38	
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38	
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38	
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38	
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38	
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38	
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38	
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38	
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38	
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38	
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38	
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38	
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38	
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38	
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38	
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38	
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38	
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38	
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38	
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38	
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38	
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38	
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38	
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38	
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38	
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38	
5.800	1.84	11.800	87.56	17.800	2.07	23.80	1.38	
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38	
6.000	1.84	12.000	127.17	18.000	2.07	24.00	1.38	

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 5.330 (i)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 73.167
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.635

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0160)
ID= 1 DT= 3.0 min
Area (ha)= 9.15
Total Imp(%)= 48.00
Dir. Conn.(%)= 48.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.39
Dep. Storage (mm)= 1.50
Average Slope (%)= 2.00
Length (m)= 246.98
Mannings n = 0.013
4.76
5.00
2.00
40.00
0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07	
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07	
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07	
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07	

HRP9-EX_2-100 YEAR.OUT									
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		

HRP9-EX_2-100 YEAR.OUT							
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38
Max.Eff.Inten.(mm/hr)=			127.18	71.39			
over (min)			6.00	12.00			
Storage Coeff. (min)=			3.24 (ii)	9.86 (ii)			
Unit Hyd. Tpeak (min)=			6.00	12.00			
Unit Hyd. peak (cms)=			0.26	0.11			
TOTALS							
PEAK FLOW (cms)=			1.53	0.68	2.158 (iii)		
TIME TO PEAK (hrs)=			12.00	12.05	12.00		
RUNOFF VOLUME (mm)=			113.70	54.14	82.73		
TOTAL RAINFALL (mm)=			115.20	115.20	115.20		
RUNOFF COEFFICIENT =			0.99	0.47	0.72		
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:							
CN* = 69.0 Ia = Dep. Storage (Above)							
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.							
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

ADD HYD (0003)							
1 + 2							
		AREA	QPEAK	TPEAK	R.V.		
		(ha)	(cms)	(hrs)	(mm)		
ID1= 1 (1060):	51.71	5.330	12.30	73.17			
+ ID2= 2 (0160):	9.15	2.158	12.00	82.73			
=====							
ID = 3 (0003):	60.86	5.867	12.30	74.60			
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.							

RESERVOIR(0009)							
IN= 2----> OUT= 1							
DT= 5.0 min							
OVERFLOW IS OFF							
		OUTFLOW	STORAGE			OUTFLOW	STORAGE
		(cms)	(ha.m.)			(cms)	(ha.m.)
		0.0000	0.0000			0.4500	0.5700
		0.0200	0.0400			0.9300	0.5750
		0.0350	0.1540			1.5000	0.6500
		0.0450	0.2340			2.6000	0.7300
		0.0540	0.3160			5.2000	1.0200
		0.0610	0.4000			7.7000	1.2000
		0.0600	0.5000			0.0000	0.0000
		AREA	QPEAK	TPEAK	R.V.		
		(ha)	(cms)	(hrs)	(mm)		
INFLOW : ID= 2 (0003)	60.860	5.867	12.30	74.60			
OUTFLOW: ID= 1 (0009)	60.860	5.099	12.55	74.60			
PEAK FLOW REDUCTION [Qout/Qin](%)= 86.89							
TIME SHIFT OF PEAK FLOW (min)= 15.00							
MAXIMUM STORAGE USED (ha.m.)= 1.0088							

CALIB							

| STANDHYD (0161)| Area (ha)= 3.49
|ID= 1 DT= 2.0 min | Total Imp(%)= 35.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (I)
Surface Area (ha)= 2.27
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 152.53 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07		
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07		
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07		
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07		
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07		
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07		
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07		
1.000	1.15	7.000	2.30	13.000	8.51	19.00	2.07		
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07		
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07		
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07		
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07		
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.767	1.61	7.767	2.30	13.767	9.45	19.77	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		

HRP9-EX_2-100 YEAR.OUT							
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38

HRP9-EX_2-100 YEAR.OUT

5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.500	1.84	11.500	11.10	17.500	2.07	23.50	1.38
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.767	1.84	11.767	87.66	17.767	2.07	23.77	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38
6.000	1.84	12.000	127.03	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 78.21
over (min) 5.00 12.00
Storage Coeff. (min)= 2.43 (ii) 10.22 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.37 0.10

TOTALS
PEAK FLOW (cms)= 0.43 0.34 0.730 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 113.70 58.11 77.57
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.50 0.67

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)|
| 1 + 2 = 3 |

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0161):	3.49	0.739	12.00	77.57
+ ID2= 2 (0009):	60.86	5.099	12.55	74.60
=====				
ID = 3 (0005):	64.35	5.237	12.53	74.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0162)| Area (ha)= 1.29 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.40

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07	
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07	
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07	
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07	
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07	
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07	
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07	
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07	
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07	
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07	
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07	
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07	
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07	
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07	
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07	
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07	
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07	
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07	
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07	
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07	

HRP9-EX_2-100 YEAR.OUT

1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 0.124

PEAK FLOW (cms)= 0.127 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 62.311
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.541

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)|
| 1 + 2 = 3 |

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0162):	1.29	0.127	12.25	62.31
+ ID2= 2 (0005):	64.35	5.237	12.53	74.68
=====				
ID = 3 (0007):	65.64	5.340	12.50	74.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y Y M M 0 0

HRP9-EX_2-100 YEAR.OUT

000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\0ab66a28-06c1-41cd-8027-ac880cbceac\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\0ab66a28-06c1-41cd-8027-ac880cbceac\scenar

DATE: 03/24/2023 TIME: 11:18:10

USER:

COMMENTS: _____

** SIMULATION : Run 06 **

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\5689c38b-e18c-428b-92ad-ffa68111e63c\2985551a
| | ata\Local\Temp\5689c38b-e18c-428b-92ad-ffa68111e63c\2985551a
| Ptotal=127.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53

| CALIB |
| NASHYD (1060) | Area (ha)= 51.71 Curve Number (CN)= 82.0
| ID= 1 DT= 6.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.48

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29

HRP9-EX_2-100 YEAR.OUT

1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.800	1.78	7.800	2.54	13.800	10.43	19.80	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.800	2.04	11.800	96.68	17.800	2.29	23.80	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
6.000	2.04	12.000	140.42	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 6.117 (1)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 83.902
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.660

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0160) | Area (ha)= 9.15
| ID= 1 DT= 3.0 min | Total Imp(%)= 48.00 Dir. Conn.(%)= 48.00

	IMPERVIOUS	PERVIOUS (1)
Surface Area (ha)=	4.39	4.76
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	246.98	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29

HRP9-EX-2-100 Year, OUT							
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.050	1.27	7.050	2.54	13.050	9.41	19.05	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.84	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.84	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.84	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.84	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.84	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.84	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.84	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.84	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.84	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.84	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.84	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.84	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.84	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.84	10.700	7.89	16.700	2.29	22.70	1.53

						HRP9-EX-2-100	YEAR	OUT
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53	
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53	
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53	
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53	
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53	
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53	
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53	
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53	
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53	
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53	
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53	
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53	
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53	
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53	
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53	
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53	
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53	
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53	
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53	
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53	
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53	
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53	
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53	
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53	
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53	
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53	
Max.Eff.Inten.(mm/hr)=			140.43	83.25				
over (min)			6.00	12.00				
Storage Coeff. (min)=			3.12 (ii)	9.48 (ii)				
Unit Hyd. Tpeak (min)=			6.00	12.00				
Unit Hyd. peak (cms)=			0.27	0.11				
TOTALS								
PEAK FLOW (cms)=			1.70	0.80	2.441 (iii)			
TIME TO PEAK (hrs)=			12.00	12.00	12.00			
RUNOFF VOLUME (mm)=			125.70	63.19	93.19			
TOTAL RAINFALL (mm)=			127.20	127.20	127.20			
RUNOFF COEFFICIENT =			0.99	0.50	0.73			
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES: CN ¹ = 69.0 Ia = Dep Storage								
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.								
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.								

DD HYD (0003)		AREA	QPEAK	TPEAK	R.V.			
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)			
ID1= 1 (1060):		51.71	6.117	12.30	83.90			
+ ID2= 2 (0160):		9.15	2.441	12.00	93.19			
ID = 3 (0003):		60.86	6.722	12.30	85.30			
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.								

ESERVOIR(0009)		OVERFLOW IS OFF						
N= 2--> OUT= 1		OUTFLOW	STORAGE	OUTFLOW	STORAGE			
T= 5.0 min		(cms)	(ha.m.)	(cms)	(ha.m.)			
		0.0000	0.0000	0.4500	0.5700			
		0.0200	0.0400	0.9300	0.5750			
		0.0350	0.1540	1.5000	0.6500			
		0.0450	0.2340	2.6000	0.7300			
		0.0540	0.3160	5.2000	1.0200			
		0.0610	0.4000	7.7000	1.2000			
		0.0600	0.5000	0.0000	0.0000			
		AREA	QPEAK	TPEAK	R.V.			
		(ha)	(cms)	(hrs)	(mm)			
INFLOW : ID= 2 (0003)		60.860	6.722	12.30	85.30			
OUTFLOW: ID= 1 (0009)		60.860	6.036	12.50	85.29			
PEAK FLOW REDUCTION [Qout/Qin](%)= 89.80								
TIME SHIFT OF PEAK FLOW (min)= 12.00								
MAXIMUM STORAGE USED (ha.m.)= 1.0810								

ALIB								
TANDHYD (0161)		Area (ha)=	3.49					
= 1 DT= 2.0 min		Total Imp(%)=	35.00	Dir. Conn.(%)=	35.00			

HRP9-EX_2-100 YEAR.OUT					
	IMPERVIOUS	PERVIOUS (i)			
Surface Area	(ha)= 1.22	2.27			
Dep. Storage	(mm)= 1.50	5.00			
Average Slope	(%)= 2.00	2.00			
Length	(m)= 152.53	40.00			
Mannings n	= 0.013	0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29
0.500	1.27	6.500	2.54	12.500	18.30	18.50	2.29
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.767	1.78	7.767	2.54	13.767	10.43	19.77	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53

HRP9-EX_2-100 YEAR.OUT							
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53

HRP9-EX_2-100 YEAR.OUT

5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 90.68
over (min)= 5.00
Storage Coeff. (min)= 2.33 (ii) 10.23 (iii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.38 0.10

TOTALS
PEAK FLOW (cms)= 0.48 0.40 0.836 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 125.70 67.57 87.92
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.53 0.69

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0161):	3.49	0.836	12.00	87.92
+ ID2= 2 (0000):	60.86	6.036	12.50	85.29
=====				
ID = 3 (0005):	64.35	6.218	12.50	85.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	1.29	Curve Number (CN)=	75.0
NASHYD (0162)	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.40			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29

HRP9-EX_2-100 YEAR.OUT

2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 0.124

PEAK FLOW (cms)= 0.148 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 72.176
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0162):	1.29	0.148	12.25	72.18
+ ID2= 2 (0005):	64.35	6.218	12.50	85.35
=====				
ID = 3 (0007):	65.64	6.341	12.50	85.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

C.4 VO Output Regional Storm



 ** SIMULATION:Run 01 **

 | READ STORM | Filename: C:\Users\AbirA\AppData
 | | ata\Local\Temp\
 | | 6bd24b09-b9be-486a-ba35-dce934397481\714b39f6
 | Ptotal=212.00 mm | Comments: Hazel

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
1.00	6.00	4.00	13.00	7.00	23.00	10.00	53.00
2.00	4.00	5.00	17.00	8.00	13.00	11.00	38.00
3.00	6.00	6.00	13.00	9.00	13.00	12.00	13.00

 | CALIB |
 | NASHYD (0012) | Area (ha)= 37.57 Curve Number (CN)= 92.0
 | ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.68

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 2.098

PEAK FLOW (cms)= 4.397 (i)
 TIME TO PEAK (hrs)= 10.583
 RUNOFF VOLUME (mm)= 187.040
 TOTAL RAINFALL (mm)= 212.000
 RUNOFF COEFFICIENT = 0.882

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP1-3-EX_REG.OUT

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V   V   I   SSSSS   U   U   A   L           (v 6.1.2002)
V   V   I   SS      U   U   A   A   L
V   V   I   SS      U   U   A   A   A   L
V   V   I   SS      U   U   A   A   L
V   V   I   SSSSS   UUUUU   A   A   LLLLL

000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   T   H   H   Y   Y   MM   MM   O   O
O   O   T   T   T   H   H   Y   Y   M   M   O   O
000   T   T   H   H   Y   Y   M   M   000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\6bbcebae-f527-4c48-9367-1f765045eaf1\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\6bbcebae-f527-4c48-9367-1f765045eaf1\scenar

DATE: 03/24/2023 TIME: 09:38:31

USER:

COMMENTS: _____

** SIMULATION : Run 01

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-----
| READ STORM |      Filename: C:\Users\AbirA\AppData\Local\Temp\
|             |      ata\Local\Temp\
|             |      0e775f8b-f23d-4932-b314-f1fb191aab41\714b39f6
| Ptotal=212.00 mm |      Comments: Hazel
|             |
|-----|
| TIME  RAIN | TIME  RAIN | ' TIME  RAIN | TIME  RAIN |
| hrs   mm/hr | hrs   mm/hr | ' hrs   mm/hr | hrs   mm/hr |
|-----|
| 1.00  6.00 | 4.00 13.00 | 7.00 23.00 | 10.00 53.00 |
| 2.00  4.00 | 5.00 17.00 | 8.00 13.00 | 11.00 38.00 |
| 3.00  6.00 | 6.00 13.00 | 9.00 13.00 | 12.00 13.00 |
|-----|
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-----
| CALIB |
| NASHYD ( 1020) | Area (ha)= 24.22 Curve Number (CN)= 91.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----|
| U.H. Tp(hrs)= 0.45
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

```
----- TRANSFORMED HYETOGRAPH -----
TIME  RAIN | TIME  RAIN | ' TIME  RAIN | TIME  RAIN |
hrs   mm/hr | hrs   mm/hr | ' hrs   mm/hr | hrs   mm/hr |
-----|
0.083  6.00 | 3.083 13.00 | 6.083 23.00 | 9.08  53.00 |
0.167  6.00 | 3.167 13.00 | 6.167 23.00 | 9.17  53.00 |
0.250  6.00 | 3.250 13.00 | 6.250 23.00 | 9.25  53.00 |
0.333  6.00 | 3.333 13.00 | 6.333 23.00 | 9.33  53.00 |
0.417  6.00 | 3.417 13.00 | 6.417 23.00 | 9.42  53.00 |
0.500  6.00 | 3.500 13.00 | 6.500 23.00 | 9.50  53.00 |
0.583  6.00 | 3.583 13.00 | 6.583 23.00 | 9.58  53.00 |
0.667  6.00 | 3.667 13.00 | 6.667 23.00 | 9.67  53.00 |
0.750  6.00 | 3.750 13.00 | 6.750 23.00 | 9.75  53.00 |
0.833  6.00 | 3.833 13.00 | 6.833 23.00 | 9.83  53.00 |
0.917  6.00 | 3.917 13.00 | 6.917 23.00 | 9.92  53.00 |
1.000  6.00 | 4.000 13.00 | 7.000 23.00 | 10.00 53.00 |
1.083  4.00 | 4.083 17.00 | 7.083 13.00 | 10.08 38.00 |
1.167  4.00 | 4.167 17.00 | 7.167 13.00 | 10.17 38.00 |
1.250  4.00 | 4.250 17.00 | 7.250 13.00 | 10.25 38.00 |
1.333  4.00 | 4.333 17.00 | 7.333 13.00 | 10.33 38.00 |
1.417  4.00 | 4.417 17.00 | 7.417 13.00 | 10.42 38.00 |
1.500  4.00 | 4.500 17.00 | 7.500 13.00 | 10.50 38.00 |
1.583  4.00 | 4.583 17.00 | 7.583 13.00 | 10.58 38.00 |
1.667  4.00 | 4.667 17.00 | 7.667 13.00 | 10.67 38.00 |
1.750  4.00 | 4.750 17.00 | 7.750 13.00 | 10.75 38.00 |
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1.833  4.00 | 4.833 17.00 | 7.833 13.00 | 10.83 38.00 |
1.917  4.00 | 4.917 17.00 | 7.917 13.00 | 10.92 38.00 |
2.000  4.00 | 5.000 17.00 | 8.000 13.00 | 11.00 38.00 |
2.083  6.00 | 5.083 13.00 | 8.083 13.00 | 11.08 13.00 |
2.167  6.00 | 5.167 13.00 | 8.167 13.00 | 11.17 13.00 |
2.250  6.00 | 5.250 13.00 | 8.250 13.00 | 11.25 13.00 |
2.333  6.00 | 5.333 13.00 | 8.333 13.00 | 11.33 13.00 |
2.417  6.00 | 5.417 13.00 | 8.417 13.00 | 11.42 13.00 |
2.500  6.00 | 5.500 13.00 | 8.500 13.00 | 11.50 13.00 |
2.583  6.00 | 5.583 13.00 | 8.583 13.00 | 11.58 13.00 |
2.667  6.00 | 5.667 13.00 | 8.667 13.00 | 11.67 13.00 |
2.750  6.00 | 5.750 13.00 | 8.750 13.00 | 11.75 13.00 |
2.833  6.00 | 5.833 13.00 | 8.833 13.00 | 11.83 13.00 |
2.917  6.00 | 5.917 13.00 | 8.917 13.00 | 11.92 13.00 |
3.000  6.00 | 6.000 13.00 | 9.000 13.00 | 12.00 13.00 |
```

Unit Hyd Qpeak (cms)= 2.038

PEAK FLOW (cms)= 3.149 (l)
TIME TO PEAK (hrs)= 10.167
RUNOFF VOLUME (mm)= 184.584
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.871

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-----
| ROUTEPIPE( 0014) | PIPE Number = 1.00
| ID= 2 ---> OUT= 1 | Width (mm)=2400.00 Height (mm)= 900.00
| DT= 5.0 min | Length (m)= 287.00
|-----|
| Slope (m/m)= 0.003
| Manning n = 0.020
```

**** WARNING: MINIMUM PIPE SIZE REQUIRED = 2.51 (m) BY 0.94 (m)
THIS SIZE WAS USED IN THE ROUTING.
THE CAPACITY OF THIS PIPE = 3.15 (cms)

```
----- TRAVEL TIME TABLE ----->
DEPTH VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (cu.m.) (cms) (m/s) min
0.05 .256E+02 0.0 0.36 9.59
0.10 .513E+02 0.1 0.56 6.19
0.15 .769E+02 0.3 0.71 4.84
0.20 .103E+03 0.4 0.84 4.09
0.25 .128E+03 0.6 0.96 3.60
0.30 .154E+03 0.8 1.06 3.26
0.35 .179E+03 1.0 1.15 3.00
0.40 .205E+03 1.2 1.23 2.81
0.44 .231E+03 1.5 1.30 2.65
0.49 .256E+03 1.7 1.37 2.51
0.54 .282E+03 2.0 1.44 2.40
0.59 .308E+03 2.2 1.49 2.31
0.64 .333E+03 2.5 1.55 2.23
0.69 .359E+03 2.8 1.60 2.16
0.74 .385E+03 3.1 1.65 2.09
0.79 .410E+03 3.4 1.69 2.04
0.84 .436E+03 3.6 1.73 1.99
0.89 .461E+03 4.0 1.77 1.95
0.94 .487E+03 4.3 1.81 1.91
```

```
----->
| CALIB |
| STANDHYD ( 0120) | Area (ha)= 13.35
| ID= 1 DT= 3.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00
|-----|
```

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (1020)	24.22	3.15	10.17	184.58	0.76	1.86
OUTFLOW: ID= 1 (0014)	24.22	3.14	10.25	184.58	0.76	1.66

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-----
| CALIB |
| STANDHYD ( 0120) | Area (ha)= 13.35
| ID= 1 DT= 3.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00
|-----|
```

	IMPERVIOUS	PERVIOUS (l)
Surface Area (ha)=	6.01	7.34
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	298.33	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

```
----- TRANSFORMED HYETOGRAPH -----
TIME  RAIN | TIME  RAIN | ' TIME  RAIN | TIME  RAIN |
hrs   mm/hr | hrs   mm/hr | ' hrs   mm/hr | hrs   mm/hr |
```

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0.050	6.00	3.050	13.00	6.050	23.00	9.05	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.150	6.00	3.150	13.00	6.150	23.00	9.15	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.350	6.00	3.350	13.00	6.350	23.00	9.35	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.450	6.00	3.450	13.00	6.450	23.00	9.45	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.550	6.00	3.550	13.00	6.550	23.00	9.55	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.650	6.00	3.650	13.00	6.650	23.00	9.65	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.850	6.00	3.850	13.00	6.850	23.00	9.85	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.950	6.00	3.950	13.00	6.950	23.00	9.95	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.050	4.00	4.950	17.00	7.050	13.00	10.05	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.150	4.00	4.150	17.00	7.150	13.00	10.15	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.350	4.00	4.350	17.00	7.350	13.00	10.35	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.450	4.00	4.450	17.00	7.450	13.00	10.45	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.550	4.00	4.550	17.00	7.550	13.00	10.55	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.650	4.00	4.650	17.00	7.650	13.00	10.65	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.850	4.00	4.850	17.00	7.850	13.00	10.85	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.950	4.00	4.950	17.00	7.950	13.00	10.95	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.99
2.050	6.00	5.050	13.00	8.050	13.00	11.05	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.150	6.00	5.150	13.00	8.150	13.00	11.15	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.350	6.00	5.350	13.00	8.350	13.00	11.35	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.450	6.00	5.450	13.00	8.450	13.00	11.45	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.550	6.00	5.550	13.00	8.550	13.00	11.55	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.650	6.00	5.650	13.00	8.650	13.00	11.65	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.850	6.00	5.850	13.00	8.850	13.00	11.85	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.950	6.00	5.950	13.00	8.950	13.00	11.95	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.99

Max.Eff.Inten.(mm/hr)= 53.00 50.93
over (min) 6.00 15.00
Storage Coeff. (min)= 5.15 (ii) 14.40 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.20 0.08
TOTALS
PEAK FLOW (cms)= 0.88 1.01 1.896 (iii)
TIME TO PEAK (hrs)= 9.95 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 178.34 192.81
TOTAL RAINFALL (mm)= 212.00 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.84 0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 87.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

[ADD HYD (0006)]
[1 + 2 = 3]

ID1= 1 (0120): 13.35 1.896 10.00 192.81

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+ ID2= 2 (0014): 24.22 3.144 10.25 184.58

ID = 3 (0006): 37.57 4.909 10.05 187.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

[CALIB
[STANDHYD (0100)]
[ID= 1 DT= 3.0 min]

Area (ha)= 10.34
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.65 5.69
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 262.55 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr
0.050 6.00 | 3.050 13.00 | 6.050 23.00 | 9.05 53.00
0.100 6.00 | 3.100 13.00 | 6.100 23.00 | 9.10 53.00
0.150 6.00 | 3.150 13.00 | 6.150 23.00 | 9.15 53.00
0.200 6.00 | 3.200 13.00 | 6.200 23.00 | 9.20 53.00
0.250 6.00 | 3.250 13.00 | 6.250 23.00 | 9.25 53.00
0.300 6.00 | 3.300 13.00 | 6.300 23.00 | 9.30 53.00
0.350 6.00 | 3.350 13.00 | 6.350 23.00 | 9.35 53.00
0.400 6.00 | 3.400 13.00 | 6.400 23.00 | 9.40 53.00
0.450 6.00 | 3.450 13.00 | 6.450 23.00 | 9.45 53.00
0.500 6.00 | 3.500 13.00 | 6.500 23.00 | 9.50 53.00
0.550 6.00 | 3.550 13.00 | 6.550 23.00 | 9.55 53.00
0.600 6.00 | 3.600 13.00 | 6.600 23.00 | 9.60 53.00
0.650 6.00 | 3.650 13.00 | 6.650 23.00 | 9.65 53.00
0.700 6.00 | 3.700 13.00 | 6.700 23.00 | 9.70 53.00
0.750 6.00 | 3.750 13.00 | 6.750 23.00 | 9.75 53.00
0.800 6.00 | 3.800 13.00 | 6.800 23.00 | 9.80 53.00
0.850 6.00 | 3.850 13.00 | 6.850 23.00 | 9.85 53.00
0.900 6.00 | 3.900 13.00 | 6.900 23.00 | 9.90 53.00
0.950 6.00 | 3.950 13.00 | 6.950 23.00 | 9.95 53.00
1.000 6.00 | 4.000 13.00 | 7.000 23.00 | 10.00 52.99
1.050 4.00 | 4.950 17.00 | 7.050 13.00 | 10.05 38.00
1.100 4.00 | 4.100 17.00 | 7.100 13.00 | 10.10 38.00
1.150 4.00 | 4.150 17.00 | 7.150 13.00 | 10.15 38.00
1.200 4.00 | 4.200 17.00 | 7.200 13.00 | 10.20 38.00
1.250 4.00 | 4.250 17.00 | 7.250 13.00 | 10.25 38.00
1.300 4.00 | 4.300 17.00 | 7.300 13.00 | 10.30 38.00
1.350 4.00 | 4.350 17.00 | 7.350 13.00 | 10.35 38.00
1.400 4.00 | 4.400 17.00 | 7.400 13.00 | 10.40 38.00
1.450 4.00 | 4.450 17.00 | 7.450 13.00 | 10.45 38.00
1.500 4.00 | 4.500 17.00 | 7.500 13.00 | 10.50 38.00
1.550 4.00 | 4.550 17.00 | 7.550 13.00 | 10.55 38.00
1.600 4.00 | 4.600 17.00 | 7.600 13.00 | 10.60 38.00
1.650 4.00 | 4.650 17.00 | 7.650 13.00 | 10.65 38.00
1.700 4.00 | 4.700 17.00 | 7.700 13.00 | 10.70 38.00
1.750 4.00 | 4.750 17.00 | 7.750 13.00 | 10.75 38.00
1.800 4.00 | 4.800 17.00 | 7.800 13.00 | 10.80 38.00
1.850 4.00 | 4.850 17.00 | 7.850 13.00 | 10.85 38.00
1.900 4.00 | 4.900 17.00 | 7.900 13.00 | 10.90 38.00
1.950 4.00 | 4.950 17.00 | 7.950 13.00 | 10.95 38.00
2.000 4.00 | 5.000 17.00 | 8.000 13.00 | 11.00 37.99
2.050 6.00 | 5.050 13.00 | 8.050 13.00 | 11.05 13.00
2.100 6.00 | 5.100 13.00 | 8.100 13.00 | 11.10 13.00
2.150 6.00 | 5.150 13.00 | 8.150 13.00 | 11.15 13.00
2.200 6.00 | 5.200 13.00 | 8.200 13.00 | 11.20 13.00
2.250 6.00 | 5.250 13.00 | 8.250 13.00 | 11.25 13.00
2.300 6.00 | 5.300 13.00 | 8.300 13.00 | 11.30 13.00
2.350 6.00 | 5.350 13.00 | 8.350 13.00 | 11.35 13.00
2.400 6.00 | 5.400 13.00 | 8.400 13.00 | 11.40 13.00
2.450 6.00 | 5.450 13.00 | 8.450 13.00 | 11.45 13.00
2.500 6.00 | 5.500 13.00 | 8.500 13.00 | 11.50 13.00
2.550 6.00 | 5.550 13.00 | 8.550 13.00 | 11.55 13.00
2.600 6.00 | 5.600 13.00 | 8.600 13.00 | 11.60 13.00
2.650 6.00 | 5.650 13.00 | 8.650 13.00 | 11.65 13.00
2.700 6.00 | 5.700 13.00 | 8.700 13.00 | 11.70 13.00
2.750 6.00 | 5.750 13.00 | 8.750 13.00 | 11.75 13.00
2.800 6.00 | 5.800 13.00 | 8.800 13.00 | 11.80 13.00
2.850 6.00 | 5.850 13.00 | 8.850 13.00 | 11.85 13.00
2.900 6.00 | 5.900 13.00 | 8.900 13.00 | 11.90 13.00
2.950 6.00 | 5.950 13.00 | 8.950 13.00 | 11.95 13.00
3.000 6.00 | 6.000 13.00 | 9.000 13.01 | 12.00 12.99

Max.Eff.Inten.(mm/hr)= 53.00 50.93
over (min) 6.00 15.00

Storage Coeff. (min)= 4.77 (ii) 14.02 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.21 0.08

PEAK FLOW (cms)= 0.69 0.79
TIME TO PEAK (hrs)= 9.95 10.00
RUNOFF VOLUME (mm)= 210.50 178.34
TOTAL RAINFALL (mm)= 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.84

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TOTALS

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 87.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0101)
ID= 1 DT= 4.0 min

Area (ha)= 21.81
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 9.81 12.00
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 381.31 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00		
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00		
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00		
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00		
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00		
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00		
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00		
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00		
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00		
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00		
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00		
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00		
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00		
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00		
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00		
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00		
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00		
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00		
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00		
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00		
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00		
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00		
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00		
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00		
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00		
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00		
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00		
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00		
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00		
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00		
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00		
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00		
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00		
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00		
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00		
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00		
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00		
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00		
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00		
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00		
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00		
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00		
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00		
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00		
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00		

Max.Eff.Inten.(mm/hr)= 53.00 50.93
over (min) 5.00 16.00
Storage Coeff. (min)= 5.97 (ii) 15.22 (ii)
Unit Hyd. Tpeak (min)= 4.00 16.00
Unit Hyd. peak (cms)= 0.21 0.07

HRP1-3-EX_REG.OUT

TOTALS

PEAK FLOW (cms)= 1.44 1.65 3.090 (iii)
TIME TO PEAK (hrs)= 10.00 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 178.34 192.81
TOTAL RAINFALL (mm)= 212.00 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.84 0.91

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 87.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0100): 10.34 1.470 10.00 192.81
+ ID2= 2 (0101): 21.81 3.090 10.00 192.81
===== ID = 3 (0009): 32.15 4.560 10.00 192.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

HRP6.1-EX-REG.OUT

```

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y M M O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\Abira\AppData\Local\Civica\VMH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4bde0297-f36b-4877-b1f0-917b215d6503\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VMH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4bde0297-f36b-4877-b1f0-917b215d6503\scenar

DATE: 03/24/2023 TIME: 10:10:42

USER:

COMMENTS: _____

** SIMULATION : Run 01

READ STORM	Filename: C:\Users\Abira\AppData\Local\Temp\ad5ffcb7-1cd1-4df4-b533-6274eacb960c\714b39f6
Ptotal=212.00 mm	Comments: Hazel

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
1.00	6.00	4.00	13.00	7.00	23.00	10.00	53.00
2.00	4.00	5.00	17.00	8.00	13.00	11.00	38.00
3.00	6.00	6.00	13.00	9.00	13.00	12.00	13.00

CALIB	
NASHYD (1030)	Area (ha)= 30.38 Curve Number (CN)= 90.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00

HRP6.1-EX-REG.OUT

1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 3.823 (1)
TIME TO PEAK (hrs)= 10.250
RUNOFF VOLUME (mm)= 182.155
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.859

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
NASHYD (0130)	Area (ha)= 2.25 Curve Number (CN)= 90.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.12

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 0.704

PEAK FLOW (cms)= 0.319 (1)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 179.876
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.848

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-EX-REG.OUT

```
ADD HYD ( 0003)
1 + 2 = 3
ID1= 1 ( 1030): 30.38 3.823 10.25 182.16
+ ID2= 2 ( 0130): 2.25 0.319 10.00 179.88
=====
ID = 3 ( 0003): 32.63 4.065 10.25 182.00
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
ROUTE CHN( 0021)
IN= 2--> OUT= 1 | Routing time step (min)'= 4.00
```

Distance	Elevation	Manning
0.00	101.00	0.0800
1.00	100.67	0.0800
2.00	100.33	0.0800 / 0.0350
3.00	100.00	0.0350
4.00	100.00	0.0350
5.00	100.33	0.0350 / 0.0800
6.00	100.67	0.0800
7.00	101.00	0.0800

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (cu.m.)	VOLUME (cms)	FLOW RATE (m/s)	VELOCITY (min)	TRAV.TIME
0.05	100.05	.185E+02	0.0	0.34	16.76
0.09	100.09	.417E+02	0.1	0.51	11.21
0.14	100.14	.695E+02	0.1	0.64	8.95
0.19	100.19	.102E+03	0.2	0.75	7.64
0.24	100.24	.139E+03	0.3	0.85	6.77
0.28	100.28	.181E+03	0.5	0.94	6.13
0.33	100.33	.227E+03	0.7	1.02	5.64
0.39	100.39	.280E+03	1.0	1.17	4.90
0.44	100.44	.355E+03	1.3	1.30	4.42
0.50	100.50	.428E+03	1.7	1.40	4.09
0.55	100.55	.508E+03	2.2	1.49	3.85
0.61	100.61	.594E+03	2.7	1.57	3.66
0.66	100.66	.686E+03	3.3	1.63	3.51
0.72	100.72	.785E+03	3.9	1.69	3.38
0.78	100.78	.890E+03	4.5	1.75	3.28
0.83	100.83	.100E+04	5.2	1.80	3.19
0.89	100.89	.112E+04	6.0	1.84	3.12
0.94	100.94	.124E+04	6.8	1.88	3.05
1.00	101.00	.138E+04	7.7	1.92	2.99

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0003)	32.63	4.07	10.25 182.00	0.74	1.71
OUTFLOW: ID= 1 (0021)	32.63	4.06	10.25 182.00	0.74	1.71

```
CALIB
NASHYD ( 0131) | Area (ha)= 14.65 Curve Number (CN)= 92.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.40
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00
0.167	6.00	3.167	13.00	6.167	23.00
0.250	6.00	3.250	13.00	6.250	23.00
0.333	6.00	3.333	13.00	6.333	23.00
0.417	6.00	3.417	13.00	6.417	23.00
0.500	6.00	3.500	13.00	6.500	23.00
0.583	6.00	3.583	13.00	6.583	23.00
0.667	6.00	3.667	13.00	6.667	23.00
0.750	6.00	3.750	13.00	6.750	23.00
0.833	6.00	3.833	13.00	6.833	23.00
0.917	6.00	3.917	13.00	6.917	23.00
1.000	6.00	4.000	13.00	7.000	23.00
1.083	4.00	4.083	17.00	7.083	13.00
1.167	4.00	4.167	17.00	7.167	13.00
1.250	4.00	4.250	17.00	7.250	13.00
1.333	4.00	4.333	17.00	7.333	13.00

HRP6.1-EX-REG.OUT

1.417	4.00	4.417	17.00	7.417	13.00
1.500	4.00	4.500	17.00	7.500	13.00
1.583	4.00	4.583	17.00	7.583	13.00
1.667	4.00	4.667	17.00	7.667	13.00
1.750	4.00	4.750	17.00	7.750	13.00
1.833	4.00	4.833	17.00	7.833	13.00
1.917	4.00	4.917	17.00	7.917	13.00
2.000	4.00	5.000	17.00	8.000	13.00
2.083	6.00	5.083	13.00	8.083	13.00
2.167	6.00	5.167	13.00	8.167	13.00
2.250	6.00	5.250	13.00	8.250	13.00
2.333	6.00	5.333	13.00	8.333	13.00
2.417	6.00	5.417	13.00	8.417	13.00
2.500	6.00	5.500	13.00	8.500	13.00
2.583	6.00	5.583	13.00	8.583	13.00
2.667	6.00	5.667	13.00	8.667	13.00
2.750	6.00	5.750	13.00	8.750	13.00
2.833	6.00	5.833	13.00	8.833	13.00
2.917	6.00	5.917	13.00	8.917	13.00
3.000	6.00	6.000	13.00	9.000	13.00

Unit Hyd Qpeak (cms)= 1.413

PEAK FLOW (cms)= 1.974 (i)
TIME TO PEAK (hrs)= 10.083
RUNOFF VOLUME (mm)= 187.019
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.882

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
ADD HYD ( 0005)
1 + 2 = 3
ID1= 1 ( 0131): 14.65 1.974 10.00 187.02
+ ID2= 2 ( 0021): 32.63 4.061 10.25 182.00
=====
ID = 3 ( 0005): 47.28 6.004 10.17 183.55
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
CALIB
STANDHYD ( 0132) | Area (ha)= 8.25
ID= 1 DT= 3.0 min | Total Imp(%)= 31.00 Dir. Conn.(%)= 31.00
```

Surface Area (ha)	IMPERVIOUS	PERVIOUS (i)
2.56	5.69	
Dep. Storage (mm)= 1.50	1.50	
Average Slope (%)= 2.00	2.00	
Length (m)= 234.52	40.00	
Mannings n = 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	6.00	3.050	13.00	6.050	23.00
0.100	6.00	3.100	13.00	6.100	23.00
0.150	6.00	3.150	13.00	6.150	23.00
0.200	6.00	3.200	13.00	6.200	23.00
0.250	6.00	3.250	13.00	6.250	23.00
0.300	6.00	3.300	13.00	6.300	23.00
0.350	6.00	3.350	13.00	6.350	23.00
0.400	6.00	3.400	13.00	6.400	23.00
0.450	6.00	3.450	13.00	6.450	23.00
0.500	6.00	3.500	13.00	6.500	23.00
0.550	6.00	3.550	13.00	6.550	23.00
0.600	6.00	3.600	13.00	6.600	23.00
0.650	6.00	3.650	13.00	6.650	23.00
0.700	6.00	3.700	13.00	6.700	23.00
0.750	6.00	3.750	13.00	6.750	23.00
0.800	6.00	3.800	13.00	6.800	23.00
0.850	6.00	3.850	13.00	6.850	23.00
0.900	6.00	3.900	13.00	6.900	23.00
0.950	6.00	3.950	13.00	6.950	23.00
1.000	6.00	4.000	13.00	7.000	23.00
1.050	4.00	4.050	17.00	7.050	13.00
1.100	4.00	4.100	17.00	7.100	13.00
1.150	4.00	4.150	17.00	7.150	13.00
1.200	4.00	4.200	17.00	7.200	13.00
1.250	4.00	4.250	17.00	7.250	13.00

HRP6.1-EX-REG.OUT

1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.350	4.00	4.350	17.00	7.350	13.00	10.35	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.450	4.00	4.450	17.00	7.450	13.00	10.45	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.550	4.00	4.550	17.00	7.550	13.00	10.55	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.650	4.00	4.650	17.00	7.650	13.00	10.65	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.850	4.00	4.850	17.00	7.850	13.00	10.85	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.950	4.00	4.950	17.00	7.950	13.00	10.95	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.99
2.050	6.00	5.050	13.00	8.050	13.00	11.05	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.150	6.00	5.150	13.00	8.150	13.00	11.15	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.350	6.00	5.350	13.00	8.350	13.00	11.35	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.450	6.00	5.450	13.00	8.450	13.00	11.45	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.550	6.00	5.550	13.00	8.550	13.00	11.55	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.650	6.00	5.650	13.00	8.650	13.00	11.65	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.850	6.00	5.850	13.00	8.850	13.00	11.85	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.950	6.00	5.950	13.00	8.950	13.00	11.95	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.99

Max.Eff.Inten.(mm/hr)= 53.00 50.93
over (min) 6.00 15.00
Storage Coeff. (min)= 4.46 (ii) 13.71 (iii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

TOTALS

PEAK FLOW (cms)= 0.38 0.79 1.164 (iii)
TIME TO PEAK (hrs)= 9.95 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 178.34 188.31
TOTAL RAINFALL (mm)= 212.00 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.84 0.89

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 87.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0132):	8.25	1.164	10.00	188.31
+ ID2= 2 (0005):	47.28	6.004	10.17	183.55
=====				
ID = 3 (0007):	55.53	7.041	10.15	184.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0022) |
| IN= 2--> OUT= 1 |

Routing time step (min) = 3.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51

HRP6.1-EX-REG.OUT

0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.504E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.250E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m/s)
INFLOW : ID= 2 (0007)	55.53	7.04	10.15	184.26	0.96 1.89
OUTFLOW: ID= 1 (0022)	55.53	7.04	10.15	184.26	0.96 1.89

| CALIB
| STANDHYD (0133) | Area (ha)= 6.79
ID= 1 DT= 3.0 min Total Imp(%)= 47.00 Dir. Conn.(%)= 47.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	3.19		3.60	
Dep. Storage	(mm)=	1.50		1.50	
Average Slope	(%)=	2.00		2.00	
Length	(m)=	212.76		40.00	
Mannings n	=	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----					
TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	6.00	3.950	13.00	6.050	23.00
0.100	6.00	3.100	13.00	6.100	23.00
0.150	6.00	3.150	13.00	6.150	23.00
0.200	6.00	3.200	13.00	6.200	23.00
0.250	6.00	3.250	13.00	6.250	23.00
0.300	6.00	3.300	13.00	6.300	23.00
0.350	6.00	3.350	13.00	6.350	23.00
0.400	6.00	3.400	13.00	6.400	23.00
0.450	6.00	3.450	13.00	6.450	23.00
0.500	6.00	3.500	13.00	6.500	23.00
0.550	6.00	3.550	13.00	6.550	23.00
0.600	6.00	3.600	13.00	6.600	23.00
0.650	6.00	3.650	13.00	6.650	23.00
0.700	6.00	3.700	13.00	6.700	23.00
0.750	6.00	3.750	13.00	6.750	23.00
0.800	6.00	3.800	13.00	6.800	23.00
0.850	6.00	3.850	13.00	6.850	23.00
0.900	6.00	3.900	13.00	6.900	23.00
0.950	6.00	3.950	13.00	6.950	23.00
1.000	6.00	4.000	13.00	7.000	23.00
1.050	4.00	4.050	17.00	7.050	13.00
1.100	4.00	4.100	17.00	7.100	13.00
1.150	4.00	4.150	17.00	7.150	13.00
1.200	4.00	4.200	17.00	7.200	13.00
1.250	4.00	4.250	17.00	7.250	13.00
1.300	4.00	4.300	17.00	7.300	13.00
1.350	4.00	4.350	17.00	7.350	13.00
1.400	4.00	4.400	17.00	7.400	13.00
1.450	4.00	4.450	17.00	7.450	13.00
1.500	4.00	4.500	17.00	7.500	13.00
1.550	4.00	4.550	17.00	7.550	13.00
1.600	4.00	4.600	17.00	7.600	13.00
1.650	4.00	4.650	17.00	7.650	13.00
1.700	4.00	4.700	17.00	7.700	13.00
1.750	4.00	4.750	17.00	7.750	13.00
1.800	4.00	4.800	17.00	7.800	13.00
1.850	4.00	4.850	17.00	7.850	13.00
1.900	4.00	4.900	17.00	7.900	13.00
1.950	4.00	4.950	17.00	7.950	13.00
2.000	4.00	5.000	17.00	8.000	13.00
2.050	6.00	5.050	13.00	8.050	13.00

HRP6.1-EX-REG.OUT

2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.150	6.00	5.150	13.00	8.150	13.00	11.15	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.350	6.00	5.350	13.00	8.350	13.00	11.35	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.450	6.00	5.450	13.00	8.450	13.00	11.45	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.550	6.00	5.550	13.00	8.550	13.00	11.55	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.650	6.00	5.650	13.00	8.650	13.00	11.65	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.850	6.00	5.850	13.00	8.850	13.00	11.85	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.950	6.00	5.950	13.00	8.950	13.00	11.95	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.99

Max.Eff.Inten.(mm/hr)= 53.00 48.49
over (min) 6.00 15.00
Storage Coeff. (min)= 4.21 (ii) 13.64 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

TOTALS

PEAK FLOW (cms)= 0.47 0.47 0.941 (iii)
TIME TO PEAK (hrs)= 9.95 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 161.71 184.04
TOTAL RAINFALL (mm)= 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.76 0.87

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
-----
| ADD HYD ( 0009) |
| 1 + 2 = 3 |
|
| AREA QPEAK TPEAK R.V.
| (ha) (cms) (hrs) (mm)
ID1= 1 ( 0133): 6.79 0.941 10.00 184.64
+ ID2= 2 ( 0022): 55.53 7.043 10.15 184.26
=====
ID = 3 ( 0009): 62.32 7.911 10.05 184.30
-----
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
| CALIB
| NASHYD ( 0134) |
|ID= 1 DT= 5.0 min |
|-----
| U.H. Tp(hrs)= 0.35
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00

HRP6.1-EX-REG.OUT

2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 1.676

PEAK FLOW (cms)= 2.112 (i)
TIME TO PEAK (hrs)= 10.083
RUNOFF VOLUME (mm)= 182.127
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.859

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
-----
| ADD HYD ( 0011) |
| 1 + 2 = 3 |
|
| AREA QPEAK TPEAK R.V.
| (ha) (cms) (hrs) (mm)
ID1= 1 ( 0134): 15.49 2.112 10.08 182.13
+ ID2= 2 ( 0009): 62.32 7.911 10.05 184.30
=====
ID = 3 ( 0011): 77.81 10.018 10.05 183.87
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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| CALIB
| STANDHYD ( 0135) |
|ID= 1 DT= 3.0 min |
|-----
| Area (ha)= 6.36
| Total Imp(%)= 36.00 Dir. Conn.(%)= 36.00
```

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.29	4.07
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	205.91	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	6.00	3.050	13.00	6.050	23.00	9.05	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.150	6.00	3.150	13.00	6.150	23.00	9.15	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.350	6.00	3.350	13.00	6.350	23.00	9.35	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.450	6.00	3.450	13.00	6.450	23.00	9.45	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.550	6.00	3.550	13.00	6.550	23.00	9.55	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.650	6.00	3.650	13.00	6.650	23.00	9.65	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.850	6.00	3.850	13.00	6.850	23.00	9.85	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.950	6.00	3.950	13.00	6.950	23.00	9.95	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.050	4.00	4.050	17.00	7.050	13.00	10.05	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.150	4.00	4.150	17.00	7.150	13.00	10.15	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.350	4.00	4.350	17.00	7.350	13.00	10.35	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.450	4.00	4.450	17.00	7.450	13.00	10.45	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.550	4.00	4.550	17.00	7.550	13.00	10.55	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00

HRP6.1-EX-REG.OUT											
1.650	4.00	4.650	17.00	7.650	13.00	10.65	38.00				
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00				
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00				
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00				
1.850	4.00	4.850	17.00	7.850	13.00	10.85	38.00				
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00				
1.950	4.00	4.950	17.00	7.950	13.00	10.95	38.00				
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.99				
2.050	6.00	5.050	13.00	8.050	13.00	11.05	13.00				
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00				
2.150	6.00	5.150	13.00	8.150	13.00	11.15	13.00				
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00				
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00				
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00				
2.350	6.00	5.350	13.00	8.350	13.00	11.35	13.00				
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00				
2.450	6.00	5.450	13.00	8.450	13.00	11.45	13.00				
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00				
2.550	6.00	5.550	13.00	8.550	13.00	11.55	13.00				
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00				
2.650	6.00	5.650	13.00	8.650	13.00	11.65	13.00				
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00				
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00				
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00				
2.850	6.00	5.850	13.00	8.850	13.00	11.85	13.00				
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00				
2.950	6.00	5.950	13.00	8.950	13.00	11.95	13.00				
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.99				

Max.Eff.Inten.(mm/hr)= 53.00 50.93
over (min) 6.00 15.00
Storage Coeff. (min)= 4.13 (ii) 13.37 (iii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

TOTALS
PEAK FLOW (cms)= 0.34 0.56 0.901 (iii)
TIME TO PEAK (hrs)= 9.95 10.00 10.00
RUNOFF VOLUME (mm)= 219.50 178.34 189.92
TOTAL RAINFALL (mm)= 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.84 0.90

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 87.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0012)				
1	2	3	AREA (ha)	QPEAK (cms)
ID= 1 (0011):	77.81	10.018	10.05	183.87
+ ID2= 2 (0135):	6.36	0.901	10.00	189.92
=====				
ID = 3 (0012):	84.17	10.897	10.05	184.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)	
IN= 2--> OUT= 1	Routing time step (min)= 3.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.590E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58

HRP6.1-EX-REG.OUT					
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.136E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<--- hydrograph --->					
<-pipe / channel->		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
					(m)
					(m/s)
INFLOW : ID= 2 (0012)	84.17	10.90	10.05	184.33	0.98
OUTFLOW: ID= 1 (0040)	84.17	10.58	10.25	184.32	1.91

CALIB				
NASHYD (0121)	Area (ha)=	3.64	Curve Number (CN)=	90.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	6.11		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00				
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00				
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00				
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00				
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00				
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00				
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00				
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00				
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00				
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00				
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00				
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00				
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00				
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00				
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00				
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00				
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00				
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00				
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00				
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00				
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00				
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00				
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00				
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00				
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00				
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00				
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00				
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00				
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00				
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00				
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00				
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00				
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00				
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00				
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00				
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00				

Unit Hyd Qpeak (cms)= 1.241

PEAK FLOW (cms)= 0.513 (i)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 179.027
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.844

- (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (0122)	Area (ha)=	16.13	Dir. Conn.(%)=	31.00
ID= 1 DT= 3.0 min	Total Imp(%)=	31.00		

HRP6.1-EX-REG.OUT

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.00	11.13
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	327.92	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	6.00	3.050	13.00	6.050	23.00	9.05	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.150	6.00	3.150	13.00	6.150	23.00	9.15	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.350	6.00	3.350	13.00	6.350	23.00	9.35	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.450	6.00	3.450	13.00	6.450	23.00	9.45	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.550	6.00	3.550	13.00	6.550	23.00	9.55	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.650	6.00	3.650	13.00	6.650	23.00	9.65	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.850	6.00	3.850	13.00	6.850	23.00	9.85	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.950	6.00	3.950	13.00	6.950	23.00	9.95	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.050	4.00	4.050	17.00	7.050	13.00	10.05	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.150	4.00	4.150	17.00	7.150	13.00	10.15	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.350	4.00	4.350	17.00	7.350	13.00	10.35	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.450	4.00	4.450	17.00	7.450	13.00	10.45	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.550	4.00	4.550	17.00	7.550	13.00	10.55	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.650	4.00	4.650	17.00	7.650	13.00	10.65	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.850	4.00	4.850	17.00	7.850	13.00	10.85	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.950	4.00	4.950	17.00	7.950	13.00	10.95	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.99
2.050	6.00	5.050	13.00	8.050	13.00	11.05	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.150	6.00	5.150	13.00	8.150	13.00	11.15	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.350	6.00	5.350	13.00	8.350	13.00	11.35	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.450	6.00	5.450	13.00	8.450	13.00	11.45	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.550	6.00	5.550	13.00	8.550	13.00	11.55	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.650	6.00	5.650	13.00	8.650	13.00	11.65	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.850	6.00	5.850	13.00	8.850	13.00	11.85	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.950	6.00	5.950	13.00	8.950	13.00	11.95	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.99

Max.Eff.Inten.(mm/hr)= 53.00 50.93
over (min) 6.00 15.00
Storage Coeff. (min)= 5.45 (ii) 14.70 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.20 0.08

PEAK FLOW (cms)= 0.74 1.53 2.268 (iii)
TIME TO PEAK (hrs)= 9.95 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 178.34 188.31
TOTAL RAINFALL (mm)= 212.00 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.84 0.89

- HRP6.1-EX-REG.OUT
- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 87.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0019) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0121): 3.64 0.513 10.00 179.03
+ ID2= 2 (0122): 16.13 2.268 10.00 188.31

ID = 3 (0019): 19.77 2.781 10.00 186.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0020) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0019): 19.77 2.781 10.00 186.60
+ ID2= 2 (0040): 84.17 10.576 10.25 184.32

ID = 3 (0020): 103.94 13.006 10.10 184.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH
=====

HRP7-EX-REG.OUT

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL
000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y M M O O
O O T T T H H Y Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

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Output filename: C:\Users\AbirA\AppData\Local\Civica\NH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\96e647e5-c9ca-4c57-ac9d-d061d57851e0\scenar
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DATE: 03/24/2023 TIME: 10:43:05

USER:

COMMENTS: _____

** SIMULATION : Run 01

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
1.00	6.00	4.00	13.00	7.00	23.00	10.00	53.00
2.00	4.00	5.00	17.00	8.00	13.00	11.00	38.00
3.00	6.00	6.00	13.00	9.00	13.00	12.00	13.00

CALIB
NASHYD (1040) Area (ha)= 10.35 Curve Number (CN)= 88.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00

1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 1.395 (1)
TIME TO PEAK (hrs)= 10.083
RUNOFF VOLUME (mm)= 177.292
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.836

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.259E+02	0.0	0.22	36.60
0.09	100.09	.582E+02	0.0	0.33	24.49
0.14	100.14	.970E+02	0.1	0.41	19.54
0.19	100.19	.142E+03	0.1	0.48	16.69
0.24	100.24	.194E+03	0.2	0.54	14.78
0.28	100.28	.252E+03	0.3	0.60	13.39
0.33	100.33	.317E+03	0.4	0.65	12.30
0.39	100.39	.402E+03	0.6	0.75	10.68
0.44	100.44	.495E+03	0.9	0.83	9.64
0.50	100.50	.590E+03	1.1	0.90	8.90
0.55	100.55	.700E+03	1.4	0.96	8.35
0.61	100.61	.829E+03	1.7	1.01	7.91
0.66	100.66	.958E+03	2.1	1.06	7.56
0.72	100.72	.110E+04	2.5	1.10	7.26
0.78	100.78	.124E+04	3.0	1.14	7.02
0.83	100.83	.140E+04	3.4	1.18	6.80
0.89	100.89	.156E+04	3.9	1.21	6.61
0.94	100.94	.174E+04	4.5	1.24	6.45
1.00	101.00	.192E+04	5.1	1.27	6.30

INFLOW : ID= 2 (1040)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
10.35	10.35	1.39	10.08	177.29	0.55	0.95
OUTFLOW: ID= 1 (0037)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
10.35	10.35	1.37	10.17	177.27	0.54	0.95

CALIB
NASHYD (0140) Area (ha)= 17.07 Curve Number (CN)= 90.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00

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0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 1.301

PEAK FLOW (cms)= 2.153 (i)
TIME TO PEAK (hrs)= 10.250
RUNOFF VOLUME (mm)= 182.155
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.859

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0140):	17.07	2.153	10.25	182.15
+ ID2= 2 (0037):	10.35	1.370	10.17	177.27
ID = 3 (0029):	27.42	3.513	10.22	180.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (1041)	Area (ha)=	11.30	Curve Number (CN)=	90.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.26		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00

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1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.597 (i)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 182.042
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.859

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):	11.30	1.597	10.00	182.04
+ ID2= 2 (0029):	27.42	3.513	10.22	180.31
ID = 3 (0018):	38.72	5.036	10.08	180.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0030)				
IN= 2---> OUT= 1				
			Routing time step (min)= 2.00	
<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.319E+02	0.0	0.38	26.06
0.09	100.09	.718E+02	0.1	0.57	17.44
0.14	100.14	.120E+03	0.1	0.71	13.91
0.19	100.19	.175E+03	0.2	0.83	11.89
0.24	100.24	.239E+03	0.4	0.94	10.53
0.28	100.28	.311E+03	0.5	1.04	9.53
0.33	100.33	.391E+03	0.7	1.13	8.76
0.39	100.39	.495E+03	1.1	1.30	7.61
0.44	100.44	.611E+03	1.5	1.44	6.86
0.50	100.50	.737E+03	1.9	1.56	6.34
0.55	100.55	.874E+03	2.5	1.66	5.94
0.61	100.61	.102E+04	3.0	1.75	5.63
0.66	100.66	.118E+04	3.7	1.83	5.38
0.72	100.72	.135E+04	4.4	1.91	5.17
0.78	100.78	.153E+04	5.1	1.97	5.00
0.83	100.83	.172E+04	5.9	2.04	4.84
0.89	100.89	.193E+04	6.8	2.10	4.71
0.94	100.94	.214E+04	7.8	2.15	4.59
1.00	101.00	.237E+04	8.8	2.20	4.48

	<---- hydrograph ---->				<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0018)	38.72	5.04	10.08	180.82	0.77	1.97
OUTFLOW: ID= 1 (0030)	38.72	5.01	10.19	180.81	0.77	1.97

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**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB
NASHYD (0141)
ID= 1 DT= 5.0 min
Area (ha)= 11.25
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.24
Curve Number (CN)= 91.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00	
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00	
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00	
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00	
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00	
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00	
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00	
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00	
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00	
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00	
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00	
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00	
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00	
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00	
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00	
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00	
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00	
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00	
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00	
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00	
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00	
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00	
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00	
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00	
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00	
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00	
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00	
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00	
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00	
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00	
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00	
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00	
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00	
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00	
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00	
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00	

Unit Hyd Qpeak (cms)= 1.783

PEAK FLOW (cms)= 1.606 (i)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 184.429
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.870

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)
1 + 2 = 3
ID1= 1 (0141): 11.25 1.606 10.00 184.43
+ ID2= 2 (0030): 38.72 5.007 10.19 189.81
ID = 3 (0021): 49.97 6.528 10.11 181.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0142)
ID= 1 DT= 3.0 min
Area (ha)= 10.92
Total Imp(%)= 53.00
Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.79 5.13
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 269.81 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.050	6.00	3.050	13.00	6.050	23.00	9.05	53.00	
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00	
0.150	6.00	3.150	13.00	6.150	23.00	9.15	53.00	
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00	
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00	
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00	
0.350	6.00	3.350	13.00	6.350	23.00	9.35	53.00	
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00	
0.450	6.00	3.450	13.00	6.450	23.00	9.45	53.00	
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00	
0.550	6.00	3.550	13.00	6.550	23.00	9.55	53.00	
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00	
0.650	6.00	3.650	13.00	6.650	23.00	9.65	53.00	
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00	
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00	
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00	
0.850	6.00	3.850	13.00	6.850	23.00	9.85	53.00	
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00	
0.950	6.00	3.950	13.00	6.950	23.00	9.95	53.00	
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99	
1.050	4.00	4.050	17.00	7.050	13.00	10.05	38.00	
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00	
1.150	4.00	4.150	17.00	7.150	13.00	10.15	38.00	
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00	
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00	
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00	
1.350	4.00	4.350	17.00	7.350	13.00	10.35	38.00	
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00	
1.450	4.00	4.450	17.00	7.450	13.00	10.45	38.00	
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00	
1.550	4.00	4.550	17.00	7.550	13.00	10.55	38.00	
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00	
1.650	4.00	4.650	17.00	7.650	13.00	10.65	38.00	
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00	
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00	
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00	
1.850	4.00	4.850	17.00	7.850	13.00	10.85	38.00	
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00	
1.950	4.00	4.950	17.00	7.950	13.00	10.95	38.00	
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.99	
2.050	6.00	5.050	13.00	8.050	13.00	11.05	13.00	
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00	
2.150	6.00	5.150	13.00	8.150	13.00	11.15	13.00	
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00	
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00	
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00	
2.350	6.00	5.350	13.00	8.350	13.00	11.35	13.00	
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00	
2.450	6.00	5.450	13.00	8.450	13.00	11.45	13.00	
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00	
2.550	6.00	5.550	13.00	8.550	13.00	11.55	13.00	
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00	
2.650	6.00	5.650	13.00	8.650	13.00	11.65	13.00	
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00	
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00	
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00	
2.850	6.00	5.850	13.00	8.850	13.00	11.85	13.00	
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00	
2.950	6.00	5.950	13.00	8.950	13.00	11.95	13.00	
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.99	

Max.Eff.Inten.(mm/hr)= 53.00 48.49
over (min) 6.00 15.00
Storage Coeff. (min)= 4.85 (ii) 13.52 (iii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. Tpeak (cms)= 0.21 0.08

TOTALS
PEAK FLOW (cms)= 0.85 0.67 1.524 (iii)
TIME TO PEAK (hrs)= 9.95 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 161.71 187.57
TOTAL RAINFALL (mm)= 212.00 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.76 0.88

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):	10.92	1.524	10.00	187.57
+ ID2= 2 (0021):	49.97	6.528	10.11	181.63
=====				
ID = 3 (0023):	60.89	7.966	10.03	182.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0143)			
ID= 1 DT= 1.0 min			

	IMPERVIOUS	PERVIOUS (I)
Surface Area	(ha)= 0.46	0.38
Dep. Storage	(mm)= 1.50	1.50
Average Slope	(%)= 2.00	2.00
Length	(m)= 74.83	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.017	6.00	3.017	13.00	6.017	23.00	9.02	53.00		
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00		
0.050	6.00	3.050	13.00	6.050	23.00	9.05	53.00		
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00		
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00		
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00		
0.117	6.00	3.117	13.00	6.117	23.00	9.12	53.00		
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00		
0.150	6.00	3.150	13.00	6.150	23.00	9.15	53.00		
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00		
0.183	6.00	3.183	13.00	6.183	23.00	9.18	53.00		
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00		
0.217	6.00	3.217	13.00	6.217	23.00	9.22	53.00		
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00		
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00		
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00		
0.283	6.00	3.283	13.00	6.283	23.00	9.28	53.00		
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00		
0.317	6.00	3.317	13.00	6.317	23.00	9.32	53.00		
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00		
0.350	6.00	3.350	13.00	6.350	23.00	9.35	53.00		
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00		
0.383	6.00	3.383	13.00	6.383	23.00	9.38	53.00		
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00		
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00		
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00		
0.450	6.00	3.450	13.00	6.450	23.00	9.45	53.00		
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00		
0.483	6.00	3.483	13.00	6.483	23.00	9.48	53.00		
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00		
0.517	6.00	3.517	13.00	6.517	23.00	9.52	53.00		
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00		
0.550	6.00	3.550	13.00	6.550	23.00	9.55	53.00		
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00		
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00		
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00		
0.617	6.00	3.617	13.00	6.617	23.00	9.62	53.00		
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00		
0.650	6.00	3.650	13.00	6.650	23.00	9.65	53.00		
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00		
0.683	6.00	3.683	13.00	6.683	23.00	9.68	53.00		
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00		
0.717	6.00	3.717	13.00	6.717	23.00	9.72	53.00		
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00		
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00		
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00		
0.783	6.00	3.783	13.00	6.783	23.00	9.78	53.00		
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00		
0.817	6.00	3.817	13.00	6.817	23.00	9.82	53.00		
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00		
0.850	6.00	3.850	13.00	6.850	23.00	9.85	53.00		
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00		
0.883	6.00	3.883	13.00	6.883	23.00	9.88	53.00		
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00		
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00		

HRP7-EX-REG.OUT							
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.950	6.00	3.950	13.00	6.950	23.00	9.95	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.96	53.00
0.983	6.00	3.983	13.00	6.983	23.00	9.98	53.00
1.000	6.00	4.000	13.00	7.000	22.90	10.00	52.98
1.017	6.00	4.017	17.00	7.017	13.00	10.02	38.00
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.050	4.00	4.050	17.00	7.050	13.00	10.05	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.117	4.00	4.117	17.00	7.117	13.00	10.12	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.150	4.00	4.150	17.00	7.150	13.00	10.15	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.183	4.00	4.183	17.00	7.183	13.00	10.18	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.217	4.00	4.217	17.00	7.217	13.00	10.22	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.283	4.00	4.283	17.00	7.283	13.00	10.28	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.317	4.00	4.317	17.00	7.317	13.00	10.32	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.350	4.00	4.350	17.00	7.350	13.00	10.35	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.383	4.00	4.383	17.00	7.383	13.00	10.38	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.450	4.00	4.450	17.00	7.450	13.00	10.45	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.483	4.00	4.483	17.00	7.483	13.00	10.48	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.517	4.00	4.517	17.00	7.517	13.00	10.52	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.550	4.00	4.550	17.00	7.550	13.00	10.55	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.617	4.00	4.617	17.00	7.617	13.00	10.62	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.650	4.00	4.650	17.00	7.650	13.00	10.65	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.683	4.00	4.683	17.00	7.683	13.00	10.68	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.717	4.00	4.717	17.00	7.717	13.00	10.72	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.783	4.00	4.783	17.00	7.783	13.00	10.78	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.817	4.00	4.817	17.00	7.817	13.00	10.82	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.850	4.00	4.850	17.00	7.850	13.00	10.85	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.883	4.00	4.883	17.00	7.883	13.00	10.88	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.950	4.00	4.950	17.00	7.950	13.00	10.95	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
1.983	4.00	4.983	17.00	7.983	13.00	10.98	38.00
2.000	6.00	5.000	17.00	8.000	13.00	11.00	37.99
2.017	6.00	5.017	13.00	8.017	13.00	11.02	13.00
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.050	6.00	5.050	13.00	8.050	13.00	11.05	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.06	13.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.117	6.00	5.117	13.00	8.117	13.00	11.12	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.150	6.00	5.150	13.00	8.150	13.00	11.15	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.183	6.00	5.183	13.00	8.183	13.00	11.18	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.217	6.00	5.217	13.00	8.217	13.00	11.22	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.283	6.00	5.283	13.00	8.283	13.00	11.28	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.317	6.00	5.317	13.00	8.317	13.00	11.32	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.350	6.00	5.350	13.00	8.350	13.00	11.35	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00

HRP7-EX-REG.OUT

2.383	6.00	5.383	13.00	8.383	13.00	11.38	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.450	6.00	5.450	13.00	8.450	13.00	11.45	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.483	6.00	5.483	13.00	8.483	13.00	11.48	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.517	6.00	5.517	13.00	8.517	13.00	11.52	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.550	6.00	5.550	13.00	8.550	13.00	11.55	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.617	6.00	5.617	13.00	8.617	13.00	11.62	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.650	6.00	5.650	13.00	8.650	13.00	11.65	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.683	6.00	5.683	13.00	8.683	13.00	11.68	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.717	6.00	5.717	13.00	8.717	13.00	11.72	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.783	6.00	5.783	13.00	8.783	13.00	11.78	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.817	6.00	5.817	13.00	8.817	13.00	11.82	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.850	6.00	5.850	13.00	8.850	13.00	11.85	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.883	6.00	5.883	13.00	8.883	13.00	11.88	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.950	6.00	5.950	13.00	8.950	13.00	11.95	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
2.983	6.00	5.983	13.00	8.983	13.00	11.98	13.00
3.000	6.00	6.000	13.01	9.000	13.00	12.00	13.00

Max.Eff.Inten.(mm/hr)= 53.00 50.95
over (min) 5.00 11.00
Storage Coeff. (min)= 2.25 (ii) 10.64 (ii)
Unit Hyd. Tpeak (min)= 5.00 11.00
Unit Hyd. peak (cms)= 0.36 0.11

TOTALS
0.121 (iii)
10.00
196.02
212.00
0.92

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 87.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)					
1 + 2 = 3					

ID1= 1 (0143):	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
+ ID2= 2 (0023):	60.89	7.966	10.03	182.69	
=====					
ID = 3 (0026):	61.73	8.084	10.03	182.87	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0144)			
ID= 1 DT= 2.0 min			

	Area (ha)=	6.14	
	Total Imp(%)=	37.00	Dir. Conn.(%)= 37.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.27 3.87
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 262.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

HRP7-EX-REG.OUT

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00	
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00	
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00	
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00	
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00	
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00	
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00	
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00	
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00	
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00	
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00	
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00	
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00	
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00	
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00	
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00	
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00	
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00	
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00	
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00	
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00	
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00	
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00	
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00	
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00	
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00	
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00	
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00	
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00	
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99	
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00	
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00	
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00	
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00	
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00	
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00	
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00	
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00	
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00	
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00	
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00	
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00	
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00	
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00	
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00	
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00	
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00	
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00	
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00	
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00	
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00	
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00	
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00	
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00	
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00	
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00	
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00	
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00	
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00	
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98	
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00	
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00	
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00	
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00	
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00	
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00	
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00	
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00	
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00	
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00	
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00	
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00	
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00	
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00	
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00	
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00	
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00	
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00	
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00	
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00	
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00	
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00	
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00	
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00	
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00	

HRP7-EX-REG.OUT

2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98
Max.Eff.Inten.(mm/hr)=	53.00		50.95				
over (min)	5.00		14.00				
Storage Coeff. (min)=	4.08 (ii)		13.33 (ii)				
Unit Hyd. Tpeak (min)=	4.00		14.00				
Unit Hyd. peak (cms)=	0.28		0.08				
PEAK FLOW (cms)=	0.33		0.54		*TOTALS*		
TIME TO PEAK (hrs)=	9.97		10.00		0.871 (iii)		
RUNOFF VOLUME (mm)=	210.50		178.34		190.24		
TOTAL RAINFALL (mm)=	212.00		212.00		212.00		
RUNOFF COEFFICIENT =	0.99		0.84		0.90		

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 87.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)				
1 + 2 = 3				

ID1= 1 (0144):	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
+ ID2= 2 (0026):	6.14	0.871	10.00	190.24
	61.73	8.084	10.03	182.87
=====				
ID = 3 (0028):	67.87	8.943	10.00	183.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4206031d-4e9a-4669-bbb1-2f51b250db75\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4206031d-4e9a-4669-bbb1-2f51b250db75\scenar

DATE: 03/24/2023 TIME: 11:09:41

USER:

COMMENTS: _____

** SIMULATION : Run 01

READ STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\ata\Local\Temp\
Ptotal=212.00 mm	Comments: Hazel a57ab224-9343-477b-a361-602d9c9b46ca\714b39f6

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
1.00	6.00	4.00	13.00	7.00	23.00	10.00	53.00
2.00	4.00	5.00	17.00	8.00	13.00	11.00	38.00
3.00	6.00	6.00	13.00	9.00	13.00	12.00	13.00

CALIB	Area (ha)= 4.49	Curve Number (CN)= 90.0
NASHYD (1050)	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 2.0 min	U.H. Tp(hrs)= 0.17	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00

0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.99
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.643 (i)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 182.144
TOTAL RAINFALL (mm)= 211.999
RUNOFF COEFFICIENT = 0.859

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)= 6.87	Curve Number (CN)= 92.0
NASHYD (0150)	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 2.0 min	U.H. Tp(hrs)= 0.19	

HRP8-EX-REG.OUT
NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00

2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Unit Hyd Qpeak (cms)= 1.346

PEAK FLOW (cms)= 0.991 (1)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 187.030
TOTAL RAINFALL (mm)= 211.999
RUNOFF COEFFICIENT = 0.882

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1050):	4.49	0.643	10.00	182.14
+ ID2= 2 (0150):	6.87	0.991	10.00	187.03

ID = 3 (0018):	11.36	1.634	10.00	185.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)		Routing time step (min)'= 2.00			
IN= 2----> OUT= 1					

<----- DATA FOR SECTION (1.1) ----->					
Distance	Elevation	Manning			
0.00	101.00	0.0500			
1.00	100.67	0.0500			
2.00	100.33	0.0500 / 0.0300	Main Channel		
3.00	100.00	0.0300	Main Channel		
4.00	100.00	0.0300	Main Channel		
5.00	100.33	0.0300 / 0.0500	Main Channel		
6.00	100.67	0.0500			
7.00	101.00	0.0500			
<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

	<---- hydrograph ---->				<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0018)	11.36	1.63	10.00	185.10	0.49	1.35
OUTFLOW: ID= 1 (0037)	11.36	1.59	10.07	185.07	0.48	1.34

| CALIB |
| NASHYD (1051) | Area (ha)= 50.34 Curve Number (CN)= 92.0
ID= 1 DT= 8.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.63

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	6.00	3.200	13.00	6.267	23.00	9.33	53.00
0.267	6.00	3.333	13.00	6.400	23.00	9.47	53.00
0.400	6.00	3.467	13.00	6.533	23.00	9.60	53.00
0.533	6.00	3.600	13.00	6.667	23.00	9.73	53.00
0.667	6.00	3.733	13.00	6.800	23.00	9.87	53.00
0.800	6.00	3.867	13.00	6.933	23.00	10.00	53.00
0.933	6.00	4.000	13.00	7.067	18.00	10.13	38.00
1.067	5.00	4.133	17.00	7.200	13.00	10.27	38.00
1.200	4.00	4.267	17.00	7.333	13.00	10.40	38.00
1.333	4.00	4.400	17.00	7.467	13.00	10.53	38.00
1.467	4.00	4.533	17.00	7.600	13.00	10.67	38.00
1.600	4.00	4.667	17.00	7.733	13.00	10.80	38.00
1.733	4.00	4.800	17.00	7.867	13.00	10.93	38.00
1.867	4.00	4.933	17.00	8.000	13.00	11.07	25.50
2.000	4.00	5.067	15.00	8.133	13.00	11.20	13.00
2.133	6.00	5.200	13.00	8.267	13.00	11.33	13.00
2.267	6.00	5.333	13.00	8.400	13.00	11.47	13.00
2.400	6.00	5.467	13.00	8.533	13.00	11.60	13.00
2.533	6.00	5.600	13.00	8.667	13.00	11.73	13.00
2.667	6.00	5.733	13.00	8.800	13.00	11.87	13.00
2.800	6.00	5.867	13.00	8.933	13.00	12.00	13.00
2.933	6.00	6.000	13.00	9.067	33.00		
3.067	9.50	6.133	23.00	9.200	53.00		

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 6.021 (i)
TIME TO PEAK (hrs)= 10.400
RUNOFF VOLUME (mm)= 187.018
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.882

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (1851):	50.34	6.021	10.40	187.02	
+ ID2= 2 (0037):	11.36	1.591	10.07	185.07	
=====					
ID = 3 (0029):	61.70	7.434	10.27	186.66	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0151)			
ID= 1 DT= 3.0 min	Area (ha)= 10.65		
	Total Imp(%)= 29.00	Dir. Conn.(%)= 29.00	

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	3.09	7.56	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	272.00	272.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	6.00	3.950	13.00	6.050	23.00	9.05	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.150	6.00	3.150	13.00	6.150	23.00	9.15	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.350	6.00	3.350	13.00	6.350	23.00	9.35	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.450	6.00	3.450	13.00	6.450	23.00	9.45	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.550	6.00	3.550	13.00	6.550	23.00	9.55	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.650	6.00	3.650	13.00	6.650	23.00	9.65	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.850	6.00	3.850	13.00	6.850	23.00	9.85	53.00

0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.950	6.00	3.950	13.00	6.950	23.00	9.95	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.050	4.00	4.050	17.00	7.050	13.00	10.05	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.150	4.00	4.150	17.00	7.150	13.00	10.15	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.350	4.00	4.350	17.00	7.350	13.00	10.35	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.450	4.00	4.450	17.00	7.450	13.00	10.45	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.550	4.00	4.550	17.00	7.550	13.00	10.55	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.650	4.00	4.650	17.00	7.650	13.00	10.65	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.850	4.00	4.850	17.00	7.850	13.00	10.85	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.950	4.00	4.950	17.00	7.950	13.00	10.95	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.99
2.050	6.00	5.050	13.00	8.050	13.00	11.05	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.150	6.00	5.150	13.00	8.150	13.00	11.15	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.350	6.00	5.350	13.00	8.350	13.00	11.35	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.450	6.00	5.450	13.00	8.450	13.00	11.45	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.550	6.00	5.550	13.00	8.550	13.00	11.55	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.650	6.00	5.650	13.00	8.650	13.00	11.65	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.850	6.00	5.850	13.00	8.850	13.00	11.85	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.950	6.00	5.950	13.00	8.950	13.00	11.95	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.99

Max.Eff.Inten.(mm/hr)= 53.00 50.74
over (min) 6.00 36.00
Storage Coeff. (min)= 4.88 (ii) 34.12 (iii)
Unit Hyd. Tpeak (min)= 6.00 36.00
Unit Hyd. peak (cms)= 0.21 0.03

TOTALS

PEAK FLOW (cms)= 0.45 0.09 1.262 (iii)
TIME TO PEAK (hrs)= 9.95 10.40 10.00
RUNOFF VOLUME (mm)= 210.50 178.34 187.67
TOTAL RAINFALL (mm)= 212.00 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.84 0.89

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 87.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0151):	10.65	1.262	10.00	187.67
+ ID2= 2 (0029):	61.70	7.434	10.27	186.66
=====				
ID = 3 (0031):	72.35	8.647	10.27	186.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0030)			
IN= 2--> OUT= 1			
Routing time step (min)= 2.00			

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel

HRP8-EX-REG.OUT

5.00 100.33 0.0300 /0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.998E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.208E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0031)	72.35	8.65	10.27	186.81	1.00
OUTFLOW: ID= 1 (0039)	72.35	8.57	10.47	186.80	1.00

CALIB			
STANDHYD (0152)			
ID= 1 DT= 3.0 min	Area (ha)=	15.40	
	Total Imp(%)=	43.00	Dir. Conn.(%)= 43.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.62	8.78
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	335.00	335.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	6.00	3.050	13.00	6.050	23.00	9.05	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.150	6.00	3.150	13.00	6.150	23.00	9.15	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.350	6.00	3.350	13.00	6.350	23.00	9.35	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.450	6.00	3.450	13.00	6.450	23.00	9.45	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.550	6.00	3.550	13.00	6.550	23.00	9.55	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.650	6.00	3.650	13.00	6.650	23.00	9.65	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.850	6.00	3.850	13.00	6.850	23.00	9.85	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.950	6.00	3.950	13.00	6.950	23.00	9.95	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.050	4.00	4.050	17.00	7.050	13.00	10.05	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.150	4.00	4.150	17.00	7.150	13.00	10.15	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.350	4.00	4.350	17.00	7.350	13.00	10.35	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.450	4.00	4.450	17.00	7.450	13.00	10.45	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.550	4.00	4.550	17.00	7.550	13.00	10.55	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00

HRP8-EX-REG.OUT

1.650	4.00	4.650	17.00	7.650	13.00	10.65	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.850	4.00	4.850	17.00	7.850	13.00	10.85	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.950	4.00	4.950	17.00	7.950	13.00	10.95	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.99
2.050	6.00	5.050	13.00	8.050	13.00	11.05	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.150	6.00	5.150	13.00	8.150	13.00	11.15	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.350	6.00	5.350	13.00	8.350	13.00	11.35	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.450	6.00	5.450	13.00	8.450	13.00	11.45	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.550	6.00	5.550	13.00	8.550	13.00	11.55	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.650	6.00	5.650	13.00	8.650	13.00	11.65	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.850	6.00	5.850	13.00	8.850	13.00	11.85	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.950	6.00	5.950	13.00	8.950	13.00	11.95	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.99

Max.Eff.Inten.(mm/hr)=	53.00	49.61
over (min)	6.00	39.00
Storage Coeff. (min)=	5.53 (ii)	38.96 (ii)
Unit Hyd. Tpeak (min)=	6.00	39.00
Unit Hyd. peak (cms)=	0.20	0.03

TOTALS			
PEAK FLOW (cms)=	0.97	0.98	1.831 (iii)
TIME TO PEAK (hrs)=	9.95	10.50	10.00
RUNOFF VOLUME (mm)=	219.50	171.16	188.07
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.81	0.89

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 84.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID= 1 (0152):	15.40	1.831	10.00	188.07
+ ID2= 2 (0039):	72.35	8.571	10.47	186.80
=====				
ID = 3 (0033):	87.75	10.248	10.47	187.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)			
IN= 2---> OUT= 1			
Routing time step (min)'= 2.00			
<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 /0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 /0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82

HRP8-EX-REG.OUT					
0.44	100.44	.296E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53
0.72	100.72	.655E+03	2.1	0.90	5.32
0.78	100.78	.743E+03	2.4	0.93	5.14
0.83	100.83	.836E+03	2.8	0.96	4.98
0.89	100.89	.934E+03	3.2	0.99	4.84
0.94	100.94	.104E+04	3.7	1.01	4.72
1.00	101.00	.115E+04	4.1	1.04	4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED					
<--- hydrograph ---> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0033)	87.75	10.25	10.47	187.03	1.00
OUTFLOW: ID= 1 (0040)	87.75	10.23	10.53	187.02	1.00

CALIB					
NASHYD (0153)	Area (ha)=	1.70	Curve Number (CN)=	91.0	
ID= 1 DT= 1.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	6.11			

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---					
TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	6.00	3.017	13.00	6.017	23.00
0.033	6.00	3.033	13.00	6.033	23.00
0.050	6.00	3.050	13.00	6.050	23.00
0.067	6.00	3.067	13.00	6.067	23.00
0.083	6.00	3.083	13.00	6.083	23.00
0.100	6.00	3.100	13.00	6.100	23.00
0.117	6.00	3.117	13.00	6.117	23.00
0.133	6.00	3.133	13.00	6.133	23.00
0.150	6.00	3.150	13.00	6.150	23.00
0.167	6.00	3.167	13.00	6.167	23.00
0.183	6.00	3.183	13.00	6.183	23.00
0.200	6.00	3.200	13.00	6.200	23.00
0.217	6.00	3.217	13.00	6.217	23.00
0.233	6.00	3.233	13.00	6.233	23.00
0.250	6.00	3.250	13.00	6.250	23.00
0.267	6.00	3.267	13.00	6.267	23.00
0.283	6.00	3.283	13.00	6.283	23.00
0.300	6.00	3.300	13.00	6.300	23.00
0.317	6.00	3.317	13.00	6.317	23.00
0.333	6.00	3.333	13.00	6.333	23.00
0.350	6.00	3.350	13.00	6.350	23.00
0.367	6.00	3.367	13.00	6.367	23.00
0.383	6.00	3.383	13.00	6.383	23.00
0.400	6.00	3.400	13.00	6.400	23.00
0.417	6.00	3.417	13.00	6.417	23.00
0.433	6.00	3.433	13.00	6.433	23.00
0.450	6.00	3.450	13.00	6.450	23.00
0.467	6.00	3.467	13.00	6.467	23.00
0.483	6.00	3.483	13.00	6.483	23.00
0.500	6.00	3.500	13.00	6.500	23.00
0.517	6.00	3.517	13.00	6.517	23.00
0.533	6.00	3.533	13.00	6.533	23.00
0.550	6.00	3.550	13.00	6.550	23.00
0.567	6.00	3.567	13.00	6.567	23.00
0.583	6.00	3.583	13.00	6.583	23.00
0.600	6.00	3.600	13.00	6.600	23.00
0.617	6.00	3.617	13.00	6.617	23.00
0.633	6.00	3.633	13.00	6.633	23.00
0.650	6.00	3.650	13.00	6.650	23.00
0.667	6.00	3.667	13.00	6.667	23.00
0.683	6.00	3.683	13.00	6.683	23.00
0.700	6.00	3.700	13.00	6.700	23.00
0.717	6.00	3.717	13.00	6.717	23.00
0.733	6.00	3.733	13.00	6.733	23.00
0.750	6.00	3.750	13.00	6.750	23.00
0.767	6.00	3.767	13.00	6.767	23.00
0.783	6.00	3.783	13.00	6.783	23.00
0.800	6.00	3.800	13.00	6.800	23.00
0.817	6.00	3.817	13.00	6.817	23.00
0.833	6.00	3.833	13.00	6.833	23.00
0.850	6.00	3.850	13.00	6.850	23.00
0.867	6.00	3.867	13.00	6.867	23.00
0.883	6.00	3.883	13.00	6.883	23.00

HRP8-EX-REG.OUT					
0.900	6.00	3.900	13.00	6.900	23.00
0.917	6.00	3.917	13.00	6.917	23.00
0.933	6.00	3.933	13.00	6.933	23.00
0.950	6.00	3.950	13.00	6.950	23.00
0.967	6.00	3.967	13.00	6.967	23.00
0.983	6.00	3.983	13.00	6.983	23.00
1.000	6.00	4.000	13.00	7.000	22.98
1.017	4.00	4.017	17.00	7.017	13.00
1.033	4.00	4.033	17.00	7.033	13.00
1.050	4.00	4.050	17.00	7.050	13.00
1.067	4.00	4.067	17.00	7.067	13.00
1.083	4.00	4.083	17.00	7.083	13.00
1.100	4.00	4.100	17.00	7.100	13.00
1.117	4.00	4.117	17.00	7.117	13.00
1.133	4.00	4.133	17.00	7.133	13.00
1.150	4.00	4.150	17.00	7.150	13.00
1.167	4.00	4.167	17.00	7.167	13.00
1.183	4.00	4.183	17.00	7.183	13.00
1.200	4.00	4.200	17.00	7.200	13.00
1.217	4.00	4.217	17.00	7.217	13.00
1.233	4.00	4.233	17.00	7.233	13.00
1.250	4.00	4.250	17.00	7.250	13.00
1.267	4.00	4.267	17.00	7.267	13.00
1.283	4.00	4.283	17.00	7.283	13.00
1.300	4.00	4.300	17.00	7.300	13.00
1.317	4.00	4.317	17.00	7.317	13.00
1.333	4.00	4.333	17.00	7.333	13.00
1.350	4.00	4.350	17.00	7.350	13.00
1.367	4.00	4.367	17.00	7.367	13.00
1.383	4.00	4.383	17.00	7.383	13.00
1.400	4.00	4.400	17.00	7.400	13.00
1.417	4.00	4.417	17.00	7.417	13.00
1.433	4.00	4.433	17.00	7.433	13.00
1.450	4.00	4.450	17.00	7.450	13.00
1.467	4.00	4.467	17.00	7.467	13.00
1.483	4.00	4.483	17.00	7.483	13.00
1.500	4.00	4.500	17.00	7.500	13.00
1.517	4.00	4.517	17.00	7.517	13.00
1.533	4.00	4.533	17.00	7.533	13.00
1.550	4.00	4.550	17.00	7.550	13.00
1.567	4.00	4.567	17.00	7.567	13.00
1.583	4.00	4.583	17.00	7.583	13.00
1.600	4.00	4.600	17.00	7.600	13.00
1.617	4.00	4.617	17.00	7.617	13.00
1.633	4.00	4.633	17.00	7.633	13.00
1.650	4.00	4.650	17.00	7.650	13.00
1.667	4.00	4.667	17.00	7.667	13.00
1.683	4.00	4.683	17.00	7.683	13.00
1.700	4.00	4.700	17.00	7.700	13.00
1.717	4.00	4.717	17.00	7.717	13.00
1.733	4.00	4.733	17.00	7.733	13.00
1.750	4.00	4.750	17.00	7.750	13.00
1.767	4.00	4.767	17.00	7.767	13.00
1.783	4.00	4.783	17.00	7.783	13.00
1.800	4.00	4.800	17.00	7.800	13.00
1.817	4.00	4.817	17.00	7.817	13.00
1.833	4.00	4.833	17.00	7.833	13.00
1.850	4.00	4.850	17.00	7.850	13.00
1.867	4.00	4.867	17.00	7.867	13.00
1.883	4.00	4.883	17.00	7.883	13.00
1.900	4.00	4.900	17.00	7.900	13.00
1.917	4.00	4.917	17.00	7.917	13.00
1.933	4.00	4.933	17.00	7.933	13.00
1.950	4.00	4.950	17.00	7.950	13.00
1.967	4.00	4.967	17.00	7.967	13.00
1.983	4.00	4.983	17.00	7.983	13.00
2.000	4.00	5.000	17.00	8.000	13.00
2.017	6.00	5.017	13.00	8.017	13.00
2.033	6.00	5.033	13.00	8.033	13.00
2.050	6.00	5.050	13.00	8.050	13.00
2.067	6.00	5.067	13.00	8.067	13.00
2.083	6.00	5.083	13.00	8.083	13.00
2.100	6.00	5.100	13.00	8.100	13.00
2.117	6.00	5.117	13.00	8.117	13.00
2.133	6.00	5.133	13.00	8.133	13.00
2.150	6.00	5.150	13.00	8.150	13.00
2.167	6.00	5.167	13.00	8.167	13.00
2.183	6.00	5.183	13.00	8.183	13.00
2.200	6.00	5.200	13.00	8.200	13.00
2.217	6.00	5.217	13.00	8.217	13.00
2.233	6.00	5.233	13.00	8.233	13.00
2.250	6.00	5.250	13.00	8.250	13.00
2.267	6.00	5.267	13.00	8.267	13.00
2.283	6.00	5.283	13.00	8.283	13.00
2.300	6.00	5.300	13.00	8.300	13.00
2.317	6.00	5.317	13.00	8.317	13.00
2.333	6.00	5.333	13.00	8.333	13.00

HRP8-EX-REG.OUT

2.350	6.00	5.350	13.00	8.350	13.00	11.35	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.383	6.00	5.383	13.00	8.383	13.00	11.38	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.450	6.00	5.450	13.00	8.450	13.00	11.45	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.483	6.00	5.483	13.00	8.483	13.00	11.48	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.517	6.00	5.517	13.00	8.517	13.00	11.52	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.550	6.00	5.550	13.00	8.550	13.00	11.55	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.617	6.00	5.617	13.00	8.617	13.00	11.62	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.650	6.00	5.650	13.00	8.650	13.00	11.65	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.683	6.00	5.683	13.00	8.683	13.00	11.68	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.717	6.00	5.717	13.00	8.717	13.00	11.72	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.783	6.00	5.783	13.00	8.783	13.00	11.78	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.817	6.00	5.817	13.00	8.817	13.00	11.82	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.850	6.00	5.850	13.00	8.850	13.00	11.85	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.883	6.00	5.883	13.00	8.883	13.00	11.88	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.950	6.00	5.950	13.00	8.950	13.00	11.95	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
2.983	6.00	5.983	13.00	8.983	13.00	11.98	13.00
3.000	6.00	6.000	13.01	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 0.580

PEAK FLOW (cms)= 0.245 (i)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 184.592
TOTAL RAINFALL (mm)= 212.001
RUNOFF COEFFICIENT = 0.871

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP8-EX-REG.OUT

1.600	4.00	4.667	17.00	7.733	13.00	10.80	38.00
1.733	4.00	4.800	17.00	7.867	13.00	10.93	38.00
1.867	4.00	4.933	17.00	8.000	13.00	11.07	25.50
2.000	4.00	5.067	15.00	8.133	13.00	11.20	13.00
2.133	6.00	5.200	13.00	8.267	13.00	11.33	13.00
2.267	6.00	5.333	13.00	8.400	13.00	11.47	13.00
2.400	6.00	5.467	13.00	8.533	13.00	11.60	13.00
2.533	6.00	5.600	13.00	8.667	13.00	11.73	13.00
2.667	6.00	5.733	13.00	8.800	13.00	11.87	13.00
2.800	6.00	5.867	13.00	8.933	13.00	12.00	13.00
2.933	6.00	6.000	13.00	9.067	33.00		
3.067	9.50	6.133	23.00	9.200	53.00		

Unit Hyd Qpeak (cms)= 3.643

PEAK FLOW (cms)= 9.539 (i)
TIME TO PEAK (hrs)= 11.067
RUNOFF VOLUME (mm)= 187.037
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.882

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

FINISH

ADD HYD (0035)					
1	+	2	=	3	
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0153):		1.70	0.245	10.00	184.59
+ ID2= 2 (0040):		87.75	10.226	10.53	187.02
=====					
ID = 3 (0035):		89.45	10.402	10.53	186.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0038)					
ID= 1 DT= 8.0 min	Area	(ha)=	87.75	Curve Number (CN)=	92.0
	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)= 0.92					

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	6.00	3.200	13.00	6.267	23.00	9.33	53.00
0.267	6.00	3.333	13.00	6.400	23.00	9.47	53.00
0.400	6.00	3.467	13.00	6.533	23.00	9.60	53.00
0.533	6.00	3.600	13.00	6.667	23.00	9.73	53.00
0.667	6.00	3.733	13.00	6.800	23.00	9.87	53.00
0.800	6.00	3.867	13.00	6.933	23.00	10.00	53.00
0.933	6.00	4.000	13.00	7.067	18.00	10.13	38.00
1.067	5.00	4.133	17.00	7.200	13.00	10.27	38.00
1.200	4.00	4.267	17.00	7.333	13.00	10.40	38.00
1.333	4.00	4.400	17.00	7.467	13.00	10.53	38.00
1.467	4.00	4.533	17.00	7.600	13.00	10.67	38.00

HRP9-EX-REG.OUT

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=====
V   V   I   SSSSS   U   U   A   L           (v 6.1.2002)
V   V   I   SS      U   U   A   A   L
V   V   I   SS      U   U   A   A   A   L
V   V   I   SS      U   U   A   A   L
V   V   I   SSSSS   UUUUU   A   A   LLLLL
000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
0   0   T   T   H   H   Y   Y   MM   MM   0   0
0   0   T   T   H   H   Y   Y   M   M   0   0
000   T   T   H   H   Y   M   M   000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4807a863-3f28-4f11-9242-0090ed7ad223\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4807a863-3f28-4f11-9242-0090ed7ad223\scenar

DATE: 03/24/2023 TIME: 11:21:32

USER:

COMMENTS: _____

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** SIMULATION : Run 01
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| READ STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\
|             | cc880175-bb54-4659-93d1-5ae7794bfe7f\714b39f6
| Ptotal=212.00 mm | Comments: Hazel
-----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
1.00 6.00 | 4.00 13.00 | 7.00 23.00 | 10.00 53.00
2.00 4.00 | 5.00 17.00 | 8.00 13.00 | 11.00 38.00
3.00 6.00 | 6.00 13.00 | 9.00 13.00 | 12.00 13.00
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| CALIB |
| NASHYD ( 1060) | Area (ha)= 51.71 Curve Number (CN)= 92.0
| ID= 1 DT= 6.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| U.H. Tp(hrs)= 0.48
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NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

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----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.100 6.00 | 3.100 13.00 | 6.100 23.00 | 9.10 53.00
0.200 6.00 | 3.200 13.00 | 6.200 23.00 | 9.20 53.00
0.300 6.00 | 3.300 13.00 | 6.300 23.00 | 9.30 53.00
0.400 6.00 | 3.400 13.00 | 6.400 23.00 | 9.40 53.00
0.500 6.00 | 3.500 13.00 | 6.500 23.00 | 9.50 53.00
0.600 6.00 | 3.600 13.00 | 6.600 23.00 | 9.60 53.00
0.700 6.00 | 3.700 13.00 | 6.700 23.00 | 9.70 53.00
0.800 6.00 | 3.800 13.00 | 6.800 23.00 | 9.80 53.00
0.900 6.00 | 3.900 13.00 | 6.900 23.00 | 9.90 53.00
1.000 6.00 | 4.000 13.00 | 7.000 23.00 | 10.00 53.00
1.100 4.00 | 4.100 17.00 | 7.100 13.00 | 10.10 38.00
1.200 4.00 | 4.200 17.00 | 7.200 13.00 | 10.20 38.00
1.300 4.00 | 4.300 17.00 | 7.300 13.00 | 10.30 38.00
1.400 4.00 | 4.400 17.00 | 7.400 13.00 | 10.40 38.00
1.500 4.00 | 4.500 17.00 | 7.500 13.00 | 10.50 38.00
1.600 4.00 | 4.600 17.00 | 7.600 13.00 | 10.60 38.00
1.700 4.00 | 4.700 17.00 | 7.700 13.00 | 10.70 38.00
1.800 4.00 | 4.800 17.00 | 7.800 13.00 | 10.80 38.00
1.900 4.00 | 4.900 17.00 | 7.900 13.00 | 10.90 38.00
2.000 4.00 | 5.000 17.00 | 8.000 13.00 | 11.00 38.00
2.100 6.00 | 5.100 13.00 | 8.100 13.00 | 11.10 13.00

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HRP9-EX-REG.OUT

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2.200 6.00 | 5.200 13.00 | 8.200 13.00 | 11.20 13.00
2.300 6.00 | 5.300 13.00 | 8.300 13.00 | 11.30 13.00
2.400 6.00 | 5.400 13.00 | 8.400 13.00 | 11.40 13.00
2.500 6.00 | 5.500 13.00 | 8.500 13.00 | 11.50 13.00
2.600 6.00 | 5.600 13.00 | 8.600 13.00 | 11.60 13.00
2.700 6.00 | 5.700 13.00 | 8.700 13.00 | 11.70 13.00
2.800 6.00 | 5.800 13.00 | 8.800 13.00 | 11.80 13.00
2.900 6.00 | 5.900 13.00 | 8.900 13.00 | 11.90 13.00
3.000 6.00 | 6.000 13.00 | 9.000 13.00 | 12.00 13.00

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Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 6.681 (l)
TIME TO PEAK (hrs)= 10.200
RUNOFF VOLUME (mm)= 187.018
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.882

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB |
| STANDHYD ( 0160) | Area (ha)= 9.15
| ID= 1 DT= 3.0 min | Total Imp(%)= 48.00 Dir. Conn.(%)= 48.00
-----
IMPERVIOUS PERVIOUS (1)
Surface Area (ha)= 4.39 4.76
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 246.98 40.00
Mannings n = 0.013 0.250

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NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

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----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.050 6.00 | 3.050 13.00 | 6.050 23.00 | 9.05 53.00
0.100 6.00 | 3.100 13.00 | 6.100 23.00 | 9.10 53.00
0.150 6.00 | 3.150 13.00 | 6.150 23.00 | 9.15 53.00
0.200 6.00 | 3.200 13.00 | 6.200 23.00 | 9.20 53.00
0.250 6.00 | 3.250 13.00 | 6.250 23.00 | 9.25 53.00
0.300 6.00 | 3.300 13.00 | 6.300 23.00 | 9.30 53.00
0.350 6.00 | 3.350 13.00 | 6.350 23.00 | 9.35 53.00
0.400 6.00 | 3.400 13.00 | 6.400 23.00 | 9.40 53.00
0.450 6.00 | 3.450 13.00 | 6.450 23.00 | 9.45 53.00
0.500 6.00 | 3.500 13.00 | 6.500 23.00 | 9.50 53.00
0.550 6.00 | 3.550 13.00 | 6.550 23.00 | 9.55 53.00
0.600 6.00 | 3.600 13.00 | 6.600 23.00 | 9.60 53.00
0.650 6.00 | 3.650 13.00 | 6.650 23.00 | 9.65 53.00
0.700 6.00 | 3.700 13.00 | 6.700 23.00 | 9.70 53.00
0.750 6.00 | 3.750 13.00 | 6.750 23.00 | 9.75 53.00
0.800 6.00 | 3.800 13.00 | 6.800 23.00 | 9.80 53.00
0.850 6.00 | 3.850 13.00 | 6.850 23.00 | 9.85 53.00
0.900 6.00 | 3.900 13.00 | 6.900 23.00 | 9.90 53.00
0.950 6.00 | 3.950 13.00 | 6.950 23.00 | 9.95 53.00
1.000 6.00 | 4.000 13.00 | 7.000 23.00 | 10.00 52.99
1.050 4.00 | 4.050 17.00 | 7.050 13.00 | 10.05 38.00
1.100 4.00 | 4.100 17.00 | 7.100 13.00 | 10.10 38.00
1.150 4.00 | 4.150 17.00 | 7.150 13.00 | 10.15 38.00
1.200 4.00 | 4.200 17.00 | 7.200 13.00 | 10.20 38.00
1.250 4.00 | 4.250 17.00 | 7.250 13.00 | 10.25 38.00
1.300 4.00 | 4.300 17.00 | 7.300 13.00 | 10.30 38.00
1.350 4.00 | 4.350 17.00 | 7.350 13.00 | 10.35 38.00
1.400 4.00 | 4.400 17.00 | 7.400 13.00 | 10.40 38.00
1.450 4.00 | 4.450 17.00 | 7.450 13.00 | 10.45 38.00
1.500 4.00 | 4.500 17.00 | 7.500 13.00 | 10.50 38.00
1.550 4.00 | 4.550 17.00 | 7.550 13.00 | 10.55 38.00
1.600 4.00 | 4.600 17.00 | 7.600 13.00 | 10.60 38.00
1.650 4.00 | 4.650 17.00 | 7.650 13.00 | 10.65 38.00
1.700 4.00 | 4.700 17.00 | 7.700 13.00 | 10.70 38.00
1.750 4.00 | 4.750 17.00 | 7.750 13.00 | 10.75 38.00
1.800 4.00 | 4.800 17.00 | 7.800 13.00 | 10.80 38.00
1.850 4.00 | 4.850 17.00 | 7.850 13.00 | 10.85 38.00
1.900 4.00 | 4.900 17.00 | 7.900 13.00 | 10.90 38.00
1.950 4.00 | 4.950 17.00 | 7.950 13.00 | 10.95 38.00
2.000 4.00 | 5.000 17.00 | 8.000 13.00 | 11.00 37.99
2.050 6.00 | 5.050 13.00 | 8.050 13.00 | 11.05 13.00
2.100 6.00 | 5.100 13.00 | 8.100 13.00 | 11.10 13.00
2.150 6.00 | 5.150 13.00 | 8.150 13.00 | 11.15 13.00
2.200 6.00 | 5.200 13.00 | 8.200 13.00 | 11.20 13.00
2.250 6.00 | 5.250 13.00 | 8.250 13.00 | 11.25 13.00
2.300 6.00 | 5.300 13.00 | 8.300 13.00 | 11.30 13.00
2.350 6.00 | 5.350 13.00 | 8.350 13.00 | 11.35 13.00
2.400 6.00 | 5.400 13.00 | 8.400 13.00 | 11.40 13.00

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HRP9-EX-REG.OUT

2.450	6.00	5.450	13.00	8.450	13.00	11.45	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.550	6.00	5.550	13.00	8.550	13.00	11.55	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.650	6.00	5.650	13.00	8.650	13.00	11.65	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.850	6.00	5.850	13.00	8.850	13.00	11.85	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.950	6.00	5.950	13.00	8.950	13.00	11.95	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.99
Max.Eff.Inten.(mm/hr)=	53.00		49.87				
over (min)	6.00		15.00				
Storage Coeff. (min)=	4.60 (ii)		13.92 (ii)				
Unit Hyd. Tpeak (min)=	6.00		15.00				
Unit Hyd. peak (cms)=	0.22		0.08				
					TOTALS		
PEAK FLOW (cms)=	0.65		0.64		1.288 (iii)		
TIME TO PEAK (hrs)=	9.95		10.00		10.00		
RUNOFF VOLUME (mm)=	210.50		167.78		188.29		
TOTAL RAINFALL (mm)=	212.00		212.00		212.00		
RUNOFF COEFFICIENT =	0.99		0.79		0.89		

TOTALS

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HRP9-EX-REG.OUT

0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	50.87
over (min)	5.00	14.00
Storage Coeff. (min)=	3.45 (ii)	12.69 (ii)
Unit Hyd. Tpeak (min)=	4.00	14.00
Unit Hyd. peak (cms)=	0.31	0.09

TOTALS

(iii)

(ii)

(i)

(ii)

(i)

(ii)

(i)

(ii)

(i)

(ii)

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(i)

(ii)

(i)

(ii)

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 87.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

	ADD HYD (0005)			
	1 + 2 = 3	AREA	QPEAK	TPEAK

		(ha)	(cms)	(hrs)
				(mm)
	ID1= 1 (0161):	3.49	0.495	10.00
	+ ID2= 2 (0003):	60.86	7.788	10.10
				187.21
=====				
	ID = 3 (0005):	64.35	8.239	10.10
				187.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

	CALIB			
	NASHYD (0162)	Area	(ha)=	1.29
	ID= 1 DT= 5.0 min	Ia	(mm)=	5.00

		U.H. Tp(hrs)=		0.40

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr		hrs	mm/hr	hrs	mm/hr	
0.083	6.00	3.083	13.00		6.083	23.00		9.08	53.00
0.167	6.00	3.167	13.00		6.167	23.00		9.17	53.00
0.250	6.00	3.250	13.00		6.250	23.00		9.25	53.00
0.333	6.00	3.333	13.00		6.333	23.00		9.33	53.00
0.417	6.00	3.417	13.00		6.417	23.00		9.42	53.00
0.500	6.00	3.500	13.00		6.500	23.00		9.50	53.00
0.583	6.00	3.583	13.00		6.583	23.00		9.58	53.00
0.667	6.00	3.667	13.00		6.667	23.00		9.67	53.00
0.750	6.00	3.750	13.00		6.750	23.00		9.75	53.00
0.833	6.00	3.833	13.00		6.833	23.00		9.83	53.00
0.917	6.00	3.917	13.00		6.917	23.00		9.92	53.00
1.000	6.00	4.000	13.00		7.000	23.00		10.00	53.00
1.083	4.00	4.083	17.00		7.083	13.00		10.08	38.00
1.167	4.00	4.167	17.00		7.167	13.00		10.17	38.00
1.250	4.00	4.250	17.00		7.250	13.00		10.25	38.00
1.333	4.00	4.333	17.00		7.333	13.00		10.33	38.00
1.417	4.00	4.417	17.00		7.417	13.00		10.42	38.00
1.500	4.00	4.500	17.00		7.500	13.00		10.50	38.00
1.583	4.00	4.583	17.00		7.583	13.00		10.58	38.00
1.667	4.00	4.667	17.00		7.667	13.00		10.67	38.00
1.750	4.00	4.750	17.00		7.750	13.00		10.75	38.00
1.833	4.00	4.833	17.00		7.833	13.00		10.83	38.00
1.917	4.00	4.917	17.00		7.917	13.00		10.92	38.00
2.000	4.00	5.000	17.00		8.000	13.00		11.00	38.00
2.083	6.00	5.083	13.00		8.083	13.00		11.08	13.00
2.167	6.00	5.167	13.00		8.167	13.00		11.17	13.00
2.250	6.00	5.250	13.00		8.250	13.00		11.25	13.00
2.333	6.00	5.333	13.00		8.333	13.00		11.33	13.00
2.417	6.00	5.417	13.00		8.417	13.00		11.42	13.00
2.500	6.00	5.500	13.00		8.500	13.00		11.50	13.00
2.583	6.00	5.583	13.00		8.583	13.00		11.58	13.00
2.667	6.00	5.667	13.00		8.667	13.00		11.67	13.00
2.750	6.00	5.750	13.00		8.750	13.00		11.75	13.00
2.833	6.00	5.833	13.00		8.833	13.00		11.83	13.00
2.917	6.00	5.917	13.00		8.917	13.00		11.92	13.00
3.000	6.00	6.000	13.00		9.000	13.00		12.00	13.00

Unit Hyd Qpeak (cms)= 0.124

PEAK FLOW (cms)= 0.170 (i)
TIME TO PEAK (hrs)= 10.083
RUNOFF VOLUME (mm)= 177.305
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.836

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

	ADD HYD (0007)			
	1 + 2 = 3	AREA	QPEAK	TPEAK

		(ha)	(cms)	(hrs)
				(mm)
	ID1= 1 (0162):	1.29	0.170	10.08
	+ ID2= 2 (0005):	64.35	8.239	10.10
				187.22
=====				
	ID = 3 (0007):	65.64	8.409	10.10
				187.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

C.5 VO Output – 50-year and 100-year 2096 IDF



HRP1-3-EX_50-100 YEAR-2096 IDF.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y Y M M O O
000 T T H H Y Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\5af1bc10-cf91-484f-8599-8478e0f54a92\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\5af1bc10-cf91-484f-8599-8478e0f54a92\scenar

DATE: 03/24/2023 TIME: 09:32:01

USER:

COMMENTS: _____

** SIMULATION : Run 11

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\ea22d8a-79a8-4a0e-8546-d58effb8d2c5\5fdf4178
Ptotal=124.08 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.25	6.25	2.50	12.25	17.97	18.25	2.25	
0.50	1.25	6.50	2.50	12.50	17.97	18.50	2.25	
0.75	1.25	6.75	2.50	12.75	9.24	18.75	2.25	
1.00	1.25	7.00	2.50	13.00	9.24	19.00	2.25	
1.25	1.25	7.25	2.50	13.25	1.75	19.25	2.25	
1.50	1.25	7.50	2.50	13.50	1.75	19.50	2.25	
1.75	1.25	7.75	2.50	13.75	10.23	19.75	2.25	
2.00	2.25	8.00	2.50	14.00	10.23	20.00	2.25	
2.25	1.62	8.25	3.37	14.25	3.74	20.25	1.50	
2.50	1.62	8.50	3.37	14.50	3.74	20.50	1.50	
2.75	1.62	8.75	3.37	14.75	3.74	20.75	1.50	
3.00	1.62	9.00	3.37	15.00	3.74	21.00	1.50	
3.25	1.62	9.25	3.00	15.25	3.74	21.25	1.50	
3.50	1.62	9.50	3.00	15.50	3.74	21.50	1.50	
3.75	1.62	9.75	4.49	15.75	3.74	21.75	1.50	
4.00	1.62	10.00	4.49	16.00	3.74	22.00	1.50	
4.25	2.00	10.25	5.74	16.25	2.25	22.25	1.50	
4.50	2.00	10.50	5.74	16.50	2.25	22.50	1.50	
4.75	2.00	10.75	7.74	16.75	2.25	22.75	1.50	
5.00	2.00	11.00	7.74	17.00	2.25	23.00	1.50	
5.25	2.00	11.25	11.98	17.25	2.25	23.25	1.50	
5.50	2.00	11.50	11.98	17.50	2.25	23.50	1.50	
5.75	2.00	11.75	51.92	17.75	2.25	23.75	1.50	
6.00	2.00	12.00	137.78	18.00	2.25	24.00	1.50	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25	
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25	
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25	
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25	
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25	
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25	
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25	
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25	
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25	
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25	
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25	
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25	
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25	
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25	
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25	
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25	
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25	
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25	
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25	
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25	
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25	
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25	
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25	
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25	
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50	
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50	
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50	
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50	
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50	
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50	
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50	
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50	
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50	
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50	
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50	
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50	
3.083	1.62	9.083	3.00	15.083	3.74	21.08	1.50	
3.167	1.62	9.167	3.00	15.167	3.74	21.17	1.50	
3.250	1.62	9.250	3.00	15.250	3.74	21.25	1.50	
3.333	1.62	9.333	3.00	15.333	3.74	21.33	1.50	
3.417	1.62	9.417	3.00	15.417	3.74	21.42	1.50	
3.500	1.62	9.500	3.00	15.500	3.74	21.50	1.50	
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50	
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50	
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50	
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50	
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50	
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50	
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50	
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50	
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50	
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50	
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50	
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50	
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50	
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50	
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50	
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50	
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50	
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50	
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50	
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50	
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50	
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50	
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50	
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50	
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50	
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50	
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50	
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50	
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50	
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50	

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 2.420 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 76.615
TOTAL RAINFALL (mm)= 124.080
RUNOFF COEFFICIENT = 0.614

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTEPIPE(0014) PIPE Number = 1.00

IN= 2--> OUT= 1 | Width (mm)=2400.00
DT= 5.0 min | Length (m)= 207.00
Slope (m/m)= 0.003
Manning n = 0.020

HRP1-3-EX_50-100 YEAR-2096 IDF.OUT
Height (mm)= 900.00

TRAVEL TIME TABLE

DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME min		
0.05	.235E+02	0.0	0.35	9.87		
0.09	.471E+02	0.1	0.54	6.37		
0.14	.706E+02	0.2	0.69	4.98		
0.19	.941E+02	0.4	0.82	4.21		
0.24	.118E+03	0.5	0.93	3.71		
0.28	.141E+03	0.7	1.03	3.36		
0.33	.165E+03	0.9	1.12	3.09		
0.38	.188E+03	1.1	1.20	2.89		
0.43	.212E+03	1.3	1.27	2.72		
0.47	.235E+03	1.5	1.33	2.59		
0.52	.259E+03	1.7	1.40	2.47		
0.57	.282E+03	2.0	1.45	2.38		
0.62	.306E+03	2.2	1.51	2.29		
0.66	.329E+03	2.5	1.55	2.22		
0.71	.353E+03	2.7	1.60	2.16		
0.76	.377E+03	3.0	1.64	2.10		
0.81	.400E+03	3.3	1.68	2.05		
0.85	.424E+03	3.5	1.72	2.00		
0.90	.447E+03	3.8	1.76	1.96		
<--- hydrograph ---> <-pipe / channel->						
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (1020)	24.22	2.42	12.42	76.61	0.65	1.54
OUTFLOW: ID= 1 (0014)	24.22	2.42	12.42	76.61	0.65	1.54

STANDHYD (0120) | Area (ha)= 13.35
ID= 1 DT= 3.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

Surface Area	(ha)=	6.01	7.34
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	298.33	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.25 6.050	2.50 12.050	17.97 18.05	2.25			
0.100	1.25 6.100	2.50 12.100	17.97 18.10	2.25			
0.150	1.25 6.150	2.50 12.150	17.97 18.15	2.25			
0.200	1.25 6.200	2.50 12.200	17.97 18.20	2.25			
0.250	1.25 6.250	2.50 12.250	17.97 18.25	2.25			
0.300	1.25 6.300	2.50 12.300	17.97 18.30	2.25			
0.350	1.25 6.350	2.50 12.350	17.97 18.35	2.25			
0.400	1.25 6.400	2.50 12.400	17.97 18.40	2.25			
0.450	1.25 6.450	2.50 12.450	17.97 18.45	2.25			
0.500	1.25 6.500	2.50 12.500	17.97 18.50	2.25			
0.550	1.25 6.550	2.50 12.550	9.24 18.55	2.25			
0.600	1.25 6.600	2.50 12.600	9.24 18.60	2.25			
0.650	1.25 6.650	2.50 12.650	9.24 18.65	2.25			
0.700	1.25 6.700	2.50 12.700	9.24 18.70	2.25			
0.750	1.25 6.750	2.50 12.750	9.24 18.75	2.25			
0.800	1.25 6.800	2.50 12.800	9.24 18.80	2.25			
0.850	1.25 6.850	2.50 12.850	9.24 18.85	2.25			
0.900	1.25 6.900	2.50 12.900	9.24 18.90	2.25			
0.950	1.25 6.950	2.50 12.950	9.24 18.95	2.25			
1.000	1.25 7.000	2.50 13.000	9.23 19.00	2.25			
1.050	1.25 7.050	2.50 13.050	1.75 19.05	2.25			
1.100	1.25 7.100	2.50 13.100	1.75 19.10	2.25			
1.150	1.25 7.150	2.50 13.150	1.75 19.15	2.25			
1.200	1.25 7.200	2.50 13.200	1.75 19.20	2.25			
1.250	1.25 7.250	2.50 13.250	1.75 19.25	2.25			
1.300	1.25 7.300	2.50 13.300	1.75 19.30	2.25			
1.350	1.25 7.350	2.50 13.350	1.75 19.35	2.25			
1.400	1.25 7.400	2.50 13.400	1.75 19.40	2.25			
1.450	1.25 7.450	2.50 13.450	1.75 19.45	2.25			
1.500	1.25 7.500	2.50 13.500	1.75 19.50	2.25			
1.550	1.25 7.550	2.50 13.550	10.23 19.55	2.25			
1.600	1.25 7.600	2.50 13.600	10.23 19.60	2.25			
1.650	1.25 7.650	2.50 13.650	10.23 19.65	2.25			

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1.700	1.25 7.700	2.50 13.700	10.23 19.70	2.25			
1.750	1.25 7.750	2.50 13.750	10.23 19.75	2.25			
1.800	2.25 7.800	2.50 13.800	10.23 19.80	2.25			
1.850	2.25 7.850	2.50 13.850	10.23 19.85	2.25			
1.900	2.25 7.900	2.50 13.900	10.23 19.90	2.25			
1.950	2.25 7.950	2.50 13.950	10.23 19.95	2.25			
2.000	2.25 8.000	2.50 14.000	10.23 20.00	2.25			
2.050	1.62 8.050	3.37 14.050	3.74 20.05	1.50			
2.100	1.62 8.100	3.37 14.100	3.74 20.10	1.50			
2.150	1.62 8.150	3.37 14.150	3.74 20.15	1.50			
2.200	1.62 8.200	3.37 14.200	3.74 20.20	1.50			
2.250	1.62 8.250	3.37 14.250	3.74 20.25	1.50			
2.300	1.62 8.300	3.37 14.300	3.74 20.30	1.50			
2.350	1.62 8.350	3.37 14.350	3.74 20.35	1.50			
2.400	1.62 8.400	3.37 14.400	3.74 20.40	1.50			
2.450	1.62 8.450	3.37 14.450	3.74 20.45	1.50			
2.500	1.62 8.500	3.37 14.500	3.74 20.50	1.50			
2.550	1.62 8.550	3.37 14.550	3.74 20.55	1.50			
2.600	1.62 8.600	3.37 14.600	3.74 20.60	1.50			
2.650	1.62 8.650	3.37 14.650	3.74 20.65	1.50			
2.700	1.62 8.700	3.37 14.700	3.74 20.70	1.50			
2.750	1.62 8.750	3.37 14.750	3.74 20.75	1.50			
2.800	1.62 8.800	3.37 14.800	3.74 20.80	1.50			
2.850	1.62 8.850	3.37 14.850	3.74 20.85	1.50			
2.900	1.62 8.900	3.37 14.900	3.74 20.90	1.50			
2.950	1.62 8.950	3.37 14.950	3.74 20.95	1.50			
3.000	1.62 9.000	3.37 15.000	3.74 21.00	1.50			
3.050	1.62 9.050	3.99 15.050	3.74 21.05	1.50			
3.100	1.62 9.100	3.99 15.100	3.74 21.10	1.50			
3.150	1.62 9.150	3.99 15.150	3.74 21.15	1.50			
3.200	1.62 9.200	3.99 15.200	3.74 21.20	1.50			
3.250	1.62 9.250	3.99 15.250	3.74 21.25	1.50			
3.300	1.62 9.300	3.99 15.300	3.74 21.30	1.50			
3.350	1.62 9.350	3.99 15.350	3.74 21.35	1.50			
3.400	1.62 9.400	3.99 15.400	3.74 21.40	1.50			
3.450	1.62 9.450	3.99 15.450	3.74 21.45	1.50			
3.500	1.62 9.500	3.99 15.500	3.74 21.50	1.50			
3.550	1.62 9.550	4.49 15.550	3.74 21.55	1.50			
3.600	1.62 9.600	4.49 15.600	3.74 21.60	1.50			
3.650	1.62 9.650	4.49 15.650	3.74 21.65	1.50			
3.700	1.62 9.700	4.49 15.700	3.74 21.70	1.50			
3.750	1.62 9.750	4.49 15.750	3.74 21.75	1.50			
3.800	1.62 9.800	4.49 15.800	3.74 21.80	1.50			
3.850	1.62 9.850	4.49 15.850	3.74 21.85	1.50			
3.900	1.62 9.900	4.49 15.900	3.74 21.90	1.50			
3.950	1.62 9.950	4.49 15.950	3.74 21.95	1.50			
4.000	1.62 10.000	4.49 16.000	3.74 22.00	1.50			
4.050	2.00 10.050	5.74 16.050	2.25 22.05	1.50			
4.100	2.00 10.100	5.74 16.100	2.25 22.10	1.50			
4.150	2.00 10.150	5.74 16.150	2.25 22.15	1.50			
4.200	2.00 10.200	5.74 16.200	2.25 22.20	1.50			
4.250	2.00 10.250	5.74 16.250	2.25 22.25	1.50			
4.300	2.00 10.300	5.74 16.300	2.25 22.30	1.50			
4.350	2.00 10.350	5.74 16.350	2.25 22.35	1.50			
4.400	2.00 10.400	5.74 16.400	2.25 22.40	1.50			
4.450	2.00 10.450	5.74 16.450	2.25 22.45	1.50			
4.500	2.00 10.500	5.74 16.500	2.25 22.50	1.50			
4.550	2.00 10.550	7.74 16.550	2.25 22.55	1.50			
4.600	2.00 10.600	7.74 16.600	2.25 22.60	1.50			
4.650	2.00 10.650	7.74 16.650	2.25 22.65	1.50			
4.700	2.00 10.700	7.74 16.700	2.25 22.70	1.50			
4.750	2.00 10.750	7.74 16.750	2.25 22.75	1.50			
4.800	2.00 10.800	7.74 16.800	2.25 22.80	1.50			
4.850	2.00 10.850	7.74 16.850	2.25 22.85	1.50			
4.900	2.00 10.900	7.74 16.900	2.25 22.90	1.50			
4.950	2.00 10.950	7.74 16.950	2.25 22.95	1.50			
5.000	2.00 11.000	7.74 17.000	2.25 23.00	1.50			
5.050	2.00 11.050	11.98 17.050	2.25 23.05	1.50			
5.100	2.00 11.100	11.98 17.100	2.25 23.10	1.50			
5.150	2.00 11.150	11.98 17.150	2.25 23.15	1.50			
5.200	2.00 11.200	11.98 17.200	2.25 23.20	1.50			
5.250	2.00 11.250	11.98 17.250	2.25 23.25	1.50			
5.300	2.00 11.300	11.98 17.300	2.25 23.30	1.50			
5.350	2.00 11.350	11.98 17.350	2.25 23.35	1.50			
5.400	2.00 11.400	11.98 17.400	2.25 23.40	1.50			
5.450	2.00 11.450	11.98 17.450	2.25 23.45	1.50			
5.500	2.00 11.500	12.00 17.500	2.25 23.50	1.50			
5.550	2.00 11.550	51.92 17.550	2.25 23.55	1.50			
5.600	2.00 11.600	51.92 17.600	2.25 23.60	1.50			
5.650	2.00 11.650	51.92 17.650	2.25 23.65	1.50			
5.700	2.00 11.700	51.92 17.700	2.25 23.70	1.50			
5.750	2.00 11.750	51.96 17.750	2.25 23.75	1.50			
5.800	2.00 11.800	137.78 17.800	2.25 23.80	1.50			
5.850	2.00 11.850	137.78 17.850	2.25 23.85	1.50			
5.900	2.00 11.900	137.78 17.900	2.25 23.90	1.50			
5.950	2.00 11.950	137.78 17.950	2.25 23.95	1.50			
6.000	2.00 12.000	137.71 18.000	2.25 24.00	1.50			

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Max.Eff.Inten.(mm/hr)=	137.78	88.79	
over (min)	6.00	12.00	
Storage Coeff. (min)=	3.52 (ii)	10.24 (iii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.25	0.10	
PEAK FLOW (cms)=	2.26	1.29	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.05	3.467 (iii)
RUNOFF VOLUME (mm)=	123.30	68.46	12.00
TOTAL RAINFALL (mm)=	124.80	124.80	93.14
RUNOFF COEFFICIENT =	0.99	0.55	0.75

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0000)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0120):	13.35	3.467	12.00	93.14
+ ID2= 2 (0014):	24.22	2.420	12.42	76.61
ID = 3 (0006):	37.57	4.647	12.00	82.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	10.34
STANDHYD (0100)	Total Imp(%)=	45.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	45.00

	IMPERVIOUS (ha)=	PERVIOUS (i)
Surface Area	4.65	5.69
Dep. Storage	1.50	1.50
Average Slope	2.00	2.00
Length	262.55	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25		
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25		
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25		
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25		
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25		
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25		
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25		
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25		
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25		
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25		
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25		
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25		
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25		
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25		
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25		
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25		
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25		
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25		
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25		
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25		
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25		
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25		
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25		
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25		

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1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)=	137.78	88.79
over (min)	6.00	12.00

Storage Coeff. (min)= 3.26 (ii) 9.98 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.26 0.11

TOTALS
PEAK FLOW (cms)= 1.76 1.01 2.702 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 123.30 68.46 93.14
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.75

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0101)
ID= 1 DT= 4.0 min

Area (ha)= 21.81
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 9.81 12.00
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 381.31 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr

0.067 1.25 | 6.067 2.50 | 12.067 17.99 | 18.07 2.25
0.133 1.25 | 6.133 2.50 | 12.133 17.97 | 18.13 2.25
0.200 1.25 | 6.200 2.50 | 12.200 17.97 | 18.20 2.25
0.267 1.25 | 6.267 2.50 | 12.267 17.97 | 18.27 2.25
0.333 1.25 | 6.333 2.50 | 12.333 17.97 | 18.33 2.25
0.400 1.25 | 6.400 2.50 | 12.400 17.97 | 18.40 2.25
0.467 1.25 | 6.467 2.50 | 12.467 17.97 | 18.47 2.25
0.533 1.25 | 6.533 2.50 | 12.533 13.60 | 18.53 2.25
0.600 1.25 | 6.600 2.50 | 12.600 9.24 | 18.60 2.25
0.667 1.25 | 6.667 2.50 | 12.667 9.24 | 18.67 2.25
0.733 1.25 | 6.733 2.50 | 12.733 9.24 | 18.73 2.25
0.800 1.25 | 6.800 2.50 | 12.800 9.24 | 18.80 2.25
0.867 1.25 | 6.867 2.50 | 12.867 9.24 | 18.87 2.25
0.933 1.25 | 6.933 2.50 | 12.933 9.24 | 18.93 2.25
1.000 1.25 | 7.000 2.50 | 13.000 9.24 | 19.00 2.25
1.067 1.25 | 7.067 2.50 | 13.067 1.75 | 19.07 2.25
1.133 1.25 | 7.133 2.50 | 13.133 1.75 | 19.13 2.25
1.200 1.25 | 7.200 2.50 | 13.200 1.75 | 19.20 2.25
1.267 1.25 | 7.267 2.50 | 13.267 1.75 | 19.27 2.25
1.333 1.25 | 7.333 2.50 | 13.333 1.75 | 19.33 2.25
1.400 1.25 | 7.400 2.50 | 13.400 1.75 | 19.40 2.25
1.467 1.25 | 7.467 2.50 | 13.467 1.75 | 19.47 2.25
1.533 1.25 | 7.533 2.50 | 13.533 5.99 | 19.53 2.25
1.600 1.25 | 7.600 2.50 | 13.600 10.23 | 19.60 2.25
1.667 1.25 | 7.667 2.50 | 13.667 10.23 | 19.67 2.25
1.733 1.25 | 7.733 2.50 | 13.733 10.23 | 19.73 2.25
1.800 2.00 | 7.800 2.50 | 13.800 10.23 | 19.80 2.25
1.867 2.25 | 7.867 2.50 | 13.867 10.23 | 19.87 2.25
1.933 2.25 | 7.933 2.50 | 13.933 10.23 | 19.93 2.25
2.000 2.25 | 8.000 2.50 | 14.000 10.23 | 20.00 2.25
2.067 1.62 | 8.067 3.37 | 14.067 3.75 | 20.07 1.50
2.133 1.62 | 8.133 3.37 | 14.133 3.74 | 20.13 1.50
2.200 1.62 | 8.200 3.37 | 14.200 3.74 | 20.20 1.50
2.267 1.62 | 8.267 3.37 | 14.267 3.74 | 20.27 1.50
2.333 1.62 | 8.333 3.37 | 14.333 3.74 | 20.33 1.50
2.400 1.62 | 8.400 3.37 | 14.400 3.74 | 20.40 1.50
2.467 1.62 | 8.467 3.37 | 14.467 3.74 | 20.47 1.50
2.533 1.62 | 8.533 3.37 | 14.533 3.74 | 20.53 1.50
2.600 1.62 | 8.600 3.37 | 14.600 3.74 | 20.60 1.50
2.667 1.62 | 8.667 3.37 | 14.667 3.74 | 20.67 1.50
2.733 1.62 | 8.733 3.37 | 14.733 3.74 | 20.73 1.50
2.800 1.62 | 8.800 3.37 | 14.800 3.74 | 20.80 1.50
2.867 1.62 | 8.867 3.37 | 14.867 3.74 | 20.87 1.50
2.933 1.62 | 8.933 3.37 | 14.933 3.74 | 20.93 1.50
3.000 1.62 | 9.000 3.37 | 15.000 3.74 | 21.00 1.50
3.067 1.62 | 9.067 3.99 | 15.067 3.74 | 21.07 1.50
3.133 1.62 | 9.133 3.99 | 15.133 3.74 | 21.13 1.50
3.200 1.62 | 9.200 3.99 | 15.200 3.74 | 21.20 1.50
3.267 1.62 | 9.267 3.99 | 15.267 3.74 | 21.27 1.50
3.333 1.62 | 9.333 3.99 | 15.333 3.74 | 21.33 1.50
3.400 1.62 | 9.400 3.99 | 15.400 3.74 | 21.40 1.50

HRP1-3-EX_50-100 YEAR-2096 IDF.OUT
3.467 1.62 | 9.467 3.99 | 15.467 3.74 | 21.47 1.50
3.533 1.62 | 9.533 4.24 | 15.533 3.74 | 21.53 1.50
3.600 1.62 | 9.600 4.49 | 15.600 3.74 | 21.60 1.50
3.667 1.62 | 9.667 4.49 | 15.667 3.74 | 21.67 1.50
3.733 1.62 | 9.733 4.49 | 15.733 3.74 | 21.73 1.50
3.800 1.62 | 9.800 4.49 | 15.800 3.74 | 21.80 1.50
3.867 1.62 | 9.867 4.49 | 15.867 3.74 | 21.87 1.50
3.933 1.62 | 9.933 4.49 | 15.933 3.74 | 21.93 1.50
4.000 1.62 | 10.000 4.49 | 16.000 3.74 | 22.00 1.50
4.067 2.00 | 10.067 5.74 | 16.067 2.25 | 22.07 1.50
4.133 2.00 | 10.133 5.74 | 16.133 2.25 | 22.13 1.50
4.200 2.00 | 10.200 5.74 | 16.200 2.25 | 22.20 1.50
4.267 2.00 | 10.267 5.74 | 16.267 2.25 | 22.27 1.50
4.333 2.00 | 10.333 5.74 | 16.333 2.25 | 22.33 1.50
4.400 2.00 | 10.400 5.74 | 16.400 2.25 | 22.40 1.50
4.467 2.00 | 10.467 5.74 | 16.467 2.25 | 22.47 1.50
4.533 2.00 | 10.533 6.74 | 16.533 2.25 | 22.53 1.50
4.600 2.00 | 10.600 7.74 | 16.600 2.25 | 22.60 1.50
4.667 2.00 | 10.667 7.74 | 16.667 2.25 | 22.67 1.50
4.733 2.00 | 10.733 7.74 | 16.733 2.25 | 22.73 1.50
4.800 2.00 | 10.800 7.74 | 16.800 2.25 | 22.80 1.50
4.867 2.00 | 10.867 7.74 | 16.867 2.25 | 22.87 1.50
4.933 2.00 | 10.933 7.74 | 16.933 2.25 | 22.93 1.50
5.000 2.00 | 11.000 7.74 | 17.000 2.25 | 23.00 1.50
5.067 2.00 | 11.067 11.98 | 17.067 2.25 | 23.07 1.50
5.133 2.00 | 11.133 11.98 | 17.133 2.25 | 23.13 1.50
5.200 2.00 | 11.200 11.98 | 17.200 2.25 | 23.20 1.50
5.267 2.00 | 11.267 11.98 | 17.267 2.25 | 23.27 1.50
5.333 2.00 | 11.333 11.98 | 17.333 2.25 | 23.33 1.50
5.400 2.00 | 11.400 11.98 | 17.400 2.25 | 23.40 1.50
5.467 2.00 | 11.467 11.98 | 17.467 2.25 | 23.47 1.50
5.533 2.00 | 11.533 31.94 | 17.533 2.25 | 23.53 1.50
5.600 2.00 | 11.600 51.92 | 17.600 2.25 | 23.60 1.50
5.667 2.00 | 11.667 51.92 | 17.667 2.25 | 23.67 1.50
5.733 2.00 | 11.733 51.92 | 17.733 2.25 | 23.73 1.50
5.800 2.00 | 11.800 116.30 | 17.800 2.25 | 23.80 1.50
5.867 2.00 | 11.867 137.78 | 17.867 2.25 | 23.87 1.50
5.933 2.00 | 11.933 137.78 | 17.933 2.25 | 23.93 1.50
6.000 2.00 | 12.000 137.78 | 18.000 2.25 | 24.00 1.50

Max.Eff.Inten.(mm/hr)= 137.78 88.80
over (min) 5.00 12.00
Storage Coeff. (min)= 4.07 (ii) 10.80 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.27 0.10

TOTALS
PEAK FLOW (cms)= 3.69 2.09 5.657 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 123.30 68.46 93.14
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.75

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0100): 10.34 2.702 12.00 93.14
+ ID2= 2 (0101): 21.81 5.657 12.00 93.14
=====

ID = 3 (0009): 32.15 8.358 12.00 93.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A A
V V I SS U U A A A A A L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y Y M M 0 0

000 T T H H Y M M 000
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HRP1-3-EX_50-100 YEAR-2096 IDF.OUT

***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voind.dat
Output filename: C:\Users\AbirA\AppData\Local\CVica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\337dd8ee-8bf4-48cf-bc71-966224c4a495\scenar
Summary filename: C:\Users\AbirA\AppData\Local\CVica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\337dd8ee-8bf4-48cf-bc71-966224c4a495\scenar

DATE: 03/24/2023 TIME: 09:32:01

USER:

COMMENTS: _____

** SIMULATION : Run 12 **

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\ea22d8a-79a8-4a0e-8546-d50effb8d2c5\c7ff0caf
| | ata\Local\Temp\ea22d8a-79a8-4a0e-8546-d50effb8d2c5\c7ff0caf
| Ptotal=136.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.37	6.25	2.74	12.25	19.70	18.25	2.46
0.50	1.37	6.50	2.74	12.50	19.70	18.50	2.46
0.75	1.37	6.75	2.74	12.75	10.12	18.75	2.46
1.00	1.37	7.00	2.74	13.00	10.12	19.00	2.46
1.25	1.37	7.25	2.74	13.25	1.92	19.25	2.46
1.50	1.37	7.50	2.74	13.50	1.92	19.50	2.46
1.75	1.37	7.75	2.74	13.75	11.22	19.75	2.46
2.00	2.46	8.00	2.74	14.00	11.22	20.00	2.46
2.25	1.78	8.25	3.69	14.25	4.10	20.25	1.64
2.50	1.78	8.50	3.69	14.50	4.10	20.50	1.64
2.75	1.78	8.75	3.69	14.75	4.10	20.75	1.64
3.00	1.78	9.00	3.69	15.00	4.10	21.00	1.64
3.25	1.78	9.25	4.38	15.25	4.10	21.25	1.64
3.50	1.78	9.50	4.38	15.50	4.10	21.50	1.64
3.75	1.78	9.75	4.92	15.75	4.10	21.75	1.64
4.00	1.78	10.00	4.92	16.00	4.10	22.00	1.64
4.25	2.19	10.25	6.29	16.25	2.46	22.25	1.64
4.50	2.19	10.50	6.29	16.50	2.46	22.50	1.64
4.75	2.19	10.75	8.48	16.75	2.46	22.75	1.64
5.00	2.19	11.00	8.48	17.00	2.46	23.00	1.64
5.25	2.19	11.25	13.13	17.25	2.46	23.25	1.64
5.50	2.19	11.50	13.13	17.50	2.46	23.50	1.64
5.75	2.19	11.75	56.91	17.75	2.46	23.75	1.64
6.00	2.19	12.00	151.03	18.00	2.46	24.00	1.64

| CALIB |
| NASHYD (1020) | Area (ha)= 24.22 Curve Number (CN)= 79.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| | U.H. Tp(hrs)= 0.53

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46

HRP1-3-EX_50-100 YEAR-2096 IDF.OUT

0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.11	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 2.755 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 87.149
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.637

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ROUTEPIPE(0014) | PIPE Number = 1.00
| IN= 2---> OUT= 1 | Width (mm)=2400.00 Height (mm)= 900.00
| DT= 5.0 min | Length (m)= 207.00
| | Slope (m/m)= 0.003
| | Manning n = 0.020

DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME min
0.05	.235E+02	0.0	0.35	9.87
0.09	.471E+02	0.1	0.54	6.37
0.14	.706E+02	0.2	0.69	4.98

HRP1-3-EX_50-100 YEAR-2096 IDF.OUT						
0.19	.941E+02	0.4	0.82	4.21		
0.24	.118E+03	0.5	0.93	3.71		
0.28	.141E+03	0.7	1.03	3.36		
0.33	.165E+03	0.9	1.12	3.09		
0.38	.188E+03	1.1	1.20	2.89		
0.43	.212E+03	1.3	1.27	2.72		
0.47	.235E+03	1.5	1.33	2.59		
0.52	.259E+03	1.7	1.40	2.47		
0.57	.282E+03	2.0	1.45	2.38		
0.62	.306E+03	2.2	1.51	2.29		
0.66	.329E+03	2.5	1.55	2.22		
0.71	.353E+03	2.7	1.60	2.16		
0.76	.377E+03	3.0	1.64	2.10		
0.81	.400E+03	3.3	1.68	2.05		
0.85	.424E+03	3.5	1.72	2.00		
0.90	.447E+03	3.8	1.76	1.96		
<---- hydrograph ----> <-pipe / channel-->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (1020)	24.22	2.75	12.42	87.15	0.72	1.60
OUTFLOW: ID= 1 (0014)	24.22	2.76	12.42	87.15	0.72	1.61

CALIB			
STANDHYD (0120)			
ID= 1 DT= 3.0 min			
	Area (ha)=	13.35	
	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	6.01	7.34
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	298.33	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	18.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	18.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	18.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	18.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	18.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	18.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	18.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	18.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64

HRP1-3-EX_50-100 YEAR-2096 IDF.OUT							
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)=	151.03	101.33					
over (min)	6.00	12.00					
Storage Coeff. (min)=	3.39 (ii)	9.88 (ii)					
Unit Hyd. Tpeak (min)=	6.00	12.00					
Unit Hyd. peak (cms)=	0.26	0.11					

PEAK FLOW (cms)=	2.48	1.50				3.887 (iii)	
TIME TO PEAK (hrs)=	12.00	12.05				12.00	
RUNOFF VOLUME (mm)=	135.36	78.20				103.90	
TOTAL RAINFALL (mm)=	136.80	136.80				136.80	

HRP1-3-EX_50-100 YEAR-2096 IDF.OUT
RUNOFF COEFFICIENT = 0.99 0.57 0.76

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0120):	13.35	3.887	12.00	103.90	
+ ID2= 2 (0014):	24.22	2.757	12.42	87.15	
=====					
ID = 3 (0006):	37.57	5.253	12.00	93.10	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0100)			
ID= 1 DT= 3.0 min	Area (ha)=	10.34	
	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.65	5.69
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	262.55	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46		
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46		
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46		
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46		
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46		
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46		
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46		
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46		
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46		
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46		
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46		
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46		
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46		
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46		
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46		
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46		
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64		
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64		
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64		

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2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.01	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 101.33
over (min) 6.00 12.00
Storage Coeff. (min)= 3.14 (ii) 9.62 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.11

PEAK FLOW (cms)= 1.93 1.17 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.05 3.028 (iii)
RUNOFF VOLUME (mm)= 135.30 78.20 103.90
TOTAL RAINFALL (mm)= 136.80 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.57 0.76

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0101)	Area (ha)= 21.81		
ID= 1 DT= 4.0 min	Total Imp(%)= 45.00	Dir. Conn.(%)= 45.00	

	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)= 9.81	12.00	
Dep. Storage	(mm)= 1.50	1.50	
Average Slope	(%)= 2.00	2.00	
Length	(m)= 381.31	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.067	1.37	6.067	2.74	12.067	19.72	18.07	2.46		
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46		
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46		
0.533	1.37	6.533	2.74	12.533	14.91	18.53	2.46		
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46		
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46		
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46		
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46		
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46		
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46		
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46		
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46		
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.533	1.37	7.533	2.74	13.533	6.56	19.53	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.800	2.19	7.800	2.74	13.800	11.22	19.80	2.46		
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46		
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46		
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46		
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64		
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64		
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64		
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64		
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64		
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64		
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64		
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64		
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64		
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64		
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64		
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64		
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64		
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64		
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64		
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64		
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64		
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64		
3.533	1.78	9.533	4.65	15.533	4.10	21.53	1.64		
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64		
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64		
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64		
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64		
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64		
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64		
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64		
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64		
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64		

4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.533	2.19	10.533	7.39	16.533	2.46	22.53	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.533	2.19	11.533	35.02	17.533	2.46	23.53	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.800	2.19	11.800	127.49	17.800	2.46	23.80	1.64
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)=	151.03	101.34
over (min)	5.00	12.00
Storage Coeff. (min)=	3.93 (ii)	10.41 (ii)
Unit Hyd. Tpeak (min)=	4.00	12.00
Unit Hyd. peak (cms)=	0.27	0.10

PEAK FLOW (cms)=	4.05	2.42	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.07	6.343 (iii)
RUNOFF VOLUME (mm)=	135.30	78.20	12.00
TOTAL RAINFALL (mm)=	136.00	136.00	103.90
RUNOFF COEFFICIENT =	0.99	0.57	136.00
			0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0000)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0100):	10.34	3.028	12.00	103.90
+ ID2= 2 (0101):	21.81	6.343	12.00	103.90

ID = 3 (0009):	32.15	9.370	12.00	104.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\7729261-2756-4a42-b2c2-2018fc664008\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\7729261-2756-4a42-b2c2-2018fc664008\scenar

DATE: 03/24/2023 TIME: 10:00:12

USER:

COMMENTS: _____

** SIMULATION : Run 11

MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\c4b58665-7486-41e0-adcf-e8c51ec9ad18\5fdf4178
| Ptotal=124.08 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.25	6.25	2.50	12.25	17.97	18.25	2.25	
0.50	1.25	6.50	2.50	12.50	17.97	18.50	2.25	
0.75	1.25	6.75	2.50	12.75	9.24	18.75	2.25	
1.00	1.25	7.00	2.50	13.00	9.24	19.00	2.25	
1.25	1.25	7.25	2.50	13.25	1.75	19.25	2.25	
1.50	1.25	7.50	2.50	13.50	1.75	19.50	2.25	
1.75	1.25	7.75	2.50	13.75	10.23	19.75	2.25	
2.00	2.25	8.00	2.50	14.00	10.23	20.00	2.25	
2.25	1.62	8.25	3.37	14.25	3.74	20.25	1.50	
2.50	1.62	8.50	3.37	14.50	3.74	20.50	1.50	
2.75	1.62	8.75	3.37	14.75	3.74	20.75	1.50	
3.00	1.62	9.00	3.37	15.00	3.74	21.00	1.50	
3.25	1.62	9.25	3.00	15.25	3.74	21.25	1.50	
3.50	1.62	9.50	3.00	15.50	3.74	21.50	1.50	
3.75	1.62	9.75	4.49	15.75	3.74	21.75	1.50	
4.00	1.62	10.00	4.49	16.00	3.74	22.00	1.50	
4.25	2.00	10.25	5.74	16.25	2.25	22.25	1.50	
4.50	2.00	10.50	5.74	16.50	2.25	22.50	1.50	
4.75	2.00	10.75	7.74	16.75	2.25	22.75	1.50	
5.00	2.00	11.00	7.74	17.00	2.25	23.00	1.50	
5.25	2.00	11.25	11.98	17.25	2.25	23.25	1.50	
5.50	2.00	11.50	11.98	17.50	2.25	23.50	1.50	
5.75	2.00	11.75	51.92	17.75	2.25	23.75	1.50	
6.00	2.00	12.00	137.78	18.00	2.25	24.00	1.50	

CALIB
NASHYD (1030) | Area (ha)= 30.38 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25	
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25	
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25	
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25	
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25	
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25	
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25	
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25	
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25	
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25	
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25	
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25	
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25	
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25	
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25	
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25	
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25	
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25	
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25	
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25	
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25	
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25	
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25	
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25	
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50	
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50	
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50	
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50	
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50	
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50	
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50	
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50	
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50	
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50	
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50	
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50	
3.083	1.62	9.083	3.00	15.083	3.74	21.08	1.50	
3.167	1.62	9.167	3.00	15.167	3.74	21.17	1.50	
3.250	1.62	9.250	3.00	15.250	3.74	21.25	1.50	
3.333	1.62	9.333	3.00	15.333	3.74	21.33	1.50	
3.417	1.62	9.417	3.00	15.417	3.74	21.42	1.50	
3.500	1.62	9.500	3.00	15.500	3.74	21.50	1.50	
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50	
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50	
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50	
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50	
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50	
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50	
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50	
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50	
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50	
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50	
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50	
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50	
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50	
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50	
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50	
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50	
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50	
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50	
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50	
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50	
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50	
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50	
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50	
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50	
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50	
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50	
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50	
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50	
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50	
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50	

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 2.980 (1)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 73.344
TOTAL RAINFALL (mm)= 124.080
RUNOFF COEFFICIENT = 0.588

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT
NASHYD (0130) | Area (ha)= 2.25 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.12

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50

Unit Hyd Qpeak (cms)= 0.704

PEAK FLOW (cms)= 0.531 (1)
TIME TO PEAK (hrs)= 12.000

RUNOFF VOLUME (mm)= 72.427
TOTAL RAINFALL (mm)= 124.800
RUNOFF COEFFICIENT = 0.580

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1	2	3	AREA (ha)	QPEAK (cms)
ID= 1 (0030):			30.38	2.990
+ ID= 2 (0130):			2.25	0.531
ID = 3 (0003):			32.63	3.092
			12.33	73.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0021)		Routing time step (min)'= 4.00				
IN= 2--> OUT= 1						
<----- DATA FOR SECTION (1.1) ----->						
Distance	Elevation	Manning				
0.00	101.00	0.0000				
1.00	100.67	0.0000				
2.00	100.33	0.0000 / 0.0350	Main Channel			
3.00	100.00	0.0350	Main Channel			
4.00	100.00	0.0350	Main Channel			
5.00	100.33	0.0350 / 0.0000	Main Channel			
6.00	100.67	0.0000				
7.00	101.00	0.0000				
<----- TRAVEL TIME TABLE ----->						
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)	
0.05	100.05	.185E+02	0.0	0.34	16.76	
0.09	100.09	.417E+02	0.1	0.51	11.21	
0.14	100.14	.695E+02	0.1	0.64	8.95	
0.19	100.19	.102E+03	0.2	0.75	7.64	
0.24	100.24	.139E+03	0.3	0.85	6.77	
0.28	100.28	.181E+03	0.5	0.94	6.13	
0.33	100.33	.227E+03	0.7	1.02	5.64	
0.39	100.39	.288E+03	1.0	1.17	4.90	
0.44	100.44	.355E+03	1.3	1.30	4.42	
0.50	100.50	.428E+03	1.7	1.40	4.09	
0.55	100.55	.508E+03	2.2	1.49	3.85	
0.61	100.61	.594E+03	2.7	1.57	3.66	
0.66	100.66	.686E+03	3.3	1.63	3.51	
0.72	100.72	.785E+03	3.9	1.69	3.38	
0.78	100.78	.890E+03	4.5	1.75	3.28	
0.83	100.83	.100E+04	5.2	1.80	3.19	
0.89	100.89	.112E+04	6.0	1.84	3.12	
0.94	100.94	.124E+04	6.8	1.88	3.05	
1.00	101.00	.138E+04	7.7	1.92	2.99	
<---- hydrograph ---->						
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-->	MAX DEPTH (m)
INFLOW : ID= 2 (0003)	32.63	3.09	12.33	73.28		0.65
OUTFLOW : ID= 1 (0021)	32.63	3.08	12.42	73.28		0.64

CALIB
NASHYD (0131) | Area (ha)= 14.65 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.40

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.833	2.25	7.833	2.50	13.833	19.23	19.83	2.25
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50

Unit Hyd Qpeak (cms)= 1.413

PEAK FLOW (cms)= 1.928 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 81.741
TOTAL RAINFALL (mm)= 124.800
RUNOFF COEFFICIENT = 0.655

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	
ID1= 1 (0131):	14.65	1.928	12.25	81.74
+ ID2= 2 (0021):	32.63	3.080	12.42	73.28
ID = 3 (0005):	47.28	4.926	12.33	75.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

CALIB	Area (ha)=	8.25
STANDHYD (0132)	Total Imp(%)=	31.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	31.00

IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.56
Dep. Storage (mm)=	1.50
Average Slope (%)=	2.00
Length (m)=	234.52
Mannings n	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT											
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50				
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50				
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50				
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50				
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50				
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50				
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50				
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50				
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50				
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50				
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50				
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50				
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50				
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50				
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50				
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50				
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50				
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50				
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50				
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50				
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50				
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50				
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50				
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50				
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50				
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50				
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50				
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50				
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50				
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50				
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50				
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50				
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50				
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50				
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50				
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50				
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50				
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50				
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50				
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50				
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50				
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50				
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50				
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50				
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50				
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50				
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50				
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50				
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50				
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50				
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50				

Max.Eff.Inten.(mm/hr)= 137.78 88.79
over (min) 6.00 12.00
Storage Coeff. (min)= 3.04 (ii) 11.50 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.10

TOTALS

PEAK FLOW (cms)= 0.97 0.96 1.855 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 123.30 68.46 85.46
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.68

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1	2	3		
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0132):	8.25	1.855	12.00	85.46
+ ID2= 2 (0005):	47.28	4.926	12.33	75.90
=====				
ID = 3 (0007):	55.53	5.618	12.25	77.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2----> OUT= 1 | Routing time step (min)'= 2.00

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

<----- DATA FOR SECTION (1.1) ----->						
Distance	Elevation	Manning				
0.00	101.00	0.0800				
1.00	100.67	0.0800				
2.00	100.33	0.0800 /0.0350	Main Channel			
3.00	100.00	0.0350	Main Channel			
4.00	100.00	0.0350	Main Channel			
5.00	100.33	0.0350 /0.0800	Main Channel			
6.00	100.67	0.0800				
7.00	101.00	0.0800				
<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.05	100.05	.609E+01	0.0	0.34	5.51	
0.09	100.09	.137E+02	0.1	0.51	3.68	
0.14	100.14	.228E+02	0.1	0.64	2.94	
0.19	100.19	.335E+02	0.2	0.75	2.51	
0.24	100.24	.457E+02	0.3	0.85	2.22	
0.28	100.28	.594E+02	0.5	0.94	2.01	
0.33	100.33	.740E+02	0.7	1.02	1.85	
0.39	100.39	.945E+02	1.0	1.17	1.61	
0.44	100.44	.117E+03	1.3	1.30	1.45	
0.50	100.50	.141E+03	1.7	1.40	1.34	
0.55	100.55	.167E+03	2.2	1.49	1.26	
0.61	100.61	.195E+03	2.7	1.57	1.20	
0.66	100.66	.225E+03	3.3	1.63	1.15	
0.72	100.72	.258E+03	3.9	1.69	1.11	
0.78	100.78	.292E+03	4.5	1.75	1.08	
0.83	100.83	.329E+03	5.2	1.80	1.05	
0.89	100.89	.368E+03	6.0	1.84	1.02	
0.94	100.94	.409E+03	6.8	1.88	1.00	
1.00	101.00	.452E+03	7.7	1.92	0.98	
<---- hydrograph ---->						
<-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(m)	(m)	(m/s)
INFLOW : ID= 2 (0007)	55.53	5.62	12.25	77.32	0.86	1.82
OUTFLOW: ID= 1 (0022)	55.53	5.61	12.25	77.32	0.86	1.82

CALIB
STANDHYD (0133)
ID= 1 DT= 3.0 min
Area (ha)= 6.79
Total Imp(%)= 47.00 Dir. Conn.(%)= 47.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.19	3.60
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	212.76	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25				
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25				
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25				
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25				
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25				
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25				
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25				
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25				
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25				
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25				
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25				
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25				
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25				
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25				
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25				
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25				
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25				
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25				
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25				
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25				
1.050	1.25	7.050	2.50	13.050	9.23	19.05	2.25				
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25				
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25				
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25				
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25				

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 70.45
over (min) 6.00 12.00
Storage Coeff. (min)= 2.87 (ii) 9.39 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.28 0.11

TOTALS
PEAK FLOW (cms)= 1.21 0.51 1.688 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 123.30 54.49 86.83
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.44 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0000) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0133): 6.79 1.688 12.00 86.83
+ ID2= 2 (0022): 55.53 5.614 12.25 77.32
===== 62.32 6.813 12.05 78.36
ID = 3 (0009): 62.32 6.813 12.05 78.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0010) |
| IN= 2----> OUT= 1 |
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 3.1610 1.2220
0.0000 0.0000 | 3.9640 1.4400
0.0040 0.1320 | 5.1940 1.6250
0.0280 0.2670 | 6.2920 1.8150
0.0390 0.4050 | 6.6170 2.0100
0.3670 0.7010 | 8.3440 2.2100
1.0220 0.8510 | 9.3610 2.4150
1.7620 1.0040 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0009) 62.320 6.813 12.05 78.36
OUTFLOW: ID= 1 (0010) 62.320 4.389 12.70 75.19

PEAK FLOW REDUCTION [Qout/Qin](%)= 64.43
TIME SHIFT OF PEAK FLOW (min)= 39.00
MAXIMUM STORAGE USED (ha.m.)= 1.5042

***** WARNING : SELECTED ROUTING TIME STEP DENIED.

| CALIB |
| NASHYD (0134) |
ID= 1 DT= 5.0 min
Area (ha)= 15.49 Curve Number (CN)= 77.0
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr
0.003 1.25 | 6.063 2.50 | 12.063 17.90 | 18.00 2.25
0.167 1.25 | 6.167 2.50 | 12.167 17.97 | 18.17 2.25
0.250 1.25 | 6.250 2.50 | 12.250 17.97 | 18.25 2.25
0.333 1.25 | 6.333 2.50 | 12.333 17.97 | 18.33 2.25
0.417 1.25 | 6.417 2.50 | 12.417 17.97 | 18.42 2.25
0.500 1.25 | 6.500 2.50 | 12.500 17.97 | 18.50 2.25
0.583 1.25 | 6.583 2.50 | 12.583 9.24 | 18.58 2.25
0.667 1.25 | 6.667 2.50 | 12.667 9.24 | 18.67 2.25

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT												
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25					
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25					
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25					
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25					
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25					
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25					
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25					
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25					
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25					
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25					
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25					
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25					
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25					
1.833	1.25	7.833	2.50	13.833	10.23	19.83	2.25					
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25					
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25					
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50					
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50					
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50					
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50					
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50					
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50					
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50					
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50					
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50					
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50					
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50					
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50					
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50					
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50					
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50					
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50					
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50					
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50					
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50					
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50					
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50					
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50					
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50					
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50					
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50					
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50					
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50					
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50					
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50					
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50					
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50					
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50					
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50					
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50					
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50					
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50					
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50					
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50					
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50					
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50					
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50					
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50					
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50					
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50					
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50					
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50					
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50					
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50					

Unit Hyd Qpeak (cms)= 1.676

PEAK FLOW (cms)= 1.954 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 73.333
TOTAL RAINFALL (mm)= 124.889
RUNOFF COEFFICIENT = 0.588

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)					
1 + 2 = 3					
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (0018):	62.32	4.389	12.70	75.19	
+ ID2= 2 (0134):	15.49	1.954	12.17	73.33	
=====					
ID = 3 (0011):	77.81	5.590	12.55	74.82	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT												

RESERVOIR(0015)			OVERFLOW IS OFF									
IN= 2---> OUT= 1												
DT= 5.0 min												

OUTFLOW			STORAGE			OUTFLOW			STORAGE			
(cms)			(ha.m.)			(cms)			(ha.m.)			
0.0000			0.0000			9.4600			0.3520			
0.4100			0.1040			0.0000			0.0000			

			AREA		QPEAK		TPEAK		R.V.			
			(ha)		(cms)		(hrs)		(mm)			
INFLOW : ID= 2 (0011)			77.810		5.590		12.55		74.82			
OUTFLOW: ID= 1 (0015)			77.810		5.558		12.60		74.77			

			PEAK		FLOW		REDUCTION		[Qout/ Qin](%)= 99.43			
			TIME SHIFT OF PEAK FLOW						(min)= 3.00			
			MAXIMUM STORAGE		USED				(ha.m.)= 0.2450			

**** WARNING : SELECTED ROUTING TIME STEP DENIED.												

CALIB												
STANDHYD (0135)			Area (ha)=		6.36							
ID= 1 DT= 3.0 min			Total Imp(%)=		36.00		Dir. Conn.(%)= 36.00					

Surface Area			(ha)=		2.29		4.07					
Dep. Storage			(mm)=		1.50		1.50					
Average Slope			(%)=		2.00		2.00					
Length			(m)=		205.91		40.00					
Mannings n			=		0.013		0.250					

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.												

---- TRANSFORMED HYETOGRAPH ----												
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.050	1.25	0.050	2.50	12.050	17.97	18.05	2.25	0.100	1.25	0.100	2.50	12.100
0.150	1.25	0.150	2.50	12.150	17.97	18.15	2.25	0.200	1.25	0.200	2.50	12.200
0.250	1.25	0.250	2.50	12.250	17.97	18.25	2.25	0.300	1.25	0.300	2.50	12.300
0.350	1.25	0.350	2.50	12.350	17.97	18.35	2.25	0.400	1.25	0.400	2.50	12.400
0.450	1.25	0.450	2.50	12.450	17.97	18.45	2.25	0.500	1.25	0.500	2.50	12.500
0.550	1.25	0.550	2.50	12.550	9.24	18.55	2.25	0.600	1.25	0.600	2.50	12.600
0.650	1.25	0.650	2.50	12.650	9.24	18.65	2.25	0.700	1.25	0.700	2.50	12.700
0.750	1.25	0.750	2.50	12.750	9.24	18.75	2.25	0.800	1.25	0.800	2.50	12.800
0.850	1.25	0.850	2.50	12.850	9.24	18.85	2.25	0.900	1.25	0.900	2.50	12.900
0.950	1.25	0.950	2.50	12.950	9.24	18.95	2.25	1.000	1.25	1.000	2.50	13.000
1.050	1.25	1.050	2.50	13.050	1.75	19.05	2.25	1.100	1.25	1.100	2.50	13.100
1.150	1.25	1.150	2.50	13.150	1.75	19.15	2.25	1.200	1.25	1.200	2.50	13.200
1.250	1.25	1.250	2.50	13.250	1.75	19.25	2.25	1.300	1.25	1.300	2.50	13.300
1.350	1.25	1.350	2.50	13.350	1.75	19.35	2.25	1.400	1.25	1.400	2.50	13.400
1.450	1.25	1.450	2.50	13.450	1.75	19.45	2.25	1.500	1.25	1.500	2.50	13.500
1.550	1.25	1.550	2.50	13.550	10.23	19.55	2.25	1.600	1.25	1.600	2.50	13.600
1.650	1.25	1.650	2.50	13.650	10.23	19.65	2.25	1.700	1.25	1.700	2.50	13.700
1.750	1.25	1.750	2.50	13.750	10.23	19.75	2.25	1.800	1.25	1.800	2.50	13.800
1.850	2.25	1.850	2.50	13.850	10.23	19.85	2.25	1.900	2.25	1.900	2.50	13.900
1.950	2.25	1.950	2.50	13.950	10.23	19.95	2.25	2.000	2.25	2.000	2.50	14.000
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50	2.100	1.62	8.100	3.37	14.100
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50	2.200	1.62	8.200	3.37	14.200
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50	2.300	1.62	8.300	3.37	14.300
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50	2.400	1.62	8.400	3.37	14.400
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50					

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT									
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50		
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50		
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50		
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50		
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50		
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50		
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50		
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50		
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50		
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50		
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50		
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50		
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50		
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50		
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50		
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50		
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50		
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50		
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50		
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50		
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50		
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50		
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50		
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50		
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50		
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50		
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50		
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50		
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50		
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50		
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50		
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50		
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50		
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50		
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50		
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50		
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50		
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50		
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50		
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50		
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50		
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50		
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50		
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50		
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50		
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50		
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50		
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50		
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50		
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50		
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50		
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50		
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50		
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50		
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50		
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50		
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50		
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50		
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50		
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50		
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50		
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50		
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50		
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50		
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50		
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50		
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50		
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50		
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50		
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50		
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50		

Max.Eff.Inten.(mm/hr)= 137.78 88.79
over (min) 6.00 12.00
Storage Coeff. (min)= 2.82 (ii) 10.63 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.28 0.10

TOTALS
PEAK FLOW (cms)= 0.87 0.71 1.528 (iii)
TIME TO PEAK (hrs)= 12.00 12.05
RUNOFF VOLUME (mm)= 123.30 68.46 88.20
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 72.0 Ia = Dep. Storage (Above)						HRP6.1-EX_50-100 YEAR-2096 IDF.OUT	
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.							
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

ADD HYD (0012)		AREA		QPEAK	TPEAK	R.V.	
1 + 2 = 3		(ha)		(cms)	(hrs)	(mm)	
ID1= 1 (0135):		6.36		1.528	12.00	88.20	
+ ID2= 2 (0015):		77.81		5.558	12.00	74.77	
		=====					
ID = 3 (0012):		84.17		5.832	12.55	75.78	
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.							

ROUTE CHN(0040)		Routing time step (min)'= 2.00					
IN= 2---> OUT= 1							
<----- DATA FOR SECTION (1.1) ----->							
	Distance	Elevation	Manning				
	0.00	101.00	0.0800				
	1.00	100.67	0.0800				
	2.00	100.33	0.0800 / 0.0350	Main Channel			
	3.00	100.00	0.0350	Main Channel			
	4.00	100.00	0.0350	Main Channel			
	5.00	100.33	0.0350 / 0.0800	Main Channel			
	6.00	100.67	0.0800				
	7.00	101.00	0.0800				
<----- TRAVEL TIME TABLE ----->							
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME		
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)		
0.05	100.05	.590E+02	0.0	0.34	53.36		
0.09	100.09	.133E+03	0.1	0.51	35.70		
0.14	100.14	.221E+03	0.1	0.64	28.48		
0.19	100.19	.324E+03	0.2	0.75	24.33		
0.24	100.24	.442E+03	0.3	0.85	21.55		
0.28	100.28	.575E+03	0.5	0.94	19.51		
0.33	100.33	.723E+03	0.7	1.02	17.94		
0.39	100.39	.916E+03	1.0	1.17	15.58		
0.44	100.44	.113E+04	1.3	1.30	14.08		
0.50	100.50	.136E+04	1.7	1.40	13.83		
0.55	100.55	.162E+04	2.2	1.49	12.25		
0.61	100.61	.189E+04	2.7	1.57	11.65		
0.66	100.66	.218E+04	3.3	1.63	11.17		
0.72	100.72	.250E+04	3.9	1.69	10.77		
0.78	100.78	.283E+04	4.5	1.75	10.45		
0.83	100.83	.319E+04	5.2	1.80	10.17		
0.89	100.89	.357E+04	6.0	1.84	9.92		
0.94	100.94	.396E+04	6.8	1.88	9.71		
1.00	101.00	.438E+04	7.7	1.92	9.52		
<--- hydrograph --->						<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0012)	84.17	5.83	12.55	75.78	0.88	1.83	
OUTFLOW: ID= 1 (0040)	84.17	5.68	12.70	75.72	0.86	1.82	

CALIB							
NASHDY (0121)		Area (ha)=	3.64	Curve Number (CN)=	77.0		
ID= 1 DT= 5.0 min		Ia (mm)=	5.00	# of Linear Res.(N)=	3.00		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.							

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0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.083	1.62	8.083	3.37	14.083	3.74	20.08	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50

Unit Hyd Qpeak (cms)= 1.241

PEAK FLOW (cms)= 0.885 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 72.085
TOTAL RAINFALL (mm)= 124.800
RUNOFF COEFFICIENT = 0.578

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0122)	Area (ha)=	16.13	
ID= 1 DT= 3.0 min	Total Imp(%)=	31.00	Dir. Conn.(%)= 31.00

Surface Area (ha)=	IMPERVIOUS	PERVIOUS (i)	
Dep. Storage (mm)=	5.00	11.13	
Average Slope (%)=	1.50	1.50	
Length (m)=	2.00	2.00	
Mannings n	327.92	40.00	
	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

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---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.25	6.050	2.50	12.050	17.97	18.050	2.25
0.100	1.25	6.100	2.50	12.100	17.97	18.100	2.25
0.150	1.25	6.150	2.50	12.150	17.97	18.150	2.25
0.200	1.25	6.200	2.50	12.200	17.97	18.200	2.25
0.250	1.25	6.250	2.50	12.250	17.97	18.250	2.25
0.300	1.25	6.300	2.50	12.300	17.97	18.300	2.25
0.350	1.25	6.350	2.50	12.350	17.97	18.350	2.25
0.400	1.25	6.400	2.50	12.400	17.97	18.400	2.25
0.450	1.25	6.450	2.50	12.450	17.97	18.450	2.25
0.500	1.25	6.500	2.50	12.500	17.97	18.500	2.25
0.550	1.25	6.550	2.50	12.550	9.24	18.550	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.600	2.25
0.650	1.25	6.650	2.50	12.650	9.24	18.650	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.700	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.750	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.800	2.25
0.850	1.25	6.850	2.50	12.850	9.24	18.850	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.900	2.25
0.950	1.25	6.950	2.50	12.950	9.24	18.950	2.25
1.000	1.25	7.000	2.50	13.000	9.23	19.000	2.25
1.050	1.25	7.050	2.50	13.050	1.75	19.050	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.100	2.25
1.150	1.25	7.150	2.50	13.150	1.75	19.150	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.200	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.250	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.300	2.25
1.350	1.25	7.350	2.50	13.350	1.75	19.350	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.400	2.25
1.450	1.25	7.450	2.50	13.450	1.75	19.450	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.500	2.25
1.550	1.25	7.550	2.50	13.550	10.23	19.550	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.600	2.25
1.650	1.25	7.650	2.50	13.650	10.23	19.650	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.700	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.750	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.800	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.850	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.900	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.950	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.000	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.050	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.100	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.150	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.200	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.250	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.300	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.350	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.400	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.450	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.500	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.550	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.600	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.650	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.700	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.750	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.800	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.850	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.900	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.950	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.000	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.050	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.100	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.150	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.200	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.250	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.300	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.350	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.400	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.450	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.500	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.550	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.600	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.650	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.700	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.750	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.800	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.850	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.900	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.950	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.000	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.050	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.100	1.50

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 88.79
over (min) 6.00 15.00
Storage Coeff. (min)= 3.72 (ii) 12.27 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09

TOTALS
PEAK FLOW (cms)= 1.88 1.78 3.385 (iii)
TIME TO PEAK (hrs)= 12.00 12.10
RUNOFF VOLUME (mm)= 123.30 68.46 85.46
TOTAL RAINFALL (mm)= 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.68

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):	3.64	0.885	12.00	72.08
+ ID2= 2 (0122):	16.13	3.385	12.00	85.46
ID = 3 (0019):	19.77	4.269	12.00	83.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0019):	19.77	4.269	12.00	83.00
+ ID2= 2 (0040):	84.17	5.677	12.70	75.72
ID = 3 (0020):	103.94	6.505	12.53	77.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\7bf4883-287a-480a-98ed-0b2a5c91b1c5\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\7bf4883-287a-480a-98ed-0b2a5c91b1c5\scenar

DATE: 03/24/2023 TIME: 10:08:13

USER:

COMMENTS: _____

** SIMULATION : Run 12 **

MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\c4b58665-7486-41e0-adcf-e8c51ec9ad18\c7ff0caf
| Ptotal=136.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.37	6.25	2.74	12.25	19.70	18.25	2.46
0.50	1.37	6.50	2.74	12.50	19.70	18.50	2.46
0.75	1.37	6.75	2.74	12.75	18.12	18.75	2.46
1.00	1.37	7.00	2.74	13.00	18.12	19.00	2.46
1.25	1.37	7.25	2.74	13.25	1.92	19.25	2.46
1.50	1.37	7.50	2.74	13.50	1.92	19.50	2.46
1.75	1.37	7.75	2.74	13.75	11.22	19.75	2.46
2.00	2.46	8.00	2.74	14.00	11.22	20.00	2.46
2.25	1.78	8.25	3.69	14.25	4.10	20.25	1.64
2.50	1.78	8.50	3.69	14.50	4.10	20.50	1.64
2.75	1.78	8.75	3.69	14.75	4.10	20.75	1.64
3.00	1.78	9.00	3.69	15.00	4.10	21.00	1.64
3.25	1.78	9.25	4.38	15.25	4.10	21.25	1.64
3.50	1.78	9.50	4.38	15.50	4.10	21.50	1.64
3.75	1.78	9.75	4.92	15.75	4.10	21.75	1.64
4.00	1.78	10.00	4.92	16.00	4.10	22.00	1.64
4.25	2.19	10.25	6.29	16.25	2.46	22.25	1.64
4.50	2.19	10.50	6.29	16.50	2.46	22.50	1.64
4.75	2.19	10.75	8.48	16.75	2.46	22.75	1.64
5.00	2.19	11.00	8.48	17.00	2.46	23.00	1.64
5.25	2.19	11.25	13.13	17.25	2.46	23.25	1.64
5.50	2.19	11.50	13.13	17.50	2.46	23.50	1.64
5.75	2.19	11.75	56.91	17.75	2.46	23.75	1.64
6.00	2.19	12.00	151.03	18.00	2.46	24.00	1.64

CALIB
NASHYD (1030) | Area (ha)= 30.38 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	18.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	18.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	18.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	18.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 3.406 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 83.644
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.611

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB (0130) Area (ha)= 2.25 Curve Number (CN)= 77.0
NASHYD (0130) Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min U.H. Tp(hrs)= 0.12

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT
NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	19.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	18.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	18.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	18.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.11	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 0.784

PEAK FLOW (cms)= 0.605 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 82.598
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.604

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0130):	30.38	3.406	12.33	83.64
+ ID2= 2 (0130):	2.25	0.605	12.00	82.60
=====				
ID = 3 (0003):	32.63	3.533	12.33	83.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0021)				
IN= 2--> OUT= 1				

Routing time step (min)'= 4.00				
<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0000 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0000	Main Channel	
6.00	100.67	0.0000		
7.00	101.00	0.0000		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.185E+02	0.0	0.34	16.76
0.09	100.09	.417E+02	0.1	0.51	11.21
0.14	100.14	.695E+02	0.1	0.64	8.95
0.19	100.19	.102E+03	0.2	0.75	7.64
0.24	100.24	.139E+03	0.3	0.85	6.77
0.28	100.28	.181E+03	0.5	0.94	6.13
0.33	100.33	.227E+03	0.7	1.02	5.64
0.39	100.39	.280E+03	1.0	1.17	4.90
0.44	100.44	.355E+03	1.3	1.30	4.42
0.50	100.50	.428E+03	1.7	1.40	4.09
0.55	100.55	.508E+03	2.2	1.49	3.85
0.61	100.61	.594E+03	2.7	1.57	3.66
0.66	100.66	.686E+03	3.3	1.63	3.51
0.72	100.72	.785E+03	3.9	1.69	3.38
0.78	100.78	.890E+03	4.5	1.75	3.28
0.83	100.83	.100E+04	5.2	1.80	3.19
0.89	100.89	.112E+04	6.0	1.84	3.12
0.94	100.94	.124E+04	6.8	1.88	3.05
1.00	101.00	.138E+04	7.7	1.92	2.99
<----- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m) (m/s)
INFLOW : ID= 2 (0003)	32.63	3.53	12.33	83.57	0.69 1.66
OUTFLOW: ID= 1 (0021)	32.63	3.52	12.42	83.57	0.69 1.66

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46		
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46		
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46		
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46		
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46		
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46		
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46		
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46		
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46		
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46		
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46		
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46		
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46		

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1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 1.413

PEAK FLOW (cms)= 2.184 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 92.607
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.677

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0131):	14.65	2.184	12.25	92.61
+ ID2= 2 (0021):	32.63	3.517	12.42	83.57
=====				
ID = 3 (0005):	47.28	5.609	12.33	86.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0132)				
ID= 1 DT= 3.0 min				

	Area	(ha)=	8.25	
	Total Imp(%)=	31.00	Dir. Conn.(%)=	31.00

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 Surface Area (ha)=
 Dep. Storage (mm)=
 Average Slope (%)=
 Length (m)=
 Mannings n =

IMPERVIOUS
 2.56
 1.50
 2.00
 234.52
 0.013

PERVIOUS (1)
 5.69
 1.50
 2.00
 40.00
 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)=	151.03	101.33
over (min)	6.00	12.00
Storage Coeff. (min)=	2.93 (ii)	11.18 (ii)
Unit Hyd. Tpeak (min)=	6.00	12.00
Unit Hyd. peak (cms)=	0.27	0.10
PEAK FLOW (cms)=	1.06	1.11
TIME TO PEAK (hrs)=	12.00	12.05
RUNOFF VOLUME (mm)=	135.30	78.20
TOTAL RAINFALL (mm)=	136.80	136.80
RUNOFF COEFFICIENT =	0.99	0.57

TOTALS
 2.007 (iii)

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
 (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 72.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007))				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0132):	8.25	2.097	12.00	95.90
+ ID2= 2 (0005):	47.28	5.609	12.33	86.37
=====				
ID = 3 (0007):	55.53	6.393	12.15	87.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)	
IN= 2---> OUT= 1	Routing time step (min)!= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	18.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	18.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	18.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	18.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	18.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	18.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	18.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	18.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT			
0.00	101.00	0.0000	
1.00	100.67	0.0000	
2.00	100.33	0.0000 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.05	100.05	.609E+01	0.0	0.34	5.51	
0.09	100.09	.137E+02	0.1	0.51	3.68	
0.14	100.14	.228E+02	0.1	0.64	2.94	
0.19	100.19	.335E+02	0.2	0.75	2.51	
0.24	100.24	.457E+02	0.3	0.85	2.22	
0.28	100.28	.594E+02	0.5	0.94	2.01	
0.33	100.33	.746E+02	0.7	1.02	1.85	
0.39	100.39	.945E+02	1.0	1.17	1.61	
0.44	100.44	.117E+03	1.3	1.30	1.45	
0.50	100.50	.141E+03	1.7	1.40	1.34	
0.55	100.55	.167E+03	2.2	1.49	1.26	
0.61	100.61	.195E+03	2.7	1.57	1.20	
0.66	100.66	.225E+03	3.3	1.63	1.15	
0.72	100.72	.258E+03	3.9	1.69	1.11	
0.78	100.78	.292E+03	4.5	1.75	1.08	
0.83	100.83	.329E+03	5.2	1.80	1.05	
0.89	100.89	.368E+03	6.0	1.84	1.02	
0.94	100.94	.409E+03	6.8	1.88	1.00	
1.00	101.00	.452E+03	7.7	1.92	0.98	
<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0007)	55.53	6.39	12.15	87.79	0.92	1.86
OUTFLOW: ID= 1 (0022)	55.53	6.39	12.25	87.79	0.92	1.86

CALIB			
STANDHYD (0133)			
ID= 1 DT= 3.0 min			

	Area (ha)=	6.79	
	Total Imp(%)=	47.00	Dir. Conn.(%)= 47.00

	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	3.19	3.60
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	212.76	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	1.37 6.050	2.74 12.050	19.70 18.05				2.46
0.100	1.37 6.100	2.74 12.100	19.70 18.10				2.46
0.150	1.37 6.150	2.74 12.150	19.70 18.15				2.46
0.200	1.37 6.200	2.74 12.200	19.70 18.20				2.46
0.250	1.37 6.250	2.74 12.250	19.70 18.25				2.46
0.300	1.37 6.300	2.74 12.300	19.70 18.30				2.46
0.350	1.37 6.350	2.74 12.350	19.70 18.35				2.46
0.400	1.37 6.400	2.74 12.400	19.70 18.40				2.46
0.450	1.37 6.450	2.74 12.450	19.70 18.45				2.46
0.500	1.37 6.500	2.74 12.500	19.69 18.50				2.46
0.550	1.37 6.550	2.74 12.550	10.12 18.55				2.46
0.600	1.37 6.600	2.74 12.600	10.12 18.60				2.46
0.650	1.37 6.650	2.74 12.650	10.12 18.65				2.46
0.700	1.37 6.700	2.74 12.700	10.12 18.70				2.46
0.750	1.37 6.750	2.74 12.750	10.12 18.75				2.46
0.800	1.37 6.800	2.74 12.800	10.12 18.80				2.46
0.850	1.37 6.850	2.74 12.850	10.12 18.85				2.46
0.900	1.37 6.900	2.74 12.900	10.12 18.90				2.46
0.950	1.37 6.950	2.74 12.950	10.12 18.95				2.46
1.000	1.37 7.000	2.74 13.000	10.12 19.00				2.46
1.050	1.37 7.050	2.74 13.050	1.92 19.05				2.46
1.100	1.37 7.100	2.74 13.100	1.92 19.10				2.46
1.150	1.37 7.150	2.74 13.150	1.92 19.15				2.46
1.200	1.37 7.200	2.74 13.200	1.92 19.20				2.46
1.250	1.37 7.250	2.74 13.250	1.92 19.25				2.46
1.300	1.37 7.300	2.74 13.300	1.92 19.30				2.46
1.350	1.37 7.350	2.74 13.350	1.92 19.35				2.46
1.400	1.37 7.400	2.74 13.400	1.92 19.40				2.46

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT							
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)=	151.03	81.39	
over (min)	6.00	12.00	
Storage Coeff. (min)=	2.77 (ii)	9.05 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.28	0.11	

PEAK FLOW (cms)=	1.33	0.60	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.05	12.00 (iii)
RUNOFF VOLUME (mm)=	135.30	62.91	96.93
TOTAL RAINFALL (mm)=	136.80	136.80	136.80
RUNOFF COEFFICIENT =	0.99	0.46	0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0133):	6.79	1.891	12.00	96.93
+ ID2= 2 (0022):	55.53	6.390	12.25	87.79
=====				
ID = 3 (0009):	62.32	7.744	12.05	88.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min				

OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	3.1610	1.2220
0.0000	0.0000	3.9640	1.4400
0.0040	0.1320	5.1940	1.6250
0.0280	0.2670	6.2920	1.8150
0.0390	0.4050	6.6170	2.0100
0.3670	0.7010	8.3440	2.2100
1.0220	0.8510	9.3610	2.4150
1.7620	1.0040	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0009)	62.320	7.744	12.05	88.78
OUTFLOW: ID= 1 (0010)	62.320	5.201	12.65	85.59

PEAK FLOW REDUCTION [Qout/Qin](%)=	67.16
TIME SHIFT OF PEAK FLOW (min)=	36.00
MAXIMUM STORAGE USED (ha.m.)=	1.6262

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB				
NASHYD (0134)	Area	(ha)=	15.49	Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
-----	U.H. Tp(hrs)=	0.35		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.11	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 1.676

PEAK FLOW (cms)=	2.234 (i)
TIME TO PEAK (hrs)=	12.167
RUNOFF VOLUME (mm)=	83.631
TOTAL RAINFALL (mm)=	136.800
RUNOFF COEFFICIENT =	0.611

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0010):	62.32	5.201	12.65	85.59
+ ID2= 2 (0134):	15.49	2.234	12.17	83.63
=====				
ID = 3 (0011):	77.81	6.662	12.50	85.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)	OVERFLOW IS OFF			

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

IN= 2--> OUT= 1 DT= 5.0 min -----	OUTFLOW		STORAGE		OUTFLOW		STORAGE		
	(cms)		(ha.m.)		(cms)		(ha.m.)		
	0.0000		0.0000		9.4690		0.3520		
	0.4100		0.1040		0.0000		0.0000		
		AREA		QPEAK		TPEAK		R.V.	
		(ha)		(cms)		(hrs)		(mm)	
INFLOW : ID= 2 (0011)		77.810		6.662		12.50		85.20	
OUTFLOW: ID= 1 (0015)		77.810		6.610		12.57		85.15	

PEAK FLOW REDUCTION [Qout/Qin](%)= 99.21
TIME SHIFT OF PEAK FLOW (min)= 4.50
MAXIMUM STORAGE USED (ha.m.)= 0.2738

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB			
STANDHYD (0135)	Area (ha)=	6.36	
ID= 1 DT= 3.0 min	Total Imp(%)=	36.00	Dir. Conn.(%)= 36.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)= 2.29	4.07
Dep. Storage	(mm)= 1.50	1.50
Average Slope	(%)= 2.00	2.00
Length	(m)= 205.91	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs		
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46		
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46		
0.550	1.37	6.550	2.74	12.550	18.12	18.55	2.46		
0.600	1.37	6.600	2.74	12.600	18.12	18.60	2.46		
0.650	1.37	6.650	2.74	12.650	18.12	18.65	2.46		
0.700	1.37	6.700	2.74	12.700	18.12	18.70	2.46		
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46		
0.800	1.37	6.800	2.74	12.800	18.12	18.80	2.46		
0.850	1.37	6.850	2.74	12.850	18.12	18.85	2.46		
0.900	1.37	6.900	2.74	12.900	18.12	18.90	2.46		
0.950	1.37	6.950	2.74	12.950	18.12	18.95	2.46		
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46		
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46		
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46		
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46		
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46		
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64		
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64		
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64		
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64		
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64		
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64		

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2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	6.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 101.33
over (min) 6.00 12.00
Storage Coeff. (min)= 2.71 (ii) 10.25 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.28 0.10

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0012)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0135):	6.36	1.721	12.00	98.76
+ ID2= 2 (0015):	77.81	6.610	12.57	85.15
=====				
ID = 3 (0012):	84.17	6.927	12.55	86.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)	
IN= 2--> OUT= 1	
Routing time step (min)'= 2.00	

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0000 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0000	Main Channel	
6.00	100.67	0.0000		
7.00	101.00	0.0000		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.590E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.136E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0012)	84.17	6.93	12.55	86.18	0.95
OUTFLOW: ID= 1 (0040)	84.17	6.72	12.68	86.11	0.93

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	18.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	18.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	18.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	18.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT

1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 1.241

PEAK FLOW	(cms)=	1.007 (l)
TIME TO PEAK	(hrs)=	12.000
RUNOFF VOLUME	(mm)=	82.208
TOTAL RAINFALL	(mm)=	136.800
RUNOFF COEFFICIENT	=	0.601

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		
STANDHYD (0122)		
ID= 1 DT= 3.0 min		
Area	(ha)=	16.13
Total Imp(%)=	31.00	Dir. Conn.(%)=

		IMPERVIOUS	PERVIOUS (l)
Surface Area	(ha)=	5.00	11.13
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	327.92	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46		
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46		
0.550	1.37	6.550	2.74	12.550	19.12	18.55	2.46		
0.600	1.37	6.600	2.74	12.600	19.12	18.60	2.46		
0.650	1.37	6.650	2.74	12.650	19.12	18.65	2.46		
0.700	1.37	6.700	2.74	12.700	19.12	18.70	2.46		
0.750	1.37	6.750	2.74	12.750	19.12	18.75	2.46		
0.800	1.37	6.800	2.74	12.800	19.12	18.80	2.46		
0.850	1.37	6.850	2.74	12.850	19.12	18.85	2.46		
0.900	1.37	6.900	2.74	12.900	19.12	18.90	2.46		
0.950	1.37	6.950	2.74	12.950	19.12	18.95	2.46		
1.000	1.37	7.000	2.74	13.000	19.12	19.00	2.46		
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46		
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46		
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46		
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46		
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64		
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64		
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64		
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64		
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64		
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64		
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64		
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64		
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64		
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64		
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64		
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64		
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64		
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64		
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64		
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64		
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64		
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64		
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64		
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64		
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64		
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64		
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64		
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64		
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64		
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64		
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64		
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64		
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64		
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64		
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64		
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64		
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64		
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64		
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64		
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64		
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64		
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64		
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64		

HRP6.1-EX_50-100 YEAR-2096 IDF.OUT									
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64		
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64		
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64		
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64		
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64		
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64		
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64		
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64		
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64		
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64		
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64		
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64		
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64		
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64		
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64		
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64		
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64		
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64		
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64		
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64		
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64		
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64		
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64		
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64		
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64		
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64		
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64		
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64		
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64		
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64		
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64		
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64		
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64		
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64		
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64		

Max.Eff.Inten.(mm/hr)=	151.03	101.33	
	over (min)	6.00	12.00
Storage Coeff. (min)=	3.59 (ii)	11.83 (iii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.25	0.09	
			TOTALS
PEAK FLOW (cms)=	2.06	2.13	4.030 (iii)
TIME TO PEAK (hrs)=	12.00	12.05	12.00
RUNOFF VOLUME (mm)=	135.30	78.20	95.90
TOTAL RAINFALL (mm)=	136.80	136.80	136.80
RUNOFF COEFFICIENT =	0.99	0.57	0.70

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)				
1	2	3	AREA	QPEAK
			(ha)	(cms)
ID1= 1 (0121):			3.64	1.007
+ ID2= 2 (0122):			16.13	4.030
ID = 3 (0019):			19.77	5.036
			12.00	93.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y M M O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\46186d87-fe32-4918-942c-7cee40cfe739\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\46186d87-fe32-4918-942c-7cee40cfe739\scenar

DATE: 03/24/2023 TIME: 10:41:45

USER:

COMMENTS: _____

** SIMULATION : Run 11

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\0d6dbfc2-ad02-44d7-85cb-eb202be3cb3\5fdf4178
Ptotal=124.08 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.25	6.25	2.50	12.25	17.97	18.25	2.25	
0.50	1.25	6.50	2.50	12.50	17.97	18.50	2.25	
0.75	1.25	6.75	2.50	12.75	9.24	18.75	2.25	
1.00	1.25	7.00	2.50	13.00	9.24	19.00	2.25	
1.25	1.25	7.25	2.50	13.25	1.75	19.25	2.25	
1.50	1.25	7.50	2.50	13.50	1.75	19.50	2.25	
1.75	1.25	7.75	2.50	13.75	10.23	19.75	2.25	
2.00	2.25	8.00	2.50	14.00	10.23	20.00	2.25	
2.25	1.62	8.25	3.37	14.25	3.74	20.25	1.50	
2.50	1.62	8.50	3.37	14.50	3.74	20.50	1.50	
2.75	1.62	8.75	3.37	14.75	3.74	20.75	1.50	
3.00	1.62	9.00	3.37	15.00	3.74	21.00	1.50	
3.25	1.62	9.25	3.00	15.25	3.74	21.25	1.50	
3.50	1.62	9.50	3.00	15.50	3.74	21.50	1.50	
3.75	1.62	9.75	4.49	15.75	3.74	21.75	1.50	
4.00	1.62	10.00	4.49	16.00	3.74	22.00	1.50	
4.25	2.00	10.25	5.74	16.25	2.25	22.25	1.50	
4.50	2.00	10.50	5.74	16.50	2.25	22.50	1.50	
4.75	2.00	10.75	7.74	16.75	2.25	22.75	1.50	
5.00	2.00	11.00	7.74	17.00	2.25	23.00	1.50	
5.25	2.00	11.25	11.98	17.25	2.25	23.25	1.50	
5.50	2.00	11.50	11.98	17.50	2.25	23.50	1.50	
5.75	2.00	11.75	51.92	17.75	2.25	23.75	1.50	
6.00	2.00	12.00	137.78	18.00	2.25	24.00	1.50	

CALIB
NASHYD (1040) Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25	
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25	
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25	
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25	
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25	
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25	
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25	
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25	
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25	
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25	
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25	
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25	
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25	
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25	
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25	
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25	
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25	
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25	
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25	
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25	
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25	
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25	
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25	
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25	
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50	
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50	
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50	
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50	
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50	
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50	
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50	
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50	
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50	
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50	
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50	
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50	
3.083	1.62	9.083	3.00	15.083	3.74	21.08	1.50	
3.167	1.62	9.167	3.00	15.167	3.74	21.17	1.50	
3.250	1.62	9.250	3.00	15.250	3.74	21.25	1.50	
3.333	1.62	9.333	3.00	15.333	3.74	21.33	1.50	
3.417	1.62	9.417	3.00	15.417	3.74	21.42	1.50	
3.500	1.62	9.500	3.00	15.500	3.74	21.50	1.50	
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50	
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50	
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50	
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50	
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50	
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50	
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50	
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50	
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50	
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50	
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50	
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50	
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50	
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50	
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50	
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50	
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50	
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50	
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50	
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50	
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50	
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50	
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50	
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50	
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50	
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50	
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50	
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50	
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50	
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50	

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 1.247 (1)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 78.178
TOTAL RAINFALL (mm)= 124.080
RUNOFF COEFFICIENT = 0.562

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0037)|

HRP7-EX_50-100 YEAR-2096 IDF.OUT
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 /0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 /0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.259E+02	0.0	0.22	36.60
0.09	100.09	.582E+02	0.0	0.33	24.49
0.14	100.14	.970E+02	0.1	0.41	19.54
0.19	100.19	.142E+03	0.1	0.48	16.69
0.24	100.24	.194E+03	0.2	0.54	14.78
0.28	100.28	.252E+03	0.3	0.60	13.39
0.33	100.33	.317E+03	0.4	0.65	12.30
0.39	100.39	.402E+03	0.6	0.75	10.68
0.44	100.44	.495E+03	0.9	0.83	9.64
0.50	100.50	.598E+03	1.1	0.90	8.90
0.55	100.55	.709E+03	1.4	0.96	8.35
0.61	100.61	.829E+03	1.7	1.01	7.91
0.66	100.66	.958E+03	2.1	1.06	7.50
0.72	100.72	.110E+04	2.5	1.10	7.26
0.78	100.78	.124E+04	3.0	1.14	7.02
0.83	100.83	.140E+04	3.4	1.18	6.80
0.89	100.89	.156E+04	3.9	1.21	6.61
0.94	100.94	.174E+04	4.5	1.24	6.45
1.00	101.00	.192E+04	5.1	1.27	6.30

<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(m)	(m/s)
INFLOW : ID= 2 (1040)	10.35	1.25	12.17	70.18	0.52
OUTFLOW: ID= 1 (0037)	10.35	1.15	12.33	70.16	0.50

CALIB			
NASHYD (0140)	Area (ha)=	17.07	Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25		
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25		
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25		
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25		
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25		
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25		
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25		
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25		
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25		
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25		
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50		
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50		
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50		
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50		
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50		
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50		

HRP7-EX_50-100 YEAR-2096 IDF.OUT									
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50		
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50		
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50		
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50		
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50		
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50		
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50		
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50		
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50		
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50		
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50		
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50		
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50		
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50		
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50		
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50		
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50		
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50		
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50		
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50		
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50		
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50		
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50		
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50		
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50		
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50		
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50		
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50		
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50		
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50		
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50		
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50		
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50		
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50		
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50		
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50		
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50		
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50		
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50		
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50		
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50		
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50		

Unit Hyd Qpeak (cms)= 1.301

PEAK FLOW (cms)=	1.685 (1)
TIME TO PEAK (hrs)=	12.333
RUNOFF VOLUME (mm)=	73.344
TOTAL RAINFALL (mm)=	124.800
RUNOFF COEFFICIENT	= 0.588

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0140):	17.07	1.685	12.33	73.34
+ ID2= 2 (0037):	10.35	1.146	12.33	70.16
=====				
ID = 3 (0029):	27.42	2.831	12.33	72.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (1041)	Area (ha)=	11.30	Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.26			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25		
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		

HRP7-EX_50-100 YEAR-2096 IDF.OUT

0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.833	1.25	7.833	2.50	13.833	10.23	19.83	2.25
1.917	1.25	7.917	2.50	13.917	10.23	19.92	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.750 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 73.299
TOTAL RAINFALL (mm)= 124.800
RUNOFF COEFFICIENT = 0.587

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)					
1 + 2 = 3					

ID1= 1 (1041):	11.30	1.750	12.08	73.30	
+ ID2= 2 (0029):	27.42	2.831	12.33	72.14	
=====					
ID = 3 (0018):	38.72	4.260	12.25	72.48	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.					

HRP7-EX_50-100 YEAR-2096 IDF.OUT

ROUTE CHN(0030)								
IN= 2--> OUT= 1		Routing time step (min)'= 2.00						

<----- DATA FOR SECTION (1.1) ----->								
Distance	Elevation	Manning						
0.00	101.00	0.0500						
1.00	100.67	0.0500						
2.00	100.33	0.0500 /0.0300	Main Channel					
3.00	100.00	0.0300	Main Channel					
4.00	100.00	0.0300	Main Channel					
5.00	100.33	0.0300 /0.0500	Main Channel					
6.00	100.67	0.0500						
7.00	101.00	0.0500						

<----- TRAVEL TIME TABLE ----->								
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME			
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)			
0.05	100.05	.319E+02	0.0	0.38	26.06			
0.09	100.09	.718E+02	0.1	0.57	17.44			
0.14	100.14	.128E+03	0.1	0.71	13.91			
0.19	100.19	.175E+03	0.2	0.83	11.89			
0.24	100.24	.239E+03	0.4	0.94	10.53			
0.28	100.28	.311E+03	0.5	1.04	9.53			
0.33	100.33	.391E+03	0.7	1.13	8.76			
0.39	100.39	.495E+03	1.1	1.30	7.61			
0.44	100.44	.611E+03	1.5	1.44	6.86			
0.50	100.50	.737E+03	1.9	1.56	6.34			
0.55	100.55	.874E+03	2.5	1.66	5.94			
0.61	100.61	.102E+04	3.0	1.75	5.63			
0.66	100.66	.118E+04	3.7	1.83	5.38			
0.72	100.72	.135E+04	4.4	1.91	5.17			
0.78	100.78	.153E+04	5.1	1.97	5.00			
0.83	100.83	.172E+04	5.9	2.04	4.84			
0.89	100.89	.193E+04	6.8	2.10	4.71			
0.94	100.94	.214E+04	7.8	2.15	4.59			
1.00	101.00	.237E+04	8.8	2.20	4.48			

<---- hydrograph ----> <-pipe / channel->								
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL			
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)			
INFLOW : ID= 2 (0018)	38.72	4.26	12.25	72.48	0.71			
OUTFLOW: ID= 1 (0030)	38.72	4.14	12.31	72.48	0.70			

CALIB					
NASHYD (0141)					
ID= 1 DT= 5.0 min					

Area	(ha)=	11.25	Curve Number	(CN)=	79.0
Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00	
U.H. Tp(hrs)=	0.24				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25		
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25		
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25		
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25		
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25		
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25		
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25		
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25		
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25		
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25		
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50		
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50		
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50		
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50		

HRP7-EX_50-100 YEAR-2096 IDF.OUT												
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50					
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50					
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50					
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50					
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50					
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50					
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50					
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50					
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50					
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50					
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50					
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50					
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50					
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50					
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50					
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50					
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50					
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50					
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50					
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50					
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50					
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50					
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50					
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50					
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50					
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50					
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50					
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50					
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50					
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50					
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50					
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50					
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50					
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50					
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50					
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50					
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50					
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50					
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50					
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50					
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50					
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50					
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50					
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50					

Unit Hyd Qpeak (cms)= 1.783

PEAK FLOW (cms)= 1.934 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 76.548
TOTAL RAINFALL (mm)= 124.800
RUNOFF COEFFICIENT = 0.613

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)					
1	+	2	=	3	
AREA QPEAK TPEAK R.V.					
(ha) (cms) (hrs) (mm)					
ID1= 1 (0141):	11.25	1.934	12.08	76.55	
+ ID2= 2 (0030):	38.72	4.144	12.31	72.48	
=====					
ID = 3 (0021):	49.97	5.657	12.22	73.39	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (0142)			
ID= 1 DT= 3.0 min	Area (ha)= 10.92	Total Imp(%)= 53.00	Dir. Conn.(%)= 53.00
IMPERVIOUS PERVIOUS (i)			
Surface Area (ha)=	5.79	5.13	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	269.81	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25		

HRP7-EX_50-100 YEAR-2096 IDF.OUT												
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25					
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25					
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25					
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25					
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25					
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25					
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25					
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25					
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25					
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25					
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25					
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25					
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25					
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25					
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25					
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25					
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25					
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25					
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25					
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25					
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25					
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25					
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25					
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25					
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25					
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25					
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25					
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25					
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25					
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25					
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25					
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25					
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25					
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25					
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25					
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25					
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25					
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25					
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25					
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50					
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50					
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50					
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50					
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50					
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50					
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50					
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50					
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50					
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50					
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50					
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50					
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50					
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50					
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50					
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50					
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50					
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50					
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50					
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50					
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50					
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50					
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50					
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50					
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50					
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50					
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50					
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50					
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50					
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50					
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50					
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50					
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50					
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50					
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50					
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50					
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50					
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50					
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50					
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50					
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50					
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50					
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50					
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50					
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50					
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50					
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50					
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50					

HRP7-EX_50-100 YEAR-2096 IDF.OUT									
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50		
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50		
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50		
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50		
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50		
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50		
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50		
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50		
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50		
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50		
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50		
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50		
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50		
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50		
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50		
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50		
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50		
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50		
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50		
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50		
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50		
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50		
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50		
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50		
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50		
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50		
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50		
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50		
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50		
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50		
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50		
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50		
Max.Eff.Inten.(mm/hr)=	137.78		70.45						
over (min)	6.00		12.00						
Storage Coeff. (min)=	3.31 (ii)		9.23 (ii)						
Unit Hyd. Tpeak (min)=	6.00		12.00						
Unit Hyd. peak (cms)=	0.26		0.11						
					TOTALS				
PEAK FLOW (cms)=	2.19		0.74		2.870 (iii)				
TIME TO PEAK (hrs)=	12.00		12.05		12.00				
RUNOFF VOLUME (mm)=	123.30		54.49		90.96				
TOTAL RAINFALL (mm)=	124.80		124.80		124.80				
RUNOFF COEFFICIENT =	0.99		0.44		0.73				

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):	10.92	2.870	12.00	90.96
+ ID2= 2 (0021):	49.97	5.657	12.22	73.39
=====				
ID = 3 (0023):	60.89	7.122	12.06	76.54
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

RESERVOIR(0024)				
IN= 2----> OUT= 1				
DT= 3.0 min				

	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000		0.0030	0.5000
0.0070	0.1125		1.0000	0.7700
0.0530	0.2275		6.4000	1.1000
0.0650	0.3450		9.2000	1.2500
0.0750	0.4630		0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0023)	60.890	7.122	12.06	76.54
OUTFLOW: ID= 1 (0024)	60.890	5.812	12.36	75.88
PEAK FLOW REDUCTION [Qout/Qin](%)= 81.61				
TIME SHIFT OF PEAK FLOW (min)= 18.33				
MAXIMUM STORAGE USED (ha.m.)= 1.0571				

HRP7-EX_50-100 YEAR-2096 IDF.OUT																
CALIB																
STANDHYD (0143)		Area	(ha)=	0.84												
ID= 1 DT= 1.0 min		Total Imp(%)=	55.00	Dir. Conn.(%)=	55.00											

		Surface Area	(ha)=	0.46	IMPERVIOUS	PERVIOUS (i)										
		Dep. Storage	(mm)=	1.50	1.50											
		Average Slope	(%)=	2.00	2.00											
		Length	(m)=	74.83	40.00											
		Mannings n	=	0.013	0.250											
NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.																
---- TRANSFORMED HYETOGRAPH ----																
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN								
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr								
0.017	1.25	6.017	2.50	12.017	18.05	18.02	2.25									
0.033	1.25	6.033	2.50	12.033	17.97	18.03	2.25									
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25									
0.067	1.25	6.067	2.50	12.067	17.97	18.07	2.25									
0.083	1.25	6.083	2.50	12.083	17.97	18.08	2.25									
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25									
0.117	1.25	6.117	2.50	12.117	17.97	18.12	2.25									
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25									
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25									
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25									
0.183	1.25	6.183	2.50	12.183	17.97	18.18	2.25									
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25									
0.217	1.25	6.217	2.50	12.217	17.97	18.22	2.25									
0.233	1.25	6.233	2.50	12.233	17.97	18.23	2.25									
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25									
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25									
0.283	1.25	6.283	2.50	12.283	17.97	18.28	2.25									
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25									
0.317	1.25	6.317	2.50	12.317	17.97	18.32	2.25									
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25									
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25									
0.367	1.25	6.367	2.50	12.367	17.97	18.37	2.25									
0.383	1.25	6.383	2.50	12.383	17.97	18.38	2.25									
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25									
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25									
0.433	1.25	6.433	2.50	12.433	17.97	18.43	2.25									
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25									
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25									
0.483	1.25	6.483	2.50	12.483	17.97	18.48	2.25									
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25									
0.517	1.25	6.517	2.50	12.517	9.25	18.52	2.25									
0.533	1.25	6.533	2.50	12.533	9.24	18.53	2.25									
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25									
0.567	1.25	6.567	2.50	12.567	9.24	18.57	2.25									
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25									
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25									
0.617	1.25	6.617	2.50	12.617	9.24	18.62	2.25									
0.633	1.25	6.633	2.50	12.633	9.24	18.63	2.25									
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25									
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25									
0.683	1.25	6.683	2.50	12.683	9.24	18.68	2.25									
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25									
0.717	1.25	6.717	2.50	12.717	9.24	18.72	2.25									
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25									
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25									
0.767	1.25	6.767	2.50	12.767	9.24	18.77	2.25									
0.783	1.25	6.783	2.50	12.783	9.24	18.78	2.25									
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25									
0.817	1.25	6.817	2.50	12.817	9.24	18.82	2.25									
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25									
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25									
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25									
0.883	1.25	6.883	2.50	12.883	9.24	18.88	2.25									
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25									
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25									
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25									
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25									
0.967	1.25	6.967	2.50	12.967	9.24	18.97	2.25									
0.983	1.25	6.983	2.50	12.983	9.24	18.98	2.25									
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25									
1.017	1.25	7.017	2.50	13.017	1.76	19.02	2.25									
1.033	1.25	7.033	2.50	13.033	1.75	19.03	2.25									
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25									
1.067	1.25	7.067	2.50	13.067	1.75	19.07	2.25									
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25									
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25									
1.117	1.25	7.117	2.50	13.117	1.75	19.12	2.25									
1.133	1.25	7.133	2.50	13.133	1.75	19.13	2.25									
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25									
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25									

HRP7-EX_50-100 YEAR-2096 IDF.OUT

1.183	1.25	7.183	2.50	13.183	1.75	19.18	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.217	1.25	7.217	2.50	13.217	1.75	19.22	2.25
1.233	1.25	7.233	2.50	13.233	1.75	19.23	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.267	1.25	7.267	2.50	13.267	1.75	19.27	2.25
1.283	1.25	7.283	2.50	13.283	1.75	19.28	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.317	1.25	7.317	2.50	13.317	1.75	19.32	2.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25
1.367	1.25	7.367	2.50	13.367	1.75	19.37	2.25
1.383	1.25	7.383	2.50	13.383	1.75	19.38	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25
1.433	1.25	7.433	2.50	13.433	1.75	19.43	2.25
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25
1.483	1.25	7.483	2.50	13.483	1.75	19.48	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.517	1.25	7.517	2.50	13.517	10.22	19.52	2.25
1.533	1.25	7.533	2.50	13.533	10.23	19.53	2.25
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25
1.567	1.25	7.567	2.50	13.567	10.23	19.57	2.25
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.617	1.25	7.617	2.50	13.617	10.23	19.62	2.25
1.633	1.25	7.633	2.50	13.633	10.23	19.63	2.25
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25
1.683	1.25	7.683	2.50	13.683	10.23	19.68	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.717	1.25	7.717	2.50	13.717	10.23	19.72	2.25
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.767	2.25	7.767	2.50	13.767	10.23	19.77	2.25
1.783	2.25	7.783	2.50	13.783	10.23	19.78	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.817	2.25	7.817	2.50	13.817	10.23	19.82	2.25
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.867	2.25	7.867	2.50	13.867	10.23	19.87	2.25
1.883	2.25	7.883	2.50	13.883	10.23	19.88	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
1.967	2.25	7.967	2.50	13.967	10.23	19.97	2.25
1.983	2.25	7.983	2.50	13.983	10.23	19.98	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.017	1.62	8.017	3.37	14.017	3.74	20.02	1.50
2.033	1.62	8.033	3.37	14.033	3.74	20.03	1.50
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.067	1.62	8.067	3.37	14.067	3.74	20.07	1.50
2.083	1.62	8.083	3.37	14.083	3.74	20.08	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.117	1.62	8.117	3.37	14.117	3.74	20.12	1.50
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.183	1.62	8.183	3.37	14.183	3.74	20.18	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.217	1.62	8.217	3.37	14.217	3.74	20.22	1.50
2.233	1.62	8.233	3.37	14.233	3.74	20.23	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50
2.283	1.62	8.283	3.37	14.283	3.74	20.28	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.317	1.62	8.317	3.37	14.317	3.74	20.32	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50
2.383	1.62	8.383	3.37	14.383	3.74	20.38	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50
2.483	1.62	8.483	3.37	14.483	3.74	20.48	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.517	1.62	8.517	3.37	14.517	3.74	20.52	1.50
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.617	1.62	8.617	3.37	14.617	3.74	20.62	1.50

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2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.683	1.62	8.683	3.37	14.683	3.74	20.68	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.717	1.62	8.717	3.37	14.717	3.74	20.72	1.50
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50
2.783	1.62	8.783	3.37	14.783	3.74	20.78	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.817	1.62	8.817	3.37	14.817	3.74	20.82	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50
2.883	1.62	8.883	3.37	14.883	3.74	20.88	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50
2.983	1.62	8.983	3.37	14.983	3.74	20.98	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.017	1.62	9.017	3.99	15.017	3.74	21.02	1.50
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.117	1.62	9.117	3.99	15.117	3.74	21.12	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.183	1.62	9.183	3.99	15.183	3.74	21.18	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.217	1.62	9.217	3.99	15.217	3.74	21.22	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.283	1.62	9.283	3.99	15.283	3.74	21.28	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.317	1.62	9.317	3.99	15.317	3.74	21.32	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.383	1.62	9.383	3.99	15.383	3.74	21.38	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.483	1.62	9.483	3.99	15.483	3.74	21.48	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.517	1.62	9.517	4.49	15.517	3.74	21.52	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.617	1.62	9.617	4.49	15.617	3.74	21.62	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.683	1.62	9.683	4.49	15.683	3.74	21.68	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.717	1.62	9.717	4.49	15.717	3.74	21.72	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.783	1.62	9.783	4.49	15.783	3.74	21.78	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.817	1.62	9.817	4.49	15.817	3.74	21.82	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.883	1.62	9.883	4.49	15.883	3.74	21.88	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
3.983	1.62	9.983	4.49	15.983	3.74	21.98	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.017	1.62	10.017	5.74	16.017	2.25	22.02	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50

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4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.117	2.00	10.117	5.74	16.117	2.25	22.12	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.183	2.00	10.183	5.74	16.183	2.25	22.18	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.217	2.00	10.217	5.74	16.217	2.25	22.22	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.283	2.00	10.283	5.74	16.283	2.25	22.28	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.317	2.00	10.317	5.74	16.317	2.25	22.32	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.383	2.00	10.383	5.74	16.383	2.25	22.38	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.483	2.00	10.483	5.74	16.483	2.25	22.48	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.517	2.00	10.517	7.74	16.517	2.25	22.52	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.617	2.00	10.617	7.74	16.617	2.25	22.62	1.50
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.683	2.00	10.683	7.74	16.683	2.25	22.68	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.717	2.00	10.717	7.74	16.717	2.25	22.72	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50
4.783	2.00	10.783	7.74	16.783	2.25	22.78	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.817	2.00	10.817	7.74	16.817	2.25	22.82	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50
4.883	2.00	10.883	7.74	16.883	2.25	22.88	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
4.967	2.00	10.967	7.74	16.967	2.25	22.97	1.50
4.983	2.00	10.983	7.74	16.983	2.25	22.98	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.017	2.00	11.017	11.98	17.017	2.25	23.02	1.50
5.033	2.00	11.033	11.98	17.033	2.25	23.03	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.117	2.00	11.117	11.98	17.117	2.25	23.12	1.50
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.183	2.00	11.183	11.98	17.183	2.25	23.18	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.217	2.00	11.217	11.98	17.217	2.25	23.22	1.50
5.233	2.00	11.233	11.98	17.233	2.25	23.23	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.267	2.00	11.267	11.98	17.267	2.25	23.27	1.50
5.283	2.00	11.283	11.98	17.283	2.25	23.28	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.317	2.00	11.317	11.98	17.317	2.25	23.32	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.367	2.00	11.367	11.98	17.367	2.25	23.37	1.50
5.383	2.00	11.383	11.98	17.383	2.25	23.38	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50
5.433	2.00	11.433	11.98	17.433	2.25	23.43	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50
5.483	2.00	11.483	11.98	17.483	2.25	23.48	1.50
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50
5.517	2.00	11.517	51.91	17.517	2.25	23.52	1.50

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5.533	2.00	11.533	51.92	17.533	2.25	23.53	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.567	2.00	11.567	51.92	17.567	2.25	23.57	1.50
5.583	2.00	11.583	51.92	17.583	2.25	23.58	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.617	2.00	11.617	51.92	17.617	2.25	23.62	1.50
5.633	2.00	11.633	51.92	17.633	2.25	23.63	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.683	2.00	11.683	51.92	17.683	2.25	23.68	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.717	2.00	11.717	51.92	17.717	2.25	23.72	1.50
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50
5.767	2.00	11.767	137.74	17.767	2.25	23.77	1.50
5.783	2.00	11.783	137.78	17.783	2.25	23.78	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.817	2.00	11.817	137.78	17.817	2.25	23.82	1.50
5.833	2.00	11.833	137.78	17.833	2.25	23.83	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50
5.883	2.00	11.883	137.78	17.883	2.25	23.88	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
5.967	2.00	11.967	137.78	17.967	2.25	23.97	1.50
5.983	2.00	11.983	137.78	17.983	2.25	23.98	1.50
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 90.23
over (min) 5.00 8.00
Storage Coeff. (min)= 1.53 (ii) 7.26 (ii)
Unit Hyd. Tpeak (min)= 5.00 8.00
Unit Hyd. peak (cms)= 0.42 0.15

TOTALS
PEAK FLOW (cms)= 0.18 0.08 0.252 (iii)
TIME TO PEAK (hrs)= 12.00 12.03 12.00
RUNOFF VOLUME (mm)= 123.29 68.45 98.62
TOTAL RAINFALL (mm)= 124.00 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.79

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0026) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.

| (ha) (cms) (hrs) (mm)
ID1= 1 (0143): 0.84 0.252 12.00 98.62
+ ID2= 2 (0024): 60.89 5.812 12.36 75.88

ID = 3 (0026): 61.73 5.854 12.37 70.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0144) | Area (ha)= 6.14
|ID= 1 DT= 2.0 min | Total Imp(%)= 37.00 Dir. Conn.(%)= 37.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.27 3.87
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 202.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr
0.033 1.25 | 6.033 2.50 | 12.033 17.97 | 18.03 2.25
0.067 1.25 | 6.067 2.50 | 12.067 17.97 | 18.07 2.25
0.100 1.25 | 6.100 2.50 | 12.100 17.97 | 18.10 2.25
0.133 1.25 | 6.133 2.50 | 12.133 17.97 | 18.13 2.25
0.167 1.25 | 6.167 2.50 | 12.167 17.97 | 18.17 2.25
0.200 1.25 | 6.200 2.50 | 12.200 17.97 | 18.20 2.25
0.233 1.25 | 6.233 2.50 | 12.233 17.97 | 18.23 2.25

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0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25
0.367	1.25	6.367	2.50	12.367	17.97	18.37	2.25
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25
0.433	1.25	6.433	2.50	12.433	17.97	18.43	2.25
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25
0.500	1.25	6.500	2.50	12.500	17.96	18.50	2.25
0.533	1.25	6.533	2.50	12.533	9.24	18.53	2.25
0.567	1.25	6.567	2.50	12.567	9.24	18.57	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25
0.633	1.25	6.633	2.50	12.633	9.24	18.63	2.25
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25
0.767	1.25	6.767	2.50	12.767	9.24	18.77	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25
0.967	1.25	6.967	2.50	12.967	9.24	18.97	2.25
1.000	1.25	7.000	2.50	13.000	9.22	19.00	2.25
1.033	1.25	7.033	2.50	13.033	1.75	19.03	2.25
1.067	1.25	7.067	2.50	13.067	1.75	19.07	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25
1.133	1.25	7.133	2.50	13.133	1.75	19.13	2.25
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.233	1.25	7.233	2.50	13.233	1.75	19.23	2.25
1.267	1.25	7.267	2.50	13.267	1.75	19.27	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25
1.367	1.25	7.367	2.50	13.367	1.75	19.37	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.433	1.25	7.433	2.50	13.433	1.75	19.43	2.25
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25
1.500	1.25	7.500	2.50	13.500	1.76	19.50	2.25
1.533	1.25	7.533	2.50	13.533	10.23	19.53	2.25
1.567	1.25	7.567	2.50	13.567	10.23	19.57	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.633	1.25	7.633	2.50	13.633	10.23	19.63	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25
1.767	1.25	7.767	2.50	13.767	10.23	19.77	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25
1.867	2.25	7.867	2.50	13.867	10.23	19.87	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25
1.967	2.25	7.967	2.50	13.967	10.23	19.97	2.25
2.000	2.25	8.000	2.50	14.000	10.22	20.00	2.25
2.033	1.62	8.033	3.37	14.033	3.74	20.03	1.50
2.067	1.62	8.067	3.37	14.067	3.74	20.07	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.233	1.62	8.233	3.37	14.233	3.74	20.23	1.50
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50

HRP7-EX_50-100 YEAR-2096 IDF.OUT

3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50
4.967	2.00	10.967	7.74	16.967	2.25	22.97	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.033	2.00	11.033	11.98	17.033	2.25	23.03	1.50
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.233	2.00	11.233	11.98	17.233	2.25	23.23	1.50

Max.Eff.Inten.(mm/hr)= 137.78 90.21
over (min) 5.00 12.00
Storage Coeff. (min)= 2.79 (ii) 10.47 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.35 0.18
PEAK FLOW (cms)= 0.86 0.67 1.476 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 123.30 68.45 88.75
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.71
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)
1 + 2 = 3
ID1= 1 (0144): 6.14 1.476 12.00 88.75
+ ID2= 2 (0026): 61.73 5.854 12.37 70.95
ID = 3 (0028): 67.87 6.266 12.33 72.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Clvica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\c7fe2db4-b15c-4a78-be37-694c42960425\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Clvica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\c7fe2db4-b15c-4a78-be37-694c42960425\scenar

DATE: 03/24/2023 TIME: 10:41:45

USER:

COMMENTS:

** SIMULATION : Run 12 **

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\0d6dbfc2-ad02-44d7-85cb-eb202be3cb3c\7ff0caf
Ptotal=136.80 mm Comments: Mass 24-Hour SCS Type II Design Storm
Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.25 1.37 | 6.25 2.74 | 12.25 19.70 | 18.25 2.46
0.50 1.37 | 6.50 2.74 | 12.50 19.70 | 18.50 2.46
0.75 1.37 | 6.75 2.74 | 12.75 10.12 | 18.75 2.46
1.00 1.37 | 7.00 2.74 | 13.00 10.12 | 19.00 2.46
1.25 1.37 | 7.25 2.74 | 13.25 1.92 | 19.25 2.46

1.50 1.37 | 7.50 2.74 | 13.50 1.92 | 19.50 2.46
1.75 1.37 | 7.75 2.74 | 13.75 11.22 | 19.75 2.46
2.00 2.46 | 8.00 2.74 | 14.00 11.22 | 20.00 2.46
2.25 1.78 | 8.25 3.69 | 14.25 4.10 | 20.25 1.64
2.50 1.78 | 8.50 3.69 | 14.50 4.10 | 20.50 1.64
2.75 1.78 | 8.75 3.69 | 14.75 4.10 | 20.75 1.64
3.00 1.78 | 9.00 3.69 | 15.00 4.10 | 21.00 1.64
3.25 1.78 | 9.25 4.38 | 15.25 4.10 | 21.25 1.64
3.50 1.78 | 9.50 4.38 | 15.50 4.10 | 21.50 1.64
3.75 1.78 | 9.75 4.92 | 15.75 4.10 | 21.75 1.64
4.00 1.78 | 10.00 4.92 | 16.00 4.10 | 22.00 1.64
4.25 2.19 | 10.25 6.29 | 16.25 2.46 | 22.25 1.64
4.50 2.19 | 10.50 6.29 | 16.50 2.46 | 22.50 1.64
4.75 2.19 | 10.75 8.48 | 16.75 2.46 | 22.75 1.64
5.00 2.19 | 11.00 8.48 | 17.00 2.46 | 23.00 1.64
5.25 2.19 | 11.25 13.13 | 17.25 2.46 | 23.25 1.64
5.50 2.19 | 11.50 13.13 | 17.50 2.46 | 23.50 1.64
5.75 2.19 | 11.75 56.91 | 17.75 2.46 | 23.75 1.64
6.00 2.19 | 12.00 151.03 | 18.00 2.46 | 24.00 1.64

CALIB
NASHYD (1040) Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.083 1.37 | 6.083 2.74 | 12.083 19.71 | 18.08 2.46
0.167 1.37 | 6.167 2.74 | 12.167 19.70 | 18.17 2.46
0.250 1.37 | 6.250 2.74 | 12.250 19.70 | 18.25 2.46
0.333 1.37 | 6.333 2.74 | 12.333 19.70 | 18.33 2.46
0.417 1.37 | 6.417 2.74 | 12.417 19.70 | 18.42 2.46
0.500 1.37 | 6.500 2.74 | 12.500 19.70 | 18.50 2.46
0.583 1.37 | 6.583 2.74 | 12.583 10.12 | 18.58 2.46
0.667 1.37 | 6.667 2.74 | 12.667 10.12 | 18.67 2.46
0.750 1.37 | 6.750 2.74 | 12.750 10.12 | 18.75 2.46
0.833 1.37 | 6.833 2.74 | 12.833 10.12 | 18.83 2.46
0.917 1.37 | 6.917 2.74 | 12.917 10.12 | 18.92 2.46
1.000 1.37 | 7.000 2.74 | 13.000 10.12 | 19.00 2.46
1.083 1.37 | 7.083 2.74 | 13.083 1.92 | 19.08 2.46
1.167 1.37 | 7.167 2.74 | 13.167 1.92 | 19.17 2.46
1.250 1.37 | 7.250 2.74 | 13.250 1.92 | 19.25 2.46
1.333 1.37 | 7.333 2.74 | 13.333 1.92 | 19.33 2.46
1.417 1.37 | 7.417 2.74 | 13.417 1.92 | 19.42 2.46
1.500 1.37 | 7.500 2.74 | 13.500 1.92 | 19.50 2.46
1.583 1.37 | 7.583 2.74 | 13.583 11.22 | 19.58 2.46
1.667 1.37 | 7.667 2.74 | 13.667 11.22 | 19.67 2.46
1.750 1.37 | 7.750 2.74 | 13.750 11.22 | 19.75 2.46
1.833 2.46 | 7.833 2.74 | 13.833 11.22 | 19.83 2.46
1.917 2.46 | 7.917 2.74 | 13.917 11.22 | 19.92 2.46
2.000 2.46 | 8.000 2.74 | 14.000 11.22 | 20.00 2.46
2.083 1.78 | 8.083 3.69 | 14.083 4.11 | 20.08 1.64
2.167 1.78 | 8.167 3.69 | 14.167 4.10 | 20.17 1.64
2.250 1.78 | 8.250 3.69 | 14.250 4.10 | 20.25 1.64
2.333 1.78 | 8.333 3.69 | 14.333 4.10 | 20.33 1.64
2.417 1.78 | 8.417 3.69 | 14.417 4.10 | 20.42 1.64
2.500 1.78 | 8.500 3.69 | 14.500 4.10 | 20.50 1.64
2.583 1.78 | 8.583 3.69 | 14.583 4.10 | 20.58 1.64
2.667 1.78 | 8.667 3.69 | 14.667 4.10 | 20.67 1.64
2.750 1.78 | 8.750 3.69 | 14.750 4.10 | 20.75 1.64
2.833 1.78 | 8.833 3.69 | 14.833 4.10 | 20.83 1.64
2.917 1.78 | 8.917 3.69 | 14.917 4.10 | 20.92 1.64
3.000 1.78 | 9.000 3.69 | 15.000 4.10 | 21.00 1.64
3.083 1.78 | 9.083 4.38 | 15.083 4.10 | 21.08 1.64
3.167 1.78 | 9.167 4.38 | 15.167 4.10 | 21.17 1.64
3.250 1.78 | 9.250 4.38 | 15.250 4.10 | 21.25 1.64
3.333 1.78 | 9.333 4.38 | 15.333 4.10 | 21.33 1.64
3.417 1.78 | 9.417 4.38 | 15.417 4.10 | 21.42 1.64
3.500 1.78 | 9.500 4.38 | 15.500 4.10 | 21.50 1.64
3.583 1.78 | 9.583 4.92 | 15.583 4.10 | 21.58 1.64
3.667 1.78 | 9.667 4.92 | 15.667 4.10 | 21.67 1.64
3.750 1.78 | 9.750 4.92 | 15.750 4.10 | 21.75 1.64
3.833 1.78 | 9.833 4.92 | 15.833 4.10 | 21.83 1.64
3.917 1.78 | 9.917 4.92 | 15.917 4.10 | 21.92 1.64
4.000 1.78 | 10.000 4.92 | 16.000 4.10 | 22.00 1.64
4.083 2.19 | 10.083 6.29 | 16.083 2.46 | 22.08 1.64
4.167 2.19 | 10.167 6.29 | 16.167 2.46 | 22.17 1.64
4.250 2.19 | 10.250 6.29 | 16.250 2.46 | 22.25 1.64
4.333 2.19 | 10.333 6.29 | 16.333 2.46 | 22.33 1.64
4.417 2.19 | 10.417 6.29 | 16.417 2.46 | 22.42 1.64
4.500 2.19 | 10.500 6.29 | 16.500 2.46 | 22.50 1.64

HRP7-EX_50-100 YEAR-2006 IDF.OUT									
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64		
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64		
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64		
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64		
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64		
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64		
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64		
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64		
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64		
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64		
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64		
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64		
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64		
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64		
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64		
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64		
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64		
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64		

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 1.429 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 80.232
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.586

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0037)
IN= 2--> OUT= 1 Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.259E+02	0.0	0.22	36.60
0.09	100.09	.582E+02	0.0	0.33	24.49
0.14	100.14	.970E+02	0.1	0.41	19.54
0.19	100.19	.142E+03	0.1	0.48	16.69
0.24	100.24	.194E+03	0.2	0.54	14.78
0.28	100.28	.252E+03	0.3	0.60	13.39
0.33	100.33	.317E+03	0.4	0.65	12.30
0.39	100.39	.402E+03	0.6	0.75	10.68
0.44	100.44	.495E+03	0.9	0.83	9.64
0.50	100.50	.590E+03	1.1	0.90	8.90
0.55	100.55	.709E+03	1.4	0.96	8.35
0.61	100.61	.829E+03	1.7	1.01	7.91
0.66	100.66	.958E+03	2.1	1.06	7.56
0.72	100.72	.110E+04	2.5	1.10	7.26
0.78	100.78	.124E+04	3.0	1.14	7.02
0.83	100.83	.140E+04	3.4	1.18	6.80
0.89	100.89	.156E+04	3.9	1.21	6.61
0.94	100.94	.174E+04	4.5	1.24	6.45
1.00	101.00	.192E+04	5.1	1.27	6.30

<---- hydrograph ---->				<-pipe / channel->	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (1640)	10.35	1.43	12.17	80.23	0.50
OUTFLOW: ID= 1 (0037)	10.35	1.32	12.31	80.21	0.53
				0.53	0.94

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

HRP7-EX_50-100 YEAR-2006 IDF.OUT									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	'	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46		
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46		
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46		
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46		
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46		
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46		
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46		
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46		
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46		
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46		
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46		
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46		
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46		
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46		
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46		
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46		
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46		
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46		
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46		
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46		
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46		
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46		
2.083	1.78	8.083	3.69	14.083	4.11	20.08	1.64		
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64		
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64		
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64		
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64		
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64		
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64		
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64		
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64		
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64		
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64		
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64		
3.083	1.78	9.083	3.69	15.083	4.10	21.08	1.64		
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64		
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64		
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64		
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64		
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64		
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64		
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64		
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64		
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64		
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64		
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64		
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64		
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64		
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64		
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64		
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64		
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64		
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64		
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64		
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64		
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64		
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64		
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64		
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64		
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64		
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64		
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64		
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64		
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64		
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64		
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64		
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64		
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64		
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64		
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64		

Unit Hyd Qpeak (cms)= 1.301

PEAK FLOW (cms)= 1.926 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 83.644
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.611

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP7-EX_50-100 YEAR-2096 IDF.OUT

```
-----
| ADD HYD ( 0029) |
| 1 + 2 = 3 |
-----
ID1= 1 ( 0140): 17.07 1.926 12.33 83.64
+ ID2= 2 ( 0037): 10.35 1.317 12.31 80.21
=====
ID = 3 ( 0029): 27.42 3.241 12.33 82.35
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| CALIB |
| NASHYD ( 1041) | Area (ha)= 11.30 Curve Number (CN)= 77.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----|
| U.H. Tp(hrs)= 0.26
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

```
----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.083 1.37 | 6.083 2.74 | 12.083 19.71 | 18.08 2.46
0.167 1.37 | 6.167 2.74 | 12.167 19.70 | 18.17 2.46
0.250 1.37 | 6.250 2.74 | 12.250 19.70 | 18.25 2.46
0.333 1.37 | 6.333 2.74 | 12.333 19.70 | 18.33 2.46
0.417 1.37 | 6.417 2.74 | 12.417 19.70 | 18.42 2.46
0.500 1.37 | 6.500 2.74 | 12.500 19.70 | 18.50 2.46
0.583 1.37 | 6.583 2.74 | 12.583 19.12 | 18.58 2.46
0.667 1.37 | 6.667 2.74 | 12.667 18.12 | 18.67 2.46
0.750 1.37 | 6.750 2.74 | 12.750 18.12 | 18.75 2.46
0.833 1.37 | 6.833 2.74 | 12.833 18.12 | 18.83 2.46
0.917 1.37 | 6.917 2.74 | 12.917 18.12 | 18.92 2.46
1.000 1.37 | 7.000 2.74 | 13.000 18.12 | 19.00 2.46
1.083 1.37 | 7.083 2.74 | 13.083 1.92 | 19.08 2.46
1.167 1.37 | 7.167 2.74 | 13.167 1.92 | 19.17 2.46
1.250 1.37 | 7.250 2.74 | 13.250 1.92 | 19.25 2.46
1.333 1.37 | 7.333 2.74 | 13.333 1.92 | 19.33 2.46
1.417 1.37 | 7.417 2.74 | 13.417 1.92 | 19.42 2.46
1.500 1.37 | 7.500 2.74 | 13.500 1.92 | 19.50 2.46
1.583 1.37 | 7.583 2.74 | 13.583 11.22 | 19.58 2.46
1.667 1.37 | 7.667 2.74 | 13.667 11.22 | 19.67 2.46
1.750 1.37 | 7.750 2.74 | 13.750 11.22 | 19.75 2.46
1.833 2.46 | 7.833 2.74 | 13.833 11.22 | 19.83 2.46
1.917 2.46 | 7.917 2.74 | 13.917 11.22 | 19.92 2.46
2.000 2.46 | 8.000 2.74 | 14.000 11.22 | 20.00 2.46
2.083 1.78 | 8.083 3.69 | 14.083 4.11 | 20.08 1.64
2.167 1.78 | 8.167 3.69 | 14.167 4.10 | 20.17 1.64
2.250 1.78 | 8.250 3.69 | 14.250 4.10 | 20.25 1.64
2.333 1.78 | 8.333 3.69 | 14.333 4.10 | 20.33 1.64
2.417 1.78 | 8.417 3.69 | 14.417 4.10 | 20.42 1.64
2.500 1.78 | 8.500 3.69 | 14.500 4.10 | 20.50 1.64
2.583 1.78 | 8.583 3.69 | 14.583 4.10 | 20.58 1.64
2.667 1.78 | 8.667 3.69 | 14.667 4.10 | 20.67 1.64
2.750 1.78 | 8.750 3.69 | 14.750 4.10 | 20.75 1.64
2.833 1.78 | 8.833 3.69 | 14.833 4.10 | 20.83 1.64
2.917 1.78 | 8.917 3.69 | 14.917 4.10 | 20.92 1.64
3.000 1.78 | 9.000 3.69 | 15.000 4.10 | 21.00 1.64
3.083 1.78 | 9.083 4.38 | 15.083 4.10 | 21.08 1.64
3.167 1.78 | 9.167 4.38 | 15.167 4.10 | 21.17 1.64
3.250 1.78 | 9.250 4.38 | 15.250 4.10 | 21.25 1.64
3.333 1.78 | 9.333 4.38 | 15.333 4.10 | 21.33 1.64
3.417 1.78 | 9.417 4.38 | 15.417 4.10 | 21.42 1.64
3.500 1.78 | 9.500 4.38 | 15.500 4.10 | 21.50 1.64
3.583 1.78 | 9.583 4.92 | 15.583 4.10 | 21.58 1.64
3.667 1.78 | 9.667 4.92 | 15.667 4.10 | 21.67 1.64
3.750 1.78 | 9.750 4.92 | 15.750 4.10 | 21.75 1.64
3.833 1.78 | 9.833 4.92 | 15.833 4.10 | 21.83 1.64
3.917 1.78 | 9.917 4.92 | 15.917 4.10 | 21.92 1.64
4.000 1.78 | 10.000 4.92 | 16.000 4.10 | 22.00 1.64
4.083 2.19 | 10.083 6.29 | 16.083 2.46 | 22.08 1.64
4.167 2.19 | 10.167 6.29 | 16.167 2.46 | 22.17 1.64
4.250 2.19 | 10.250 6.29 | 16.250 2.46 | 22.25 1.64
4.333 2.19 | 10.333 6.29 | 16.333 2.46 | 22.33 1.64
4.417 2.19 | 10.417 6.29 | 16.417 2.46 | 22.42 1.64
4.500 2.19 | 10.500 6.29 | 16.500 2.46 | 22.50 1.64
4.583 2.19 | 10.583 8.48 | 16.583 2.46 | 22.58 1.64
4.667 2.19 | 10.667 8.48 | 16.667 2.46 | 22.67 1.64
4.750 2.19 | 10.750 8.48 | 16.750 2.46 | 22.75 1.64
4.833 2.19 | 10.833 8.48 | 16.833 2.46 | 22.83 1.64
4.917 2.19 | 10.917 8.48 | 16.917 2.46 | 22.92 1.64
5.000 2.19 | 11.000 8.48 | 17.000 2.46 | 23.00 1.64
5.083 2.19 | 11.083 13.13 | 17.083 2.46 | 23.08 1.64
5.167 2.19 | 11.167 13.13 | 17.167 2.46 | 23.17 1.64
5.250 2.19 | 11.250 13.13 | 17.250 2.46 | 23.25 1.64
5.333 2.19 | 11.333 13.13 | 17.333 2.46 | 23.33 1.64
```

HRP7-EX_50-100 YEAR-2096 IDF.OUT

```
5.417 2.19 |11.417 13.13 |17.417 2.46 | 23.42 1.64
5.500 2.19 |11.500 13.13 |17.500 2.46 | 23.50 1.64
5.583 2.19 |11.583 56.90 |17.583 2.46 | 23.58 1.64
5.667 2.19 |11.667 56.91 |17.667 2.46 | 23.67 1.64
5.750 2.19 |11.750 56.91 |17.750 2.46 | 23.75 1.64
5.833 2.19 |11.833 151.02 |17.833 2.46 | 23.83 1.64
5.917 2.19 |11.917 151.03 |17.917 2.46 | 23.92 1.64
6.000 2.19 |12.000 151.03 |18.000 2.46 | 24.00 1.64
```

Unit Hyd Qpeak (cms)= 1.654

```
PEAK FLOW (cms)= 1.999 (1)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 83.592
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.611
```

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
-----
| ADD HYD ( 0018) |
| 1 + 2 = 3 |
-----
ID1= 1 ( 1041): 11.30 1.999 12.08 83.59
+ ID2= 2 ( 0029): 27.42 3.241 12.33 82.35
=====
ID = 3 ( 0018): 38.72 4.876 12.25 82.71
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ROUTE CHN( 0030) |
| IN= 2--> OUT= 1 |
-----
Routing time step (min)'= 2.00

<----- DATA FOR SECTION ( 1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0500
1.00 100.67 0.0500
2.00 100.33 0.0500 / 0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel
5.00 100.33 0.0300 / 0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500
```

```
----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .319E+02 0.0 0.38 26.06
0.09 100.09 .718E+02 0.1 0.57 17.44
0.14 100.14 .120E+03 0.1 0.71 13.91
0.19 100.19 .175E+03 0.2 0.83 11.89
0.24 100.24 .239E+03 0.4 0.94 10.53
0.28 100.28 .311E+03 0.5 1.04 9.53
0.33 100.33 .391E+03 0.7 1.13 8.76
0.39 100.39 .495E+03 1.1 1.30 7.61
0.44 100.44 .611E+03 1.5 1.44 6.86
0.50 100.50 .737E+03 1.9 1.56 6.34
0.55 100.55 .874E+03 2.5 1.66 5.94
0.61 100.61 .102E+04 3.0 1.75 5.63
0.66 100.66 .118E+04 3.7 1.83 5.38
0.72 100.72 .135E+04 4.4 1.91 5.17
0.78 100.78 .153E+04 5.1 1.97 5.00
0.83 100.83 .172E+04 5.9 2.04 4.84
0.89 100.89 .193E+04 6.8 2.10 4.71
0.94 100.94 .214E+04 7.8 2.15 4.59
1.00 101.00 .237E+04 8.8 2.20 4.48
```

```
----- hydrograph ----->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 ( 0018) 38.72 4.88 12.25 82.71 0.76 1.95
OUTFLOW: ID= 1 ( 0030) 38.72 4.75 12.31 82.71 0.75 1.94
```

```
-----
| CALIB |
| NASHYD ( 0141) | Area (ha)= 11.25 Curve Number (CN)= 79.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----|
| U.H. Tp(hrs)= 0.24
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

HRP7-EX_50-100 YEAR-2096 IDF.OUT

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.91	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 1.783

PEAK FLOW (cms)= 2.201 (1)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 87.073
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.636

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP7-EX_50-100 YEAR-2096 IDF.OUT

ADD HYD (0021)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0141):	11.25	2.201	12.08	87.07
+ ID2= 2 (0030):	38.72	4.749	12.31	82.71
=====				
ID = 3 (0021):	49.97	6.482	12.22	83.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		Area (ha)=	10.92
STANDHYD (0142)		Total Imp(%)=	53.00
ID= 1 DT= 3.0 min		Dir. Conn.(%)=	53.00

	IMPERVIOUS	PERVIOUS (1)
Surface Area (ha)=	5.79	5.13
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	269.81	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0143)	Area (ha)=	0.84	
ID= 1 DT= 1.0 min	Total Imp(%)=	55.00	Dir. Conn.(%)= 55.00

		IMPERVIOUS	PERVIOUS (1)
Surface Area	(ha)=	0.46	0.38
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	74.83	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYDROGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.017	1.37	0.617	2.74	12.017	19.70	18.02	2.46
0.033	1.37	0.633	2.74	12.033	19.70	18.03	2.46
0.050	1.37	0.650	2.74	12.050	19.70	18.05	2.46
0.067	1.37	0.667	2.74	12.067	19.70	18.07	2.46
0.083	1.37	0.683	2.74	12.083	19.70	18.08	2.46
0.100	1.37	0.700	2.74	12.100	19.70	18.10	2.46
0.117	1.37	0.717	2.74	12.117	19.70	18.12	2.46
0.133	1.37	0.733	2.74	12.133	19.70	18.13	2.46
0.150	1.37	0.750	2.74	12.150	19.70	18.15	2.46
0.167	1.37	0.767	2.74	12.167	19.70	18.17	2.46
0.183	1.37	0.783	2.74	12.183	19.70	18.18	2.46
0.200	1.37	0.799	2.74	12.199	19.70	18.20	2.46
0.217	1.37	0.817	2.74	12.217	19.70	18.21	2.46
0.233	1.37	0.833	2.74	12.233	19.70	18.23	2.46
0.250	1.37	0.850	2.74	12.250	19.70	18.25	2.46
0.267	1.37	0.867	2.74	12.267	19.70	18.27	2.46
0.283	1.37	0.883	2.74	12.283	19.70	18.28	2.46
0.300	1.37	0.900	2.74	12.300	19.70	18.30	2.46
0.317	1.37	0.917	2.74	12.317	19.70	18.32	2.46
0.333	1.37	0.933	2.74	12.333	19.70	18.33	2.46
0.350	1.37	0.950	2.74	12.350	19.70	18.35	2.46
0.367	1.37	0.967	2.74	12.367	19.70	18.37	2.46
0.383	1.37	0.983	2.74	12.383	19.70	18.38	2.46
0.400	1.37	1.000	2.74	12.400	19.70	18.40	2.46
0.417	1.37	1.017	2.74	12.417	19.70	18.42	2.46
0.433	1.37	1.033	2.74	12.433	19.70	18.43	2.46
0.450	1.37	1.050	2.74	12.450	19.70	18.45	2.46
0.467	1.37	1.067	2.74	12.467	19.70	18.47	2.46
0.483	1.37	1.083	2.74	12.483	19.70	18.48	2.46
0.500	1.37	1.100	2.74	12.500	19.70	18.50	2.46
0.517	1.37	1.117	2.74	12.517	18.13	18.52	2.46
0.533	1.37	1.133	2.74	12.533	18.12	18.53	2.46
0.550	1.37	1.150	2.74	12.550	18.12	18.55	2.46
0.567	1.37	1.167	2.74	12.567	18.12	18.57	2.46
0.583	1.37	1.183	2.74	12.583	18.12	18.58	2.46
0.600	1.37	1.200	2.74	12.600	18.12	18.60	2.46
0.617	1.37	1.217	2.74	12.617	18.12	18.62	2.46
0.633	1.37	1.233	2.74	12.633	18.12	18.63	2.46

HRP7-EX_50-100 YEAR-2096 IDF.OUT

0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.683	1.37	6.683	2.74	12.683	10.12	18.68	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.717	1.37	6.717	2.74	12.717	10.12	18.72	2.46
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.767	1.37	6.767	2.74	12.767	10.12	18.77	2.46
0.783	1.37	6.783	2.74	12.783	10.12	18.78	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.817	1.37	6.817	2.74	12.817	10.12	18.82	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46
0.883	1.37	6.883	2.74	12.883	10.12	18.88	2.46
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
0.967	1.37	6.967	2.74	12.967	10.12	18.97	2.46
0.983	1.37	6.983	2.74	12.983	10.12	18.98	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.017	1.37	7.017	2.74	13.017	1.93	19.02	2.46
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.117	1.37	7.117	2.74	13.117	1.92	19.12	2.46
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.183	1.37	7.183	2.74	13.183	1.92	19.18	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.217	1.37	7.217	2.74	13.217	1.92	19.22	2.46
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46
1.283	1.37	7.283	2.74	13.283	1.92	19.28	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.317	1.37	7.317	2.74	13.317	1.92	19.32	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46
1.383	1.37	7.383	2.74	13.383	1.92	19.38	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46
1.483	1.37	7.483	2.74	13.483	1.92	19.48	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.517	1.37	7.517	2.74	13.517	11.20	19.52	2.46
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.617	1.37	7.617	2.74	13.617	11.22	19.62	2.46
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.683	1.37	7.683	2.74	13.683	11.22	19.68	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.717	1.37	7.717	2.74	13.717	11.22	19.72	2.46
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.767	2.46	7.767	2.74	13.767	11.22	19.77	2.46
1.783	2.46	7.783	2.74	13.783	11.22	19.78	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.817	2.46	7.817	2.74	13.817	11.22	19.82	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46
1.883	2.46	7.883	2.74	13.883	11.22	19.88	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46
1.983	2.46	7.983	2.74	13.983	11.22	19.98	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.017	1.78	8.017	3.69	14.017	4.10	20.02	1.64
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64

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2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.117	1.78	8.117	3.69	14.117	4.10	20.12	1.64
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.183	1.78	8.183	3.69	14.183	4.10	20.18	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.217	1.78	8.217	3.69	14.217	4.10	20.22	1.64
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64
2.283	1.78	8.283	3.69	14.283	4.10	20.28	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.317	1.78	8.317	3.69	14.317	4.10	20.32	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64
2.383	1.78	8.383	3.69	14.383	4.10	20.38	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64
2.483	1.78	8.483	3.69	14.483	4.10	20.48	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.517	1.78	8.517	3.69	14.517	4.10	20.52	1.64
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.617	1.78	8.617	3.69	14.617	4.10	20.62	1.64
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.683	1.78	8.683	3.69	14.683	4.10	20.68	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.717	1.78	8.717	3.69	14.717	4.10	20.72	1.64
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64
2.783	1.78	8.783	3.69	14.783	4.10	20.78	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.817	1.78	8.817	3.69	14.817	4.10	20.82	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64
2.883	1.78	8.883	3.69	14.883	4.10	20.88	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64
2.983	1.78	8.983	3.69	14.983	4.10	20.98	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.017	1.78	9.017	4.38	15.017	4.10	21.02	1.64
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.117	1.78	9.117	4.38	15.117	4.10	21.12	1.64
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.183	1.78	9.183	4.38	15.183	4.10	21.18	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.217	1.78	9.217	4.38	15.217	4.10	21.22	1.64
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64
3.283	1.78	9.283	4.38	15.283	4.10	21.28	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.317	1.78	9.317	4.38	15.317	4.10	21.32	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.383	1.78	9.383	4.38	15.383	4.10	21.38	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.483	1.78	9.483	4.38	15.483	4.10	21.48	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.517	1.78	9.517	4.92	15.517	4.10	21.52	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64

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3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.617	1.78	9.617	4.92	15.617	4.10	21.62	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.683	1.78	9.683	4.92	15.683	4.10	21.68	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.717	1.78	9.717	4.92	15.717	4.10	21.72	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.783	1.78	9.783	4.92	15.783	4.10	21.78	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.817	1.78	9.817	4.92	15.817	4.10	21.82	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.883	1.78	9.883	4.92	15.883	4.10	21.88	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
3.983	1.78	9.983	4.92	15.983	4.10	21.98	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.017	2.19	10.017	6.29	16.017	2.46	22.02	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.117	2.19	10.117	6.29	16.117	2.46	22.12	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.183	2.19	10.183	6.29	16.183	2.46	22.18	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.217	2.19	10.217	6.29	16.217	2.46	22.22	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.283	2.19	10.283	6.29	16.283	2.46	22.28	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.317	2.19	10.317	6.29	16.317	2.46	22.32	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.383	2.19	10.383	6.29	16.383	2.46	22.38	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.483	2.19	10.483	6.29	16.483	2.46	22.48	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.517	2.19	10.517	8.48	16.517	2.46	22.52	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.617	2.19	10.617	8.48	16.617	2.46	22.62	1.64
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.683	2.19	10.683	8.48	16.683	2.46	22.68	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.717	2.19	10.717	8.48	16.717	2.46	22.72	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64
4.783	2.19	10.783	8.48	16.783	2.46	22.78	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.817	2.19	10.817	8.48	16.817	2.46	22.82	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.883	2.19	10.883	8.48	16.883	2.46	22.88	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64
4.983	2.19	10.983	8.48	16.983	2.46	22.98	1.64

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5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.017	2.19	11.017	13.13	17.017	2.46	23.02	1.64
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.117	2.19	11.117	13.13	17.117	2.46	23.12	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.183	2.19	11.183	13.13	17.183	2.46	23.18	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.217	2.19	11.217	13.13	17.217	2.46	23.22	1.64
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.283	2.19	11.283	13.13	17.283	2.46	23.28	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.317	2.19	11.317	13.13	17.317	2.46	23.32	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64
5.383	2.19	11.383	13.13	17.383	2.46	23.38	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.483	2.19	11.483	13.13	17.483	2.46	23.48	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.517	2.19	11.517	56.90	17.517	2.46	23.52	1.64
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64
5.583	2.19	11.583	56.91	17.583	2.46	23.58	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.617	2.19	11.617	56.91	17.617	2.46	23.62	1.64
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.683	2.19	11.683	56.91	17.683	2.46	23.68	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.717	2.19	11.717	56.91	17.717	2.46	23.72	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.767	2.19	11.767	150.90	17.767	2.46	23.77	1.64
5.783	2.19	11.783	151.03	17.783	2.46	23.78	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.817	2.19	11.817	151.03	17.817	2.46	23.82	1.64
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64
5.883	2.19	11.883	151.03	17.883	2.46	23.88	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64
5.983	2.19	11.983	151.03	17.983	2.46	23.98	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

HRP7-EX_50-100 YEAR-2096 IDF.OUT
ID1= 1 (0143): 0.84 0.281 12.00 109.60
+ ID2= 2 (0024): 60.89 6.765 12.33 86.18
=====

ID = 3 (0026): 61.73 6.815 12.33 81.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0144)
ID= 1 DT= 2.0 min

Area (ha)= 6.14
Total Imp(%)= 37.00 Dir. Conn.(%)= 37.00

IMPERVIOUS PERVIOUS (I)
Surface Area (ha)= 2.27 3.87
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 202.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	1.37	6.033	2.74	12.033	19.70	18.03	2.46	
0.067	1.37	6.067	2.74	12.067	19.70	18.07	2.46	
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46	
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46	
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46	
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46	
0.233	1.37	6.233	2.74	12.233	19.70	18.23	2.46	
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46	
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46	
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46	
0.367	1.37	6.367	2.74	12.367	19.70	18.37	2.46	
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46	
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46	
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46	
0.500	1.37	6.500	2.74	12.500	19.60	18.50	2.46	
0.533	1.37	6.533	2.74	12.533	10.12	18.53	2.46	
0.567	1.37	6.567	2.74	12.567	10.12	18.57	2.46	
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46	
0.633	1.37	6.633	2.74	12.633	10.12	18.63	2.46	
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46	
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46	
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46	
0.767	1.37	6.767	2.74	12.767	10.12	18.77	2.46	
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46	
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46	
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46	
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46	
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46	
0.967	1.37	6.967	2.74	12.967	10.12	18.97	2.46	
1.000	1.37	7.000	2.74	13.000	10.11	19.00	2.46	
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46	
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46	
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46	
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46	
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46	
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46	
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46	
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46	
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46	
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46	
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46	
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46	
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46	
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46	
1.500	1.37	7.500	2.74	13.500	1.93	19.50	2.46	
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46	
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46	
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46	
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46	
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46	
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46	
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46	
1.767	1.92	7.767	2.74	13.767	11.22	19.77	2.46	
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46	
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46	
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46	
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46	
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46	
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46	
2.000	2.46	8.000	2.74	14.000	11.20	20.00	2.46	
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64	
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64	

HRP7-EX_50-100 YEAR-2096 IDF.OUT

2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64
4.667	2.19	10.667	8.48	16.667	2.46		

HRP7-EX_50-100 YEAR-2096 IDF.OUT

5.000	2.19	11.000	8.49	17.000	2.46	23.00	1.64
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.500	2.19	11.500	13.19	17.500	2.46	23.50	1.64
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.767	2.19	11.767	104.09	17.767	2.46	23.77	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64
6.000	2.19	12.000	150.85	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 102.85
over (min) 5.00 12.00
Storage Coeff. (min)= 2.69 (ii) 10.09 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.35 0.11

TOTALS
PEAK FLOW (cms)= 0.95 0.78 1.660 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 135.30 78.20 99.33
TOTAL RAINFALL (mm)= 136.80 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.57 0.73

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0020)
1 + 2 = 3
ID1= 1 (0144): 6.14 1.660 12.00 99.33
+ ID2= 2 (0026): 61.73 6.815 12.33 81.24
=====

ID = 3 (0028):	67.87	7.300	12.30	82.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH
=====

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y M M O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\761190c2-a302-483c-97c5-1ff751aae599\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\761190c2-a302-483c-97c5-1ff751aae599\scenar

DATE: 03/24/2023 TIME: 11:07:23

USER:

COMMENTS: _____

** SIMULATION : Run 11

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\
| | 44abe5e4-85f2-496b-a0a0-478d5144af76\5fdf4178
| Ptotal=124.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.25	6.25	2.50	12.25	17.97	18.25	2.25	
0.50	1.25	6.50	2.50	12.50	17.97	18.50	2.25	
0.75	1.25	6.75	2.50	12.75	9.24	18.75	2.25	
1.00	1.25	7.00	2.50	13.00	9.24	19.00	2.25	
1.25	1.25	7.25	2.50	13.25	1.75	19.25	2.25	
1.50	1.25	7.50	2.50	13.50	1.75	19.50	2.25	
1.75	1.25	7.75	2.50	13.75	10.23	19.75	2.25	
2.00	2.25	8.00	2.50	14.00	10.23	20.00	2.25	
2.25	1.62	8.25	3.37	14.25	3.74	20.25	1.50	
2.50	1.62	8.50	3.37	14.50	3.74	20.50	1.50	
2.75	1.62	8.75	3.37	14.75	3.74	20.75	1.50	
3.00	1.62	9.00	3.37	15.00	3.74	21.00	1.50	
3.25	1.62	9.25	3.00	15.25	3.74	21.25	1.50	
3.50	1.62	9.50	3.00	15.50	3.74	21.50	1.50	
3.75	1.62	9.75	4.49	15.75	3.74	21.75	1.50	
4.00	1.62	10.00	4.49	16.00	3.74	22.00	1.50	
4.25	2.00	10.25	5.74	16.25	2.25	22.25	1.50	
4.50	2.00	10.50	5.74	16.50	2.25	22.50	1.50	
4.75	2.00	10.75	7.74	16.75	2.25	22.75	1.50	
5.00	2.00	11.00	7.74	17.00	2.25	23.00	1.50	
5.25	2.00	11.25	11.98	17.25	2.25	23.25	1.50	
5.50	2.00	11.50	11.98	17.50	2.25	23.50	1.50	
5.75	2.00	11.75	51.92	17.75	2.25	23.75	1.50	
6.00	2.00	12.00	137.78	18.00	2.25	24.00	1.50	

| CALIB |
| NASHYD (1050) | Area (ha)= 4.49 Curve Number (CN)= 77.0
| ID= 1 DT= 2.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	1.25	6.033	2.50	12.033	17.97	18.03	2.25	
0.067	1.25	6.067	2.50	12.067	17.97	18.07	2.25	
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25	
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25	
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25	
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25	
0.233	1.25	6.233	2.50	12.233	17.97	18.23	2.25	
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25	
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25	
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25	
0.367	1.25	6.367	2.50	12.367	17.97	18.37	2.25	
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25	
0.433	1.25	6.433	2.50	12.433	17.97	18.43	2.25	
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25	
0.500	1.25	6.500	2.50	12.500	17.96	18.50	2.25	
0.533	1.25	6.533	2.50	12.533	9.24	18.53	2.25	
0.567	1.25	6.567	2.50	12.567	9.24	18.57	2.25	
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25	
0.633	1.25	6.633	2.50	12.633	9.24	18.63	2.25	
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25	
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25	
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25	
0.767	1.25	6.767	2.50	12.767	9.24	18.77	2.25	
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25	
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25	
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25	
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25	
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25	
0.967	1.25	6.967	2.50	12.967	9.24	18.97	2.25	
1.000	1.25	7.000	2.50	13.000	9.22	19.00	2.25	
1.033	1.25	7.033	2.50	13.033	1.75	19.03	2.25	
1.067	1.25	7.067	2.50	13.067	1.75	19.07	2.25	
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25	
1.133	1.25	7.133	2.50	13.133	1.75	19.13	2.25	
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25	
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25	
1.233	1.25	7.233	2.50	13.233	1.75	19.23	2.25	
1.267	1.25	7.267	2.50	13.267	1.75	19.27	2.25	
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25	
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25	
1.367	1.25	7.367	2.50	13.367	1.75	19.37	2.25	
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25	
1.433	1.25	7.433	2.50	13.433	1.75	19.43	2.25	
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25	
1.500	1.25	7.500	2.50	13.500	1.76	19.50	2.25	
1.533	1.25	7.533	2.50	13.533	10.23	19.53	2.25	
1.567	1.25	7.567	2.50	13.567	10.23	19.57	2.25	
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25	
1.633	1.25	7.633	2.50	13.633	10.23	19.63	2.25	
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25	
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25	
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25	
1.767	1.75	7.767	2.50	13.767	10.23	19.77	2.25	
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25	
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25	
1.867	2.25	7.867	2.50	13.867	10.23	19.87	2.25	
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25	
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25	
1.967	2.25	7.967	2.50	13.967	10.23	19.97	2.25	
2.000	2.25	8.000	2.50	14.000	10.22	20.00	2.25	
2.033	1.62	8.033	3.37	14.033	3.74	20.03	1.50	
2.067	1.62	8.067	3.37	14.067	3.74	20.07	1.50	
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50	
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50	
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50	
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50	
2.233	1.62	8.233	3.37	14.233	3.74	20.23	1.50	
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50	
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50	
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50	
2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50	
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50	
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50	
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50	
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50	
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50	
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50	
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50	
2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50	
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50	
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50	
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50	
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50	
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50	
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50	
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50	

HRP8-EX_50-100 YEAR-2096 IDF.OUT									
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50		
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50		
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50		
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50		
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50		
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50		
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50		
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50		
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50		
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50		
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50		
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50		
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50		
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50		
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50		
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50		
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50		
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50		
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50		
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50		
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50		
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50		
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50		
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50		
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50		
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50		
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50		
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50		
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50		
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50		
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50		
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50		
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50		
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50		
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50		
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50		
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50		
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50		
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50		
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50		
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50		
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50		
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50		
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50		
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50		
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50		
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50		
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50		
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50		
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50		
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50		
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50		
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50		
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50		
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50		
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50		
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50		
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50		
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50		
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50		
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50		
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50		
4.967	2.00	10.967	7.74	16.967	2.25	22.97	1.50		
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50		
5.033	2.00	11.033	11.98	17.033	2.25	23.03	1.50		
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50		
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50		
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50		
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50		
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50		
5.233	2.00	11.233	11.98	17.233	2.25	23.23	1.50		
5.267	2.00	11.267	11.98	17.267	2.25	23.27	1.50		
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50		
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50		
5.367	2.00	11.367	11.98	17.367	2.25	23.37	1.50		
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50		
5.433	2.00	11.433	11.98	17.433	2.25	23.43	1.50		
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50		
5.500	2.00	11.500	12.63	17.500	2.25	23.50	1.50		
5.533	2.00	11.533	51.92	17.533	2.25	23.53	1.50		
5.567	2.00	11.567	51.92	17.567	2.25	23.57	1.50		
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50		
5.633	2.00	11.633	51.92	17.633	2.25	23.63	1.50		
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50		
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50		
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50		
5.767	2.00	11.767	94.96	17.767	2.25	23.77	1.50		

HRP8-EX_50-100 YEAR-2096 IDF.OUT									
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50		
5.833	2.00	11.833	137.78	17.833	2.25	23.83	1.50		
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50		
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50		
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50		
5.967	2.00	11.967	137.78	17.967	2.25	23.97	1.50		
6.000	2.00	12.000	137.61	18.000	2.25	24.00	1.50		

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.896 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 73.348
TOTAL RAINFALL (mm)= 124.799
RUNOFF COEFFICIENT = 0.588

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
NASHWD (0150)
ID= 1 DT= 2.0 min
Area (ha)= 6.87
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.19
Curve Number (CN)= 82.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	'	hrs	mm/hr
0.033	1.25	6.033	2.50	12.033	17.97	18.03	2.25		
0.067	1.25	6.067	2.50	12.067	17.97	18.07	2.25		
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25		
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25		
0.233	1.25	6.233	2.50	12.233	17.97	18.23	2.25		
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25		
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25		
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25		
0.367	1.25	6.367	2.50	12.367	17.97	18.37	2.25		
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25		
0.433	1.25	6.433	2.50	12.433	17.97	18.43	2.25		
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25		
0.500	1.25	6.500	2.50	12.500	17.96	18.50	2.25		
0.533	1.25	6.533	2.50	12.533	9.24	18.53	2.25		
0.567	1.25	6.567	2.50	12.567	9.24	18.57	2.25		
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25		
0.633	1.25	6.633	2.50	12.633	9.24	18.63	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25		
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25		
0.767	1.25	6.767	2.50	12.767	9.24	18.77	2.25		
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25		
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25		
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25		
0.900	1.25	6.900	2.50	13.000	9.22	19.00	2.25		
0.933	1.25	6.933	2.50	13.033	1.75	19.03	2.25		
0.967	1.25	6.967	2.50	13.067	1.75	19.07	2.25		
1.000	1.25	7.000	2.50	13.100	1.75	19.10	2.25		
1.033	1.25	7.033	2.50	13.133	1.75	19.13	2.25		
1.067	1.25	7.067	2.50	13.167	1.75	19.17	2.25		
1.100	1.25	7.100	2.50	13.200	1.75	19.20	2.25		
1.133	1.25	7.133	2.50	13.233	1.75	19.23	2.25		
1.167	1.25	7.167	2.50	13.267	1.75	19.27	2.25		
1.200	1.25	7.200	2.50	13.300	1.75	19.30	2.25		
1.233	1.25	7.233	2.50	13.333	1.75	19.33	2.25		
1.267	1.25	7.267	2.50	13.367	1.75	19.37	2.25		
1.300	1.25	7.300	2.50	13.400	1.76	19.40	2.25		
1.333	1.25	7.333	2.50	13.433	1.76	19.43	2.25		
1.367	1.25	7.367	2.50	13.467	1.75	19.47	2.25		
1.400	1.25	7.400	2.50	13.500	1.76	19.50	2.25		
1.433	1.25	7.433	2.50	13.533	10.23	19.53	2.25		
1.467	1.25	7.467	2.50	13.567	10.23	19.57	2.25		
1.500	1.25	7.500	2.50	13.600	10.23	19.60	2.25		
1.533	1.25	7.533	2.50	13.633	10.23	19.63	2.25		
1.567	1.25	7.567	2.50	13.667	10.23	19.67	2.25		
1.600	1.25	7.600	2.50	13.700	10.23	19.70	2.25		
1.633	1.25	7.633	2.50	13.733	10.23	19.73	2.25		
1.667	1.25	7.667	2.50	13.767	10.23	19.77	2.25		
1.700	1.25	7.700	2.50	13.800	10.23	19.80	2.25		
1.733	1.25	7.733	2.50	13.833	10.23	19.83	2.25		
1.767	1.25	7.767	2.50	13.867	10.23	19.87	2.25		
1.800	1.25	7.800	2.50	13.900	10.23	19.90	2.25		
1.833	1.25	7.833	2.50	13.933	10.23	19.93	2.25		
1.867	1.25	7.867	2.50	13.967	10.23	19.97	2.25		

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1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25
1.967	2.25	7.967	2.50	13.967	10.23	19.97	2.25
2.000	2.25	8.000	2.50	14.000	10.22	20.00	2.25
2.033	1.62	8.033	3.37	14.033	3.74	20.03	1.50
2.067	1.62	8.067	3.37	14.067	3.74	20.07	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.233	1.62	8.233	3.37	14.233	3.74	20.23	1.50
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50

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4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50
4.967	2.00	10.967	7.74	16.967	2.25	22.97	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.033	2.00	11.033	11.98	17.033	2.25	23.03	1.50
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.233	2.00	11.233	11.98	17.233	2.25	23.23	1.50
5.267	2.00	11.267	11.98	17.267	2.25	23.27	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.367	2.00	11.367	11.98	17.367	2.25	23.37	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.433	2.00	11.433	11.98	17.433	2.25	23.43	1.50
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50
5.500	2.00	11.500	12.03	17.500	2.25	23.50	1.50
5.533	2.00	11.533	51.92	17.533	2.25	23.53	1.50
5.567	2.00	11.567	51.92	17.567	2.25	23.57	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.633	2.00	11.633	51.92	17.633	2.25	23.63	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50
5.767	2.00	11.767	94.96	17.767	2.25	23.77	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.833	2.00	11.833	137.78	17.833	2.25	23.83	1.50
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50
5.967	2.00	11.967	137.78	17.967	2.25	23.97	1.50
6.000	2.00	12.000	137.61	18.000	2.25	24.00	1.50

Unit Hyd Qpeak (cms)= 1.346

PEAK FLOW (cms)= 1.424 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 81.747
TOTAL RAINFALL (mm)= 124.799
RUNOFF COEFFICIENT = 0.655

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1	2	3	4	5
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (1050):	4.49	0.896	12.07	73.34
+ ID2= 2 (0150):	6.87	1.424	12.07	81.75
ID = 3 (0018):	11.36	2.320	12.07	78.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)					
IN= 2--> OUT= 1		Routing time step (min)'= 2.00			
<----- DATA FOR SECTION (1.1) ----->					
Distance	Elevation	Manning			
0.00	101.00	0.0500			
1.00	100.67	0.0500			
2.00	100.33	0.0500 / 0.0300	Main Channel		
3.00	100.00	0.0300	Main Channel		
4.00	100.00	0.0300	Main Channel		
5.00	100.33	0.0300 / 0.0500	Main Channel		
6.00	100.67	0.0500			
7.00	101.00	0.0500			
<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.630E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21

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0.44	100.44	.122E+04	1.3	1.27	15.53	
0.50	100.50	.147E+04	1.7	1.37	14.34	
0.55	100.55	.174E+04	2.2	1.46	13.44	
0.61	100.61	.204E+04	2.7	1.54	12.74	
0.66	100.66	.236E+04	3.2	1.62	12.17	
0.72	100.72	.269E+04	3.8	1.68	11.70	
0.78	100.78	.306E+04	4.5	1.74	11.30	
0.83	100.83	.344E+04	5.2	1.80	10.96	
0.89	100.89	.385E+04	6.0	1.85	10.65	
0.94	100.94	.427E+04	6.9	1.90	10.38	
1.00	101.00	.472E+04	7.8	1.94	10.14	

<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0018)	11.36	2.32	12.07	78.42	0.57	1.49
OUTFLOW: ID= 1 (0037)	11.36	1.73	12.20	78.39	0.50	1.38

CALIB			
NASHYD (1051)			
ID= 1 DT= 8.0 min	Area	(ha)= 50.34	Curve Number (CN)= 82.0
	Ia	(mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.63	

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.133	1.25 6.133	2.50 12.133	17.98 18.13		2.25				
0.267	1.25 6.267	2.50 12.267	17.97 18.27		2.25				
0.400	1.25 6.400	2.50 12.400	17.97 18.40		2.25				
0.533	1.25 6.533	2.50 12.533	15.79 18.53		2.25				
0.667	1.25 6.667	2.50 12.667	9.24 18.67		2.25				
0.800	1.25 6.800	2.50 12.800	9.24 18.80		2.25				
0.933	1.25 6.933	2.50 12.933	9.24 18.93		2.25				
1.067	1.25 7.067	2.50 13.067	5.49 19.07		2.25				
1.200	1.25 7.200	2.50 13.200	1.75 19.20		2.25				
1.333	1.25 7.333	2.50 13.333	1.75 19.33		2.25				
1.467	1.25 7.467	2.50 13.467	1.75 19.47		2.25				
1.600	1.25 7.600	2.50 13.600	8.11 19.60		2.25				
1.733	1.25 7.733	2.50 13.733	10.23 19.73		2.25				
1.867	2.12 7.867	2.50 13.867	10.23 19.87		2.25				
2.000	2.25 8.000	2.50 14.000	10.23 20.00		2.25				
2.133	1.62 8.133	3.37 14.133	3.74 20.13		1.50				
2.267	1.62 8.267	3.37 14.267	3.74 20.27		1.50				
2.400	1.62 8.400	3.37 14.400	3.74 20.40		1.50				
2.533	1.62 8.533	3.37 14.533	3.74 20.53		1.50				
2.667	1.62 8.667	3.37 14.667	3.74 20.67		1.50				
2.800	1.62 8.800	3.37 14.800	3.74 20.80		1.50				
2.933	1.62 8.933	3.37 14.933	3.74 20.93		1.50				
3.067	1.62 9.067	3.68 15.067	3.74 21.07		1.50				
3.200	1.62 9.200	3.99 15.200	3.74 21.20		1.50				
3.333	1.62 9.333	3.99 15.333	3.74 21.33		1.50				
3.467	1.62 9.467	3.99 15.467	3.74 21.47		1.50				
3.600	1.62 9.600	4.37 15.600	3.74 21.60		1.50				
3.733	1.62 9.733	4.49 15.733	3.74 21.73		1.50				
3.867	1.62 9.867	4.49 15.867	3.74 21.87		1.50				
4.000	1.62 10.000	4.49 16.000	3.74 22.00		1.50				
4.133	2.00 10.133	5.74 16.133	2.25 22.13		1.50				
4.267	2.00 10.267	5.74 16.267	2.25 22.27		1.50				
4.400	2.00 10.400	5.74 16.400	2.25 22.40		1.50				
4.533	2.00 10.533	6.24 16.533	2.25 22.53		1.50				
4.667	2.00 10.667	7.74 16.667	2.25 22.67		1.50				
4.800	2.00 10.800	7.74 16.800	2.25 22.80		1.50				
4.933	2.00 10.933	7.74 16.933	2.25 22.93		1.50				
5.067	2.00 11.067	9.86 17.067	2.25 23.07		1.50				
5.200	2.00 11.200	11.98 17.200	2.25 23.20		1.50				
5.333	2.00 11.333	11.98 17.333	2.25 23.33		1.50				
5.467	2.00 11.467	11.98 17.467	2.25 23.47		1.50				
5.600	2.00 11.600	41.93 17.600	2.25 23.60		1.50				
5.733	2.00 11.733	51.92 17.733	2.25 23.73		1.50				
5.867	2.00 11.867	127.04 17.867	2.25 23.87		1.50				
6.000	2.00 12.000	137.78 18.000	2.25 24.00		1.50				

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 4.738 (1)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 81.741
TOTAL RAINFALL (mm)= 124.800
RUNOFF COEFFICIENT = 0.655

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1051):	50.34	4.738	12.53	81.74
+ ID2= 2 (0037):	11.36	1.729	12.20	78.39
=====				
ID = 3 (0029):	61.70	6.031	12.30	81.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0151)			
ID= 1 DT= 3.0 min	Area	(ha)= 10.65	
	Total Imp(%)=	29.00	Dir. Conn.(%)= 29.00

IMPERVIOUS			PERVIOUS (1)		
Surface Area	(ha)=	7.50			
Dep. Storage	(mm)=	1.50			
Average Slope	(%)=	2.00			
Length	(m)=	272.00			
Mannings n	=	0.013			

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.25 6.050	2.50 12.050	17.97 18.05		2.25				
0.100	1.25 6.100	2.50 12.100	17.97 18.10		2.25				
0.150	1.25 6.150	2.50 12.150	17.97 18.15		2.25				
0.200	1.25 6.200	2.50 12.200	17.97 18.20		2.25				
0.250	1.25 6.250	2.50 12.250	17.97 18.25		2.25				
0.300	1.25 6.300	2.50 12.300	17.97 18.30		2.25				
0.350	1.25 6.350	2.50 12.350	17.97 18.35		2.25				
0.400	1.25 6.400	2.50 12.400	17.97 18.40		2.25				
0.450	1.25 6.450	2.50 12.450	17.97 18.45		2.25				
0.500	1.25 6.500	2.50 12.500	17.97 18.50		2.25				
0.550	1.25 6.550	2.50 12.550	9.24 18.55		2.25				
0.600	1.25 6.600	2.50 12.600	9.24 18.60		2.25				
0.650	1.25 6.650	2.50 12.650	9.24 18.65		2.25				
0.700	1.25 6.700	2.50 12.700	9.24 18.70		2.25				
0.750	1.25 6.750	2.50 12.750	9.24 18.75		2.25				
0.800	1.25 6.800	2.50 12.800	9.24 18.80		2.25				
0.850	1.25 6.850	2.50 12.850	9.24 18.85		2.25				
0.900	1.25 6.900	2.50 12.900	9.24 18.90		2.25				
0.950	1.25 6.950	2.50 12.950	9.24 18.95		2.25				
1.000	1.25 7.000	2.50 13.000	9.23 19.00		2.25				
1.050	1.25 7.050	2.50 13.050	1.75 19.05		2.25				
1.100	1.25 7.100	2.50 13.100	1.75 19.10		2.25				
1.150	1.25 7.150	2.50 13.150	1.75 19.15		2.25				
1.200	1.25 7.200	2.50 13.200	1.75 19.20		2.25				
1.250	1.25 7.250	2.50 13.250	1.75 19.25		2.25				
1.300	1.25 7.300	2.50 13.300	1.75 19.30		2.25				
1.350	1.25 7.350	2.50 13.350	1.75 19.35		2.25				
1.400	1.25 7.400	2.50 13.400	1.75 19.40		2.25				
1.450	1.25 7.450	2.50 13.450	1.75 19.45		2.25				
1.500	1.25 7.500	2.50 13.500	1.75 19.50		2.25				
1.550	1.25 7.550	2.50 13.550	10.23 19.55		2.25				
1.600	1.25 7.600	2.50 13.600	10.23 19.60		2.25				
1.650	1.25 7.650	2.50 13.650	10.23 19.65		2.25				
1.700	1.25 7.700	2.50 13.700	10.23 19.70		2.25				
1.750	1.25 7.750	2.50 13.750	10.23 19.75		2.25				
1.800	2.25 7.800	2.50 13.800	10.23 19.80		2.25				
1.850	2.25 7.850	2.50 13.850	10.23 19.85		2.25				
1.900	2.25 7.900	2.50 13.900	10.23 19.90		2.25				
1.950	2.25 7.950	2.50 13.950	10.23 19.95		2.25				
2.000	2.25 8.000	2.50 14.000	10.23 20.00		2.25				
2.050	1.62 8.050	3.37 14.050	3.74 20.05		1.50				
2.100	1.62 8.100	3.37 14.100	3.74 20.10		1.50				
2.150	1.62 8.150	3.37 14.150	3.74 20.15		1.50				
2.200	1.62 8.200	3.37 14.200	3.74 20.20		1.50				
2.250	1.62 8.250	3.37 14.250	3.74 20.25		1.50				
2.300	1.62 8.300	3.37 14.300	3.74 20.30		1.50				
2.350	1.62 8.350	3.37 14.350	3.74 20.35		1.50				
2.400	1.62 8.400	3.37 14.400	3.74 20.40		1.50				
2.450	1.62 8.450	3.37 14.450	3.74 20.45		1.50				
2.500	1.62 8.500	3.37 14.500	3.74 20.50		1.50				
2.550	1.62 8.550	3.37 14.550	3.74 20.55		1.50				
2.600	1.62 8.600	3.37 14.600	3.74 20.60		1.50				
2.650	1.62 8.650	3.37 14.650	3.74 20.65		1.50				
2.700	1.62 8.700	3.37 14.700	3.74 20.70		1.50				

HRP8-EX_50-100 YEAR-2096 IDF.OUT									
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50		
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50		
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50		
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50		
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50		
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50		
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50		
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50		
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50		
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50		
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50		
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50		
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50		
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50		
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50		
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50		
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50		
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50		
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50		
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50		
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50		
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50		
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50		
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50		
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50		
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50		
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50		
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50		
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50		
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50		
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50		
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50		
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50		
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50		
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50		
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50		
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50		
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50		
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50		
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50		
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50		
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50		
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50		
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50		
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50		
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50		
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50		
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50		
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50		
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50		
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50		
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50		
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50		
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50		
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50		
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50		
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50		
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50		
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50		
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50		
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50		
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50		
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50		
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50		
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50		
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50		

Max.Eff.Inten.(mm/hr)= 137.78 56.08
over (min) 6.00 33.00
Storage Coeff. (min)= 3.33 (ii) 31.42 (iii)
Unit Hyd. Tpeak (min)= 6.00 33.00
Unit Hyd. peak (cms)= 0.26 0.04

TOTALS
PEAK FLOW (cms)= 1.17 0.70 1.496 (iii)
TIME TO PEAK (hrs)= 12.00 12.40 12.00
RUNOFF VOLUME (mm)= 123.30 68.45 84.36
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.68

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP8-EX_50-100 YEAR-2096 IDF.OUT

ADD HYD (0031)
1 + 2 = 3
ID1= 1 (0151): AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
+ ID2= 2 (0029): 10.65 1.496 12.00 84.36
ID = 3 (0031): 61.70 6.031 12.30 81.12
ID = 3 (0031): 72.35 6.866 12.40 81.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0039)
IN= 2--> OUT= 1 Routing time step (min)'= 2.00
<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0500
1.00 100.67 0.0500
2.00 100.33 0.0500 / 0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel
5.00 100.33 0.0300 / 0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .266E+02 0.0 0.18 46.14
0.09 100.09 .599E+02 0.0 0.27 30.87
0.14 100.14 .998E+02 0.1 0.33 24.63
0.19 100.19 .146E+03 0.1 0.39 21.04
0.24 100.24 .200E+03 0.2 0.44 18.63
0.28 100.28 .259E+03 0.3 0.49 16.87
0.33 100.33 .326E+03 0.4 0.53 15.51
0.39 100.39 .413E+03 0.5 0.61 13.47
0.44 100.44 .510E+03 0.7 0.68 12.15
0.50 100.50 .615E+03 0.9 0.73 11.22
0.55 100.55 .729E+03 1.2 0.78 10.52
0.61 100.61 .853E+03 1.4 0.83 9.97
0.66 100.66 .985E+03 1.7 0.86 9.53
0.72 100.72 .113E+04 2.1 0.90 9.16
0.78 100.78 .128E+04 2.4 0.93 8.84
0.83 100.83 .144E+04 2.8 0.96 8.57
0.89 100.89 .161E+04 3.2 0.99 8.34
0.94 100.94 .179E+04 3.7 1.01 8.13
1.00 101.00 .198E+04 4.1 1.04 7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0031) 72.35 6.87 12.40 81.60 0.99 1.03
OUTFLOW: ID= 1 (0039) 72.35 6.64 12.50 81.59 1.00 1.04

CALIB
STANDHYD (0152) Area (ha)= 15.40
ID= 1 DT= 3.0 min Total Imp(%)= 43.00 Dir. Conn.(%)= 43.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.62 8.78
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 335.00 335.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.050 1.25 6.050 2.50 12.050 17.97 18.05 2.25
0.100 1.25 6.100 2.50 12.100 17.97 18.10 2.25
0.150 1.25 6.150 2.50 12.150 17.97 18.15 2.25
0.200 1.25 6.200 2.50 12.200 17.97 18.20 2.25
0.250 1.25 6.250 2.50 12.250 17.97 18.25 2.25
0.300 1.25 6.300 2.50 12.300 17.97 18.30 2.25
0.350 1.25 6.350 2.50 12.350 17.97 18.35 2.25
0.400 1.25 6.400 2.50 12.400 17.97 18.40 2.25
0.450 1.25 6.450 2.50 12.450 17.97 18.45 2.25

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0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50

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4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 45.41
over (min) 6.00 39.00
Storage Coeff. (min)= 3.77 (ii) 38.41 (iii)
Unit Hyd. Tpeak (min)= 6.00 39.00
Unit Hyd. peak (cms)= 0.24 0.03

PEAK FLOW (cms)= 2.48 0.66 2.751 (iii)
TIME TO PEAK (hrs)= 12.00 12.50 12.00
RUNOFF VOLUME (mm)= 123.30 64.03 89.52
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.51 0.72

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0033)					
1 + 2 = 3					

	AREA	QPEAK	TPEAK	R. V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0152):	15.40	2.751	12.00	89.52	
+ ID2= 2 (0039):	72.35	6.635	12.50	81.59	
=====					
ID = 3 (0033):	87.75	7.628	12.50	82.98	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)			
IN= 2--> OUT= 1			
Routing time step (min)'= 2.00			
<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.296E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79

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0.66	100.66	.573E+03	1.7	0.86	5.53		
0.72	100.72	.655E+03	2.1	0.90	5.32		
0.78	100.78	.743E+03	2.4	0.93	5.14		
0.83	100.83	.836E+03	2.8	0.96	4.98		
0.89	100.89	.934E+03	3.2	0.99	4.84		
0.94	100.94	.104E+04	3.7	1.01	4.72		
1.00	101.00	.115E+04	4.1	1.04	4.61		

**** WARNING: TRAVEL TIME TABLE EXCEEDED							
<---- hydrograph ---->				<-pipe / channel->			
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0033)	87.75	7.63	12.50	82.98	0.99	1.03	
OUTFLOW: ID= 1 (0040)	87.75	7.54	12.57	82.98	1.00	1.04	

RESERVOIR(0036)							
IN= 2---> OUT= 1							
DT= 4.0 min							

OVERFLOW IS OFF							
	OUTFLOW	STORAGE	OUTFLOW	STORAGE			
	(cms)	(ha.m.)	(cms)	(ha.m.)			
0.0000	0.0000	1.5621	0.7845				
0.0206	0.1029	3.2275	0.8811				
0.0461	0.1764	5.2638	0.9799				
0.0618	0.2539	7.6097	1.0811				
0.0743	0.3353	10.2263	1.1844				
0.0850	0.4205	13.0858	1.2900				
0.0945	0.5081	16.1069	1.3979				
0.1031	0.5980	19.5735	1.5082				
0.1071	0.6438	23.5541	1.6210				
0.3892	0.6901	35.0828	1.9135				
	AREA	QPEAK	TPEAK	R.V.			
	(ha)	(cms)	(hrs)	(mm)			
INFLOW : ID= 2 (0040)	87.750	7.536	12.57	82.98			
OUTFLOW: ID= 1 (0036)	87.750	7.358	12.67	82.64			
	PEAK	FLOW	REDUCTION	[Qout/Qin](%)=	97.63		
	TIME SHIFT OF PEAK FLOW			(min)=	6.00		
	MAXIMUM STORAGE	USED		(ha.m.)=	1.0703		

CALIB							
NASHYD (0153)	Area	(ha)=	1.70	Curve Number (CN)=	79.0		
ID= 1 DT= 1.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00		
-----	U.H. Tp(hrs)=	0.11					

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	1.25	6.017	2.50	12.017	18.05	18.02	2.25
0.033	1.25	6.033	2.50	12.033	17.97	18.03	2.25
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25
0.067	1.25	6.067	2.50	12.067	17.97	18.07	2.25
0.083	1.25	6.083	2.50	12.083	17.97	18.08	2.25
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25
0.117	1.25	6.117	2.50	12.117	17.97	18.12	2.25
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25
0.183	1.25	6.183	2.50	12.183	17.97	18.18	2.25
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25
0.217	1.25	6.217	2.50	12.217	17.97	18.22	2.25
0.233	1.25	6.233	2.50	12.233	17.97	18.23	2.25
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25
0.283	1.25	6.283	2.50	12.283	17.97	18.28	2.25
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25
0.317	1.25	6.317	2.50	12.317	17.97	18.32	2.25
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25
0.367	1.25	6.367	2.50	12.367	17.97	18.37	2.25
0.383	1.25	6.383	2.50	12.383	17.97	18.38	2.25
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25
0.433	1.25	6.433	2.50	12.433	17.97	18.43	2.25
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25
0.483	1.25	6.483	2.50	12.483	17.97	18.48	2.25
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25
0.517	1.25	6.517	2.50	12.517	9.25	18.52	2.25

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0.533	1.25	6.533	2.50	12.533	9.24	18.53	2.25
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25
0.567	1.25	6.567	2.50	12.567	9.24	18.57	2.25
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25
0.617	1.25	6.617	2.50	12.617	9.24	18.62	2.25
0.633	1.25	6.633	2.50	12.633	9.24	18.63	2.25
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25
0.683	1.25	6.683	2.50	12.683	9.24	18.68	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25
0.717	1.25	6.717	2.50	12.717	9.24	18.72	2.25
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25
0.767	1.25	6.767	2.50	12.767	9.24	18.77	2.25
0.783	1.25	6.783	2.50	12.783	9.24	18.78	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25
0.817	1.25	6.817	2.50	12.817	9.24	18.82	2.25
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25
0.883	1.25	6.883	2.50	12.883	9.24	18.88	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25
0.967	1.25	6.967	2.50	12.967	9.24	18.97	2.25
0.983	1.25	6.983	2.50	12.983	9.24	18.98	2.25
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25
1.017	1.25	7.017	2.50	13.017	1.76	19.02	2.25
1.033	1.25	7.033	2.50	13.033	1.75	19.03	2.25
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25
1.067	1.25	7.067	2.50	13.067	1.75	19.07	2.25
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25
1.117	1.25	7.117	2.50	13.117	1.75	19.12	2.25
1.133	1.25	7.133	2.50	13.133	1.75	19.13	2.25
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25
1.183	1.25	7.183	2.50	13.183	1.75	19.18	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.217	1.25	7.217	2.50	13.217	1.75	19.22	2.25
1.233	1.25	7.233	2.50	13.233	1.75	19.23	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.267	1.25	7.267	2.50	13.267	1.75	19.27	2.25
1.283	1.25	7.283	2.50	13.283	1.75	19.28	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.317	1.25	7.317	2.50	13.317	1.75	19.32	2.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25
1.367	1.25	7.367	2.50	13.367	1.75	19.37	2.25
1.383	1.25	7.383	2.50	13.383	1.75	19.38	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25
1.433	1.25	7.433	2.50	13.433	1.75	19.43	2.25
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25
1.483	1.25	7.483	2.50	13.483	1.75	19.48	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.517	1.25	7.517	2.50	13.517	10.22	19.52	2.25
1.533	1.25	7.533	2.50	13.533	10.23	19.53	2.25
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25
1.567	1.25	7.567	2.50	13.567	10.23	19.57	2.25
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.617	1.25	7.617	2.50	13.617	10.23	19.62	2.25
1.633	1.25	7.633	2.50	13.633	10.23	19.63	2.25
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25
1.683	1.25	7.683	2.50	13.683	10.23	19.68	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.717	1.25	7.717	2.50	13.717	10.23	19.72	2.25
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.767	2.25	7.767	2.50	13.767	10.23	19.77	2.25
1.783	2.25	7.783	2.50	13.783	10.23	19.78	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.817	2.25	7.817	2.50	13.817	10.23	19.82	2.25
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.867	2.25	7.867	2.50	13.867	10.23	19.87	2.25
1.883	2.25	7.883	2.50	13.883	10.23	19.88	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
1.967	2.25	7.967	2.50	13.967	10.23	19.97	2.25

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1.983	2.25	7.983	2.50	13.983	10.23	19.98	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.017	1.62	8.017	3.37	14.017	3.76	20.02	1.50
2.033	1.62	8.033	3.37	14.033	3.74	20.03	1.50
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.067	1.62	8.067	3.37	14.067	3.74	20.07	1.50
2.083	1.62	8.083	3.37	14.083	3.74	20.08	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.117	1.62	8.117	3.37	14.117	3.74	20.12	1.50
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.183	1.62	8.183	3.37	14.183	3.74	20.18	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.217	1.62	8.217	3.37	14.217	3.74	20.22	1.50
2.233	1.62	8.233	3.37	14.233	3.74	20.23	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50
2.283	1.62	8.283	3.37	14.283	3.74	20.28	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.317	1.62	8.317	3.37	14.317	3.74	20.32	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50
2.383	1.62	8.383	3.37	14.383	3.74	20.38	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50
2.483	1.62	8.483	3.37	14.483	3.74	20.48	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.517	1.62	8.517	3.37	14.517	3.74	20.52	1.50
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.617	1.62	8.617	3.37	14.617	3.74	20.62	1.50
2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.683	1.62	8.683	3.37	14.683	3.74	20.68	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.717	1.62	8.717	3.37	14.717	3.74	20.72	1.50
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50
2.783	1.62	8.783	3.37	14.783	3.74	20.78	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.817	1.62	8.817	3.37	14.817	3.74	20.82	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50
2.883	1.62	8.883	3.37	14.883	3.74	20.88	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50
2.983	1.62	8.983	3.37	14.983	3.74	20.98	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.017	1.62	9.017	3.99	15.017	3.74	21.02	1.50
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.117	1.62	9.117	3.99	15.117	3.74	21.12	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.183	1.62	9.183	3.99	15.183	3.74	21.18	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.217	1.62	9.217	3.99	15.217	3.74	21.22	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.283	1.62	9.283	3.99	15.283	3.74	21.28	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.317	1.62	9.317	3.99	15.317	3.74	21.32	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.383	1.62	9.383	3.99	15.383	3.74	21.38	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50

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3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.483	1.62	9.483	3.99	15.483	3.74	21.48	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.517	1.62	9.517	4.49	15.517	3.74	21.52	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.617	1.62	9.617	4.49	15.617	3.74	21.62	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.683	1.62	9.683	4.49	15.683	3.74	21.68	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.717	1.62	9.717	4.49	15.717	3.74	21.72	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.783	1.62	9.783	4.49	15.783	3.74	21.78	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.817	1.62	9.817	4.49	15.817	3.74	21.82	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.883	1.62	9.883	4.49	15.883	3.74	21.88	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
3.983	1.62	9.983	4.49	15.983	3.74	21.98	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.017	2.00	10.017	5.74	16.017	2.25	22.02	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.117	2.00	10.117	5.74	16.117	2.25	22.12	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.183	2.00	10.183	5.74	16.183	2.25	22.18	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.217	2.00	10.217	5.74	16.217	2.25	22.22	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.283	2.00	10.283	5.74	16.283	2.25	22.28	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.317	2.00	10.317	5.74	16.317	2.25	22.32	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.383	2.00	10.383	5.74	16.383	2.25	22.38	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.483	2.00	10.483	5.74	16.483	2.25	22.48	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.517	2.00	10.517	7.74	16.517	2.25	22.52	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.617	2.00	10.617	7.74	16.617	2.25	22.62	1.50
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.683	2.00	10.683	7.74	16.683	2.25	22.68	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.717	2.00	10.717	7.74	16.717	2.25	22.72	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50
4.783	2.00	10.783	7.74	16.783	2.25	22.78	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.817	2.00	10.817	7.74	16.817	2.25	22.82	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50

HRP8-EX_50-100 YEAR-2096 IDF.OUT

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voind.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\2f9a742c-6959-4839-8e61-4c1e3cb8c5fa\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\2f9a742c-6959-4839-8e61-4c1e3cb8c5fa\scenar

DATE: 03/24/2023 TIME: 11:07:23

USER:

COMMENTS: _____

** SIMULATION : Run 12 **

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\44abe5e4-85f2-496b-a0a0-478d5144af76\c7ff0caf
| Ptotal=136.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.37	6.25	2.74	12.25	19.70	18.25	2.46
0.50	1.37	6.50	2.74	12.50	19.70	18.50	2.46
0.75	1.37	6.75	2.74	12.75	10.12	18.75	2.46
1.00	1.37	7.00	2.74	13.00	10.12	19.00	2.46
1.25	1.37	7.25	2.74	13.25	1.92	19.25	2.46
1.50	1.37	7.50	2.74	13.50	1.92	19.50	2.46
1.75	1.37	7.75	2.74	13.75	11.22	19.75	2.46
2.00	2.46	8.00	2.74	14.00	11.22	20.00	2.46
2.25	1.78	8.25	3.69	14.25	4.10	20.25	1.64
2.50	1.78	8.50	3.69	14.50	4.10	20.50	1.64
2.75	1.78	8.75	3.69	14.75	4.10	20.75	1.64
3.00	1.78	9.00	3.69	15.00	4.10	21.00	1.64
3.25	1.78	9.25	4.38	15.25	4.10	21.25	1.64
3.50	1.78	9.50	4.38	15.50	4.10	21.50	1.64
3.75	1.78	9.75	4.92	15.75	4.10	21.75	1.64
4.00	1.78	10.00	4.92	16.00	4.10	22.00	1.64
4.25	2.19	10.25	6.29	16.25	2.46	22.25	1.64
4.50	2.19	10.50	6.29	16.50	2.46	22.50	1.64
4.75	2.19	10.75	8.48	16.75	2.46	22.75	1.64
5.00	2.19	11.00	8.48	17.00	2.46	23.00	1.64
5.25	2.19	11.25	13.13	17.25	2.46	23.25	1.64
5.50	2.19	11.50	13.13	17.50	2.46	23.50	1.64
5.75	2.19	11.75	56.91	17.75	2.46	23.75	1.64
6.00	2.19	12.00	151.03	18.00	2.46	24.00	1.64

| CALIB |
| NASHYD (1050) | Area (ha)= 4.49 Curve Number (CN)= 77.0
| ID= 1 DT= 2.0 min | Ia (mm)= 5.00 # of Linear Res. (N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	1.37	6.033	2.74	12.033	19.70	18.03	2.46
0.067	1.37	6.067	2.74	12.067	19.70	18.07	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.233	1.37	6.233	2.74	12.233	19.70	18.23	2.46
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46

0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.367	1.37	6.367	2.74	12.367	19.70	18.37	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46
0.500	1.37	6.500	2.74	12.500	19.68	18.50	2.46
0.533	1.37	6.533	2.74	12.533	10.12	18.53	2.46
0.567	1.37	6.567	2.74	12.567	10.12	18.57	2.46
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46
0.633	1.37	6.633	2.74	12.633	10.12	18.63	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46
0.767	1.37	6.767	2.74	12.767	10.12	18.77	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46
0.967	1.37	6.967	2.74	12.967	10.12	18.97	2.46
1.000	1.37	7.000	2.74	13.000	10.11	19.00	2.46
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46
1.500	1.37	7.500	2.74	13.500	1.93	19.50	2.46
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46
1.767	1.92	7.767	2.74	13.767	11.22	19.77	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46
2.000	2.46	8.000	2.74	14.000	11.20	20.00	2.46
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64

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3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64
5.000	2.19	11.000	8.49	17.000	2.46	23.00	1.64
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.500	2.19	11.500	13.19	17.500	2.46	23.50	1.64
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.767	2.19	11.767	104.09	17.767	2.46	23.77	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64
6.000	2.19	12.000	150.85	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 1.015

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PEAK FLOW (cms)= 1.021 (1)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 83.639
TOTAL RAINFALL (mm)= 136.799
RUNOFF COEFFICIENT = 0.611

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
NASHYD (0150)
IDC-1 DT= 2.0 min
Area (ha)= 6.87
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.19
Curve Number (CN)= 82.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.37	6.033	2.74	12.033	19.70	18.03	2.46		
0.067	1.37	6.067	2.74	12.067	19.70	18.07	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46		
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.233	1.37	6.233	2.74	12.233	19.70	18.23	2.46		
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46		
0.367	1.37	6.367	2.74	12.367	19.70	18.37	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46		
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46		
0.500	1.37	6.500	2.74	12.500	19.68	18.50	2.46		
0.533	1.37	6.533	2.74	12.533	18.12	18.53	2.46		
0.567	1.37	6.567	2.74	12.567	18.12	18.57	2.46		
0.600	1.37	6.600	2.74	12.600	18.12	18.60	2.46		
0.633	1.37	6.633	2.74	12.633	18.12	18.63	2.46		
0.667	1.37	6.667	2.74	12.667	18.12	18.67	2.46		
0.700	1.37	6.700	2.74	12.700	18.12	18.70	2.46		
0.733	1.37	6.733	2.74	12.733	18.12	18.73	2.46		
0.767	1.37	6.767	2.74	12.767	18.12	18.77	2.46		
0.800	1.37	6.800	2.74	12.800	18.12	18.80	2.46		
0.833	1.37	6.833	2.74	12.833	18.12	18.83	2.46		
0.867	1.37	6.867	2.74	12.867	18.12	18.87	2.46		
0.900	1.37	6.900	2.74	12.900	18.12	18.90	2.46		
0.933	1.37	6.933	2.74	12.933	18.12	18.93	2.46		
0.967	1.37	6.967	2.74	12.967	18.12	18.97	2.46		
1.000	1.37	7.000	2.74	13.000	18.11	19.00	2.46		
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46		
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46		
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46		
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.500	1.37	7.500	2.74	13.500	1.93	19.50	2.46		
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46		
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46		
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.767	1.92	7.767	2.74	13.767	11.22	19.77	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46		
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46		
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46		
2.000	2.46	8.000	2.74	14.000	11.22	19.99	2.46		
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64		
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64		
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64		

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2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64
5.000	2.19	11.000	8.49	17.000	2.46	23.00	1.64
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64

HRP8-EX_50-100 YEAR-2096 IDF.OUT

5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.500	2.19	11.500	13.19	17.500	2.46	23.50	1.64
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.767	2.19	11.767	104.09	17.767	2.46	23.77	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64
6.000	2.19	12.000	150.85	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 1.346

PEAK FLOW (cms)= 1.611 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 92.613
TOTAL RAINFALL (mm)= 136.799
RUNOFF COEFFICIENT = 0.677

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0018) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (1050): 4.49 1.021 12.07 83.64
+ ID2= 2 (9150): 6.87 1.611 12.07 92.61
=====

ID = 3 (0018): 11.36 2.632 12.07 89.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0037) |
IN= 2--> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0500
1.00 100.67 0.0500
2.00 100.33 0.0500 / 0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel
5.00 100.33 0.0300 / 0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .630E+02 0.0 0.33 58.96
0.09 100.09 .143E+03 0.1 0.50 39.44
0.14 100.14 .239E+03 0.1 0.63 31.47
0.19 100.19 .350E+03 0.2 0.73 26.89
0.24 100.24 .477E+03 0.3 0.83 23.81
0.28 100.28 .620E+03 0.5 0.91 21.56
0.33 100.33 .779E+03 0.7 0.99 19.82
0.39 100.39 .988E+03 1.0 1.14 17.21
0.44 100.44 .122E+04 1.3 1.27 15.53
0.50 100.50 .147E+04 1.7 1.37 14.34
0.55 100.55 .174E+04 2.2 1.46 13.44
0.61 100.61 .204E+04 2.7 1.54 12.74
0.66 100.66 .236E+04 3.2 1.62 12.17
0.72 100.72 .269E+04 3.8 1.68 11.70
0.78 100.78 .306E+04 4.5 1.74 11.30
0.83 100.83 .344E+04 5.2 1.80 10.96
0.89 100.89 .385E+04 6.0 1.85 10.65

0.94 100.94 .427E+04 6.9 1.90 10.38
1.00 101.00 .472E+04 7.8 1.94 10.14

<----- hydrograph -----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0018) 11.36 2.63 12.07 89.07 0.61 1.54
OUTFLOW: ID= 1 (0037) 11.36 1.98 12.20 89.04 0.53 1.43

CALIB
STANDHYD (0151)
NASHYD (1051) Area (ha)= 50.34 Curve Number (CN)= 82.0
ID= 1 DT= 8.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.63

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.533	1.37	6.533	2.74	12.533	17.31	18.53	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46
1.067	1.37	7.067	2.74	13.067	6.02	19.07	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46
1.600	1.37	7.600	2.74	13.600	8.89	19.60	2.46
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46
1.867	1.37	7.867	2.74	13.867	11.22	19.87	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64
3.067	1.78	9.067	4.04	15.067	4.10	21.07	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.600	1.78	9.600	4.79	15.600	4.10	21.60	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.533	2.19	10.533	6.84	16.533	2.46	22.53	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
5.067	2.19	11.067	10.81	17.067	2.46	23.07	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.600	2.19	11.600	45.96	17.600	2.46	23.60	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.867	2.19	11.867	139.26	17.867	2.46	23.87	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 5.367 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 92.607
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.677

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)
1 + 2 = 3
ID1= 1 (1051): 50.34 5.367 12.53 92.61

HRP8-EX_50-100 YEAR-2096 IDF.OUT
+ ID2= 2 (0037): 11.36 1.982 12.20 89.04
ID = 3 (0029): 61.78 6.858 12.30 91.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0151)
ID= 1 DT= 3.0 min
Area (ha)= 10.65
Total Imp(%)= 29.00
Dir. Conn.(%)= 29.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.09 7.56
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 272.00 272.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64

HRP8-EX_50-100 YEAR-2096 IDF.OUT

HRP8-EX_50-100 YEAR-2096 IDF.OUT

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0039)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.260E+02	0.0	0.18	46.14
0.09	100.09	.509E+02	0.0	0.27	30.87
0.14	100.14	.998E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ---->				<-pipe / channel->		
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)	
INFLOW : ID= 2 (0031)	72.35	7.86	12.33	92.36	0.99	1.03
OUTFLOW: ID= 1 (0039)	72.35	7.58	12.47	92.36	1.00	1.04

| CALIB |
| STANDHYD (0152) | Area (ha)= 15.40
| ID= 1 DT= 3.0 min | Total Imp(%)= 43.00 Dir. Conn.(%)= 43.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	6.62		8.78
Dep. Storage (mm)=	1.50		1.50
Average Slope (%)=	2.00		2.00
Length (m)=	335.00		335.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	19.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	18.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	18.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	18.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	18.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	18.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	18.12	18.90	2.46

3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 68.37
over (min) 6.00 30.00
Storage Coeff. (min)= 3.21 (ii) 29.16 (ii)
Unit Hyd. Tpeak (min)= 6.00 30.00
Unit Hyd. peak (cms)= 0.26 0.04

TOTALS
PEAK FLOW (cms)= 1.28 0.04 1.717 (iii)
TIME TO PEAK (hrs)= 12.00 12.35 12.00
RUNOFF VOLUME (mm)= 135.30 78.20 94.76
TOTAL RAINFALL (mm)= 136.80 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.57 0.69

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0031) |
1 + 2 = 3
ID1= 1 (0151): 10.65 1.717 12.00 94.76
+ ID2= 2 (0029): 61.70 6.858 12.30 91.95
=====

ID = 3 (0031): 72.35 7.860 12.33 92.36

HRP8-EX_50-100 YEAR-2096 IDF.OUT

0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64

HRP8-EX_50-100 YEAR-2096 IDF.OUT

5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 55.74
over (min) 6.00 36.00
Storage Coeff. (min)= 3.63 (ii) 35.55 (ii)
Unit Hyd. Tpeak (min)= 6.00 36.00
Unit Hyd. peak (cms)= 0.25 0.03
PEAK FLOW (cms)= 2.73 0.80
TIME TO PEAK (hrs)= 12.00 12.45
RUNOFF VOLUME (mm)= 135.30 73.39
TOTAL RAINFALL (mm)= 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.54

TOTALS

3.078 (iii)

12.00

100.01

136.80

0.73

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0152): 15.40 3.078 12.00 100.01
+ ID2= 2 (0039): 72.35 7.579 12.47 92.36
ID = 3 (0033): 87.75 8.743 12.47 93.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)
IN= 2--> OUT= 1
Routing time step (min)'= 2.00
<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0500
1.00 100.67 0.0500
2.00 100.33 0.0500 / 0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel
5.00 100.33 0.0300 / 0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .155E+02 0.0 0.18 26.80
0.09 100.09 .348E+02 0.0 0.27 17.93
0.14 100.14 .580E+02 0.1 0.33 14.31
0.19 100.19 .850E+02 0.1 0.39 12.22
0.24 100.24 .116E+03 0.2 0.44 10.83
0.28 100.28 .151E+03 0.3 0.49 9.80
0.33 100.33 .189E+03 0.4 0.53 9.01
0.39 100.39 .240E+03 0.5 0.61 7.82
0.44 100.44 .296E+03 0.7 0.68 7.06
0.50 100.50 .357E+03 0.9 0.73 6.52
0.55 100.55 .424E+03 1.2 0.78 6.11
0.61 100.61 .496E+03 1.4 0.83 5.79
0.66 100.66 .573E+03 1.7 0.86 5.53
0.72 100.72 .655E+03 2.1 0.90 5.32
0.78 100.78 .743E+03 2.4 0.93 5.14
0.83 100.83 .836E+03 2.8 0.96 4.98
0.89 100.89 .934E+03 3.2 0.99 4.84
0.94 100.94 .104E+04 3.7 1.01 4.72
1.00 101.00 .115E+04 4.1 1.04 4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED

HRP8-EX_50-100 YEAR-2096 IDF.OUT						
<---- hydrograph ---->			<-pipe / channel->			
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0633)	87.75	8.74	12.47	93.79	0.98	1.03
OUTFLOW: ID= 1 (0646)	87.75	8.64	12.53	93.69	1.00	1.04

OVERFLOW IS OFF				
OUTFLOW	STORAGE	OUTFLOW	STORAGE	
(cms)	(ha.m.)	(cms)	(ha.m.)	
0.0000	0.0000	1.5621	0.7845	
0.0206	0.1029	3.2275	0.8811	
0.0461	0.1764	5.2638	0.9799	
0.0618	0.2539	7.6097	1.0811	
0.0743	0.3353	10.2263	1.1844	
0.0850	0.4205	13.0858	1.2900	
0.0945	0.5081	16.1669	1.3979	
0.1031	0.5980	19.5735	1.5082	
0.1071	0.6438	23.5541	1.6210	
0.3892	0.6991	35.0828	1.9135	
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0640)	87.750	8.637	12.53	93.69
OUTFLOW: ID= 1 (0636)	87.750	8.443	12.63	93.35
PEAK FLOW REDUCTION [Qout/Qin](%)= 97.76				
TIME SHIFT OF PEAK FLOW (min)= 6.00				
MAXIMUM STORAGE USED (ha.m.)= 1.1142				

CALIB	Area (ha)=	Curve Number (CN)=
NASHYD (0153)	1.70	79.0
ID= 1 DT= 1.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.11	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	1.37	6.017	2.74	12.017	19.79	18.02	2.46
0.033	1.37	6.033	2.74	12.033	19.70	18.03	2.46
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.067	1.37	6.067	2.74	12.067	19.70	18.07	2.46
0.083	1.37	6.083	2.74	12.083	19.70	18.08	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.117	1.37	6.117	2.74	12.117	19.70	18.12	2.46
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.183	1.37	6.183	2.74	12.183	19.70	18.18	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.217	1.37	6.217	2.74	12.217	19.70	18.22	2.46
0.233	1.37	6.233	2.74	12.233	19.70	18.23	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46
0.283	1.37	6.283	2.74	12.283	19.70	18.28	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.317	1.37	6.317	2.74	12.317	19.70	18.32	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.367	1.37	6.367	2.74	12.367	19.70	18.37	2.46
0.383	1.37	6.383	2.74	12.383	19.70	18.38	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46
0.483	1.37	6.483	2.74	12.483	19.70	18.48	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.517	1.37	6.517	2.74	12.517	10.13	18.52	2.46
0.533	1.37	6.533	2.74	12.533	10.12	18.53	2.46
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46
0.567	1.37	6.567	2.74	12.567	10.12	18.57	2.46
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46
0.617	1.37	6.617	2.74	12.617	10.12	18.62	2.46
0.633	1.37	6.633	2.74	12.633	10.12	18.63	2.46
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46

HRP8-EX_50-100 YEAR-2096 IDF.OUT							
0.683	1.37	6.683	2.74	12.683	10.12	18.68	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.717	1.37	6.717	2.74	12.717	10.12	18.72	2.46
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.767	1.37	6.767	2.74	12.767	10.12	18.77	2.46
0.783	1.37	6.783	2.74	12.783	10.12	18.78	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.817	1.37	6.817	2.74	12.817	10.12	18.82	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46
0.883	1.37	6.883	2.74	12.883	10.12	18.88	2.46
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
0.967	1.37	6.967	2.74	12.967	10.12	18.97	2.46
0.983	1.37	6.983	2.74	12.983	10.12	18.98	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.017	1.37	7.017	2.74	13.017	1.93	19.02	2.46
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.117	1.37	7.117	2.74	13.117	1.92	19.12	2.46
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.183	1.37	7.183	2.74	13.183	1.92	19.18	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.217	1.37	7.217	2.74	13.217	1.92	19.22	2.46
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46
1.283	1.37	7.283	2.74	13.283	1.92	19.28	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.317	1.37	7.317	2.74	13.317	1.92	19.32	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46
1.383	1.37	7.383	2.74	13.383	1.92	19.38	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46
1.483	1.37	7.483	2.74	13.483	1.92	19.48	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.517	1.37	7.517	2.74	13.517	11.20	19.52	2.46
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.617	1.37	7.617	2.74	13.617	11.22	19.62	2.46
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.683	1.37	7.683	2.74	13.683	11.22	19.68	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.717	1.37	7.717	2.74	13.717	11.22	19.72	2.46
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.767	2.46	7.767	2.74	13.767	11.22	19.77	2.46
1.783	2.46	7.783	2.74	13.783	11.22	19.78	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.817	2.46	7.817	2.74	13.817	11.22	19.82	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46
1.883	2.46	7.883	2.74	13.883	11.22	19.88	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46
1.983	2.46	7.983	2.74	13.983	11.22	19.98	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.017	1.78	8.017	3.69	14.017	4.12	20.02	1.65
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.117	1.78	8.117	3.69	14.117	4.10	20.12	1.64

HRP8-EX_50-100 YEAR-2096 IDF.OUT

2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.183	1.78	8.183	3.69	14.183	4.10	20.18	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.217	1.78	8.217	3.69	14.217	4.10	20.22	1.64
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64
2.283	1.78	8.283	3.69	14.283	4.10	20.28	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.317	1.78	8.317	3.69	14.317	4.10	20.32	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64
2.383	1.78	8.383	3.69	14.383	4.10	20.38	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64
2.483	1.78	8.483	3.69	14.483	4.10	20.48	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.517	1.78	8.517	3.69	14.517	4.10	20.52	1.64
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.617	1.78	8.617	3.69	14.617	4.10	20.62	1.64
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.683	1.78	8.683	3.69	14.683	4.10	20.68	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.717	1.78	8.717	3.69	14.717	4.10	20.72	1.64
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64
2.783	1.78	8.783	3.69	14.783	4.10	20.78	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.817	1.78	8.817	3.69	14.817	4.10	20.82	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64
2.883	1.78	8.883	3.69	14.883	4.10	20.88	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64
2.983	1.78	8.983	3.69	14.983	4.10	20.98	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.017	1.78	9.017	4.38	15.017	4.10	21.02	1.64
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.117	1.78	9.117	4.38	15.117	4.10	21.12	1.64
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.183	1.78	9.183	4.38	15.183	4.10	21.18	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.217	1.78	9.217	4.38	15.217	4.10	21.22	1.64
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64
3.283	1.78	9.283	4.38	15.283	4.10	21.28	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.317	1.78	9.317	4.38	15.317	4.10	21.32	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.383	1.78	9.383	4.38	15.383	4.10	21.38	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.483	1.78	9.483	4.38	15.483	4.10	21.48	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.517	1.78	9.517	4.92	15.517	4.10	21.52	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64

HRP8-EX_50-100 YEAR-2096 IDF.OUT

3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.617	1.78	9.617	4.92	15.617	4.10	21.62	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.683	1.78	9.683	4.92	15.683	4.10	21.68	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.717	1.78	9.717	4.92	15.717	4.10	21.72	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.783	1.78	9.783	4.92	15.783	4.10	21.78	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.817	1.78	9.817	4.92	15.817	4.10	21.82	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.883	1.78	9.883	4.92	15.883	4.10	21.88	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
3.983	1.78	9.983	4.92	15.983	4.10	21.98	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.017	2.19	10.017	6.29	16.017	2.47	22.02	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.117	2.19	10.117	6.29	16.117	2.46	22.12	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.183	2.19	10.183	6.29	16.183	2.46	22.18	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.217	2.19	10.217	6.29	16.217	2.46	22.22	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.283	2.19	10.283	6.29	16.283	2.46	22.28	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.317	2.19	10.317	6.29	16.317	2.46	22.32	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.383	2.19	10.383	6.29	16.383	2.46	22.38	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.483	2.19	10.483	6.29	16.483	2.46	22.48	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.517	2.19	10.517	8.48	16.517	2.46	22.52	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.617	2.19	10.617	8.48	16.617	2.46	22.62	1.64
4.633	2.19	10.633					

HRP8-EX_50-100 YEAR-2096 IDF.OUT									
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64		
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64		
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64		
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64		
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64		
5.117	2.19	11.117	13.13	17.117	2.46	23.12	1.64		
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64		
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64		
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64		
5.183	2.19	11.183	13.13	17.183	2.46	23.18	1.64		
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64		
5.217	2.19	11.217	13.13	17.217	2.46	23.22	1.64		
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64		
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64		
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64		
5.283	2.19	11.283	13.13	17.283	2.46	23.28	1.64		
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64		
5.317	2.19	11.317	13.13	17.317	2.46	23.32	1.64		
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64		
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64		
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64		
5.383	2.19	11.383	13.13	17.383	2.46	23.38	1.64		
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64		
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64		
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64		
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64		
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64		
5.483	2.19	11.483	13.13	17.483	2.46	23.48	1.64		
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64		
5.517	2.19	11.517	56.91	17.517	2.46	23.52	1.64		
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64		
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64		
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64		
5.583	2.19	11.583	56.91	17.583	2.46	23.58	1.64		
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64		
5.617	2.19	11.617	56.91	17.617	2.46	23.62	1.64		
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64		
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64		
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64		
5.683	2.19	11.683	56.91	17.683	2.46	23.68	1.64		
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64		
5.717	2.19	11.717	56.91	17.717	2.46	23.72	1.64		
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64		
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64		
5.767	2.19	11.767	150.98	17.767	2.46	23.77	1.64		
5.783	2.19	11.783	151.03	17.783	2.46	23.78	1.64		
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64		
5.817	2.19	11.817	151.03	17.817	2.46	23.82	1.64		
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64		
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64		
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64		
5.883	2.19	11.883	151.03	17.883	2.46	23.88	1.64		
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64		
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64		
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64		
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64		
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64		
5.983	2.19	11.983	151.03	17.983	2.46	23.98	1.64		
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64		

Unit Hyd Qpeak (cms)= 0.580

PEAK FLOW (cms)= 0.481 (i)
TIME TO PEAK (hrs)= 12.017
RUNOFF VOLUME (mm)= 73.814
TOTAL RAINFALL (mm)= 136.801
RUNOFF COEFFICIENT = 0.540

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)				
1	2	3		
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0153):	1.70	0.481	12.02	73.81
+ ID2= 2 (0036):	87.75	8.443	12.63	93.35
=====				
ID = 3 (0035):	89.45	8.503	12.63	89.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0038)	Area	(ha)=	87.75	Curve Number (CN)= 82.0
ID= 1 DT= 8.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00

----- U.H. Tp(hrs)= 0.92
NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46		
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.533	1.37	6.533	2.74	12.533	17.31	18.53	2.46		
0.667	1.37	6.667	2.74	12.667	19.12	18.67	2.46		
0.800	1.37	6.800	2.74	12.800	19.12	18.80	2.46		
0.933	1.37	6.933	2.74	12.933	19.12	18.93	2.46		
1.067	1.37	7.067	2.74	13.067	6.02	19.07	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.600	1.37	7.600	2.74	13.600	8.89	19.60	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.867	2.33	7.867	2.74	13.867	11.22	19.87	2.46		
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46		
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64		
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64		
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64		
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64		
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64		
3.067	1.78	9.067	4.04	15.067	4.10	21.07	1.64		
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64		
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64		
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64		
3.600	1.78	9.600	4.79	15.600	4.10	21.60	1.64		
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64		
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64		
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64		
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64		
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64		
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64		
4.533	2.19	10.533	6.84	16.533	2.46	22.53	1.64		
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64		
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64		
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64		
5.067	2.19	11.067	10.81	17.067	2.46	23.07	1.64		
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64		
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64		
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64		
5.600	2.19	11.600	45.96	17.600	2.46	23.60	1.64		
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64		
5.867	2.19	11.867	139.26	17.867	2.46	23.87	1.64		
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64		

Unit Hyd Qpeak (cms)= 3.643

PEAK FLOW (cms)= 7.120 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 92.616
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.677

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP9-EX_50-100 YEAR-2096 IDF.OUT

V V I SSSS U U A L (v 6.1.2002)

V V I SS U U A A L

V V I SS U U A A A A L

V V I SS U U A A L

V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM

O O T T T H H Y Y M M O O

O O T T H H Y M M O O

000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat

Output filename: C:\Users\AbirA\AppData\Local\Civica\NH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\114573d4-a544-4ebd-80e7-5adacf368335\scenar

Summary filename: C:\Users\AbirA\AppData\Local\Civica\NH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\114573d4-a544-4ebd-80e7-5adacf368335\scenar

DATE: 03/24/2023 TIME: 11:19:38

USER:

COMMENTS: _____

** SIMULATION : Run 11

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\1abcbcf8-2ffc-4655-a8c2-4873468fd2c8\5fdf4178

Ptotal=124.80 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs

Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.25	6.25	2.50	12.25	17.97	18.25	2.25	
0.50	1.25	6.50	2.50	12.50	17.97	18.50	2.25	
0.75	1.25	6.75	2.50	12.75	9.24	18.75	2.25	
1.00	1.25	7.00	2.50	13.00	9.24	19.00	2.25	
1.25	1.25	7.25	2.50	13.25	1.75	19.25	2.25	
1.50	1.25	7.50	2.50	13.50	1.75	19.50	2.25	
1.75	1.25	7.75	2.50	13.75	10.23	19.75	2.25	
2.00	2.25	8.00	2.50	14.00	10.23	20.00	2.25	
2.25	1.62	8.25	3.37	14.25	3.74	20.25	1.50	
2.50	1.62	8.50	3.37	14.50	3.74	20.50	1.50	
2.75	1.62	8.75	3.37	14.75	3.74	20.75	1.50	
3.00	1.62	9.00	3.37	15.00	3.74	21.00	1.50	
3.25	1.62	9.25	3.00	15.25	3.74	21.25	1.50	
3.50	1.62	9.50	3.00	15.50	3.74	21.50	1.50	
3.75	1.62	9.75	4.49	15.75	3.74	21.75	1.50	
4.00	1.62	10.00	4.49	16.00	3.74	22.00	1.50	
4.25	2.00	10.25	5.74	16.25	2.25	22.25	1.50	
4.50	2.00	10.50	5.74	16.50	2.25	22.50	1.50	
4.75	2.00	10.75	7.74	16.75	2.25	22.75	1.50	
5.00	2.00	11.00	7.74	17.00	2.25	23.00	1.50	
5.25	2.00	11.25	11.98	17.25	2.25	23.25	1.50	
5.50	2.00	11.50	11.98	17.50	2.25	23.50	1.50	
5.75	2.00	11.75	51.92	17.75	2.25	23.75	1.50	
6.00	2.00	12.00	137.78	18.00	2.25	24.00	1.50	

CALIB

NASHYD (1060) Area (ha)= 51.71 Curve Number (CN)= 82.0

ID= 1 DT= 6.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.48

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25	
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25	
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25	
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25	
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25	
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25	
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25	
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25	
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25	
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25	
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25	
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25	
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25	
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25	
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25	
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25	
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25	
1.800	1.75	7.800	2.50	13.800	10.23	19.80	2.25	
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25	
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25	
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50	
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50	
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50	
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50	
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50	
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50	
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50	
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50	
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50	
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50	
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50	
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50	
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50	
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50	
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50	
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50	
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50	
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50	
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50	
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50	
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50	
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50	
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50	
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50	
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50	
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50	
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50	
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50	
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50	
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50	
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50	
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50	
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50	
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50	
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50	
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50	
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50	
5.800	2.00	11.800	94.86	17.800	2.25	23.80	1.50	
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50	
6.000	2.00	12.000	137.77	18.000	2.25	24.00	1.50	

Unit Hyd Ppeak (cms)= 4.149

PEAK FLOW (cms)= 5.959 (1)

TIME TO PEAK (hrs)= 12.300

RUNOFF VOLUME (mm)= 81.741

TOTAL RAINFALL (mm)= 124.800

RUNOFF COEFFICIENT = 0.655

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

STANDHYD (0160) Area (ha)= 9.15

ID= 1 DT= 3.0 min Total Imp(%)= 48.00 Dir. Conn.(%)= 48.00

IMPERVIOUS PERVIOUS (1)

Surface Area (ha)= 4.39

Dep. Storage (mm)= 1.50

Average Slope (%)= 2.00

Length (m)= 246.98

Mannings n = 0.013

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP9-EX_50-100 YEAR-2096 IDF.OUT

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50

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4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)=	137.78	80.85	
over (min)	6.00	12.00	
Storage Coeff. (min)=	3.14 (ii)	9.55 (iii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.27	0.11	
			TOTALS
PEAK FLOW (cms)=	1.66	0.78	2.384 (iii)
TIME TO PEAK (hrs)=	12.00	12.05	12.00
RUNOFF VOLUME (mm)=	123.30	61.35	91.09
TOTAL RAINFALL (mm)=	124.80	124.80	124.80
RUNOFF COEFFICIENT =	0.99	0.49	0.73

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 69.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1060):	51.71	5.959	12.30	81.74
+ ID2= 2 (0160):	9.15	2.384	12.00	91.09
=====				
ID = 3 (0003):	60.86	6.550	12.30	83.15

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0009)				
IN= 2----> OUT= 1				
DT= 5.0 min				

	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	0.4500	0.5700	
0.0200	0.0400	0.9300	0.5750	
0.0350	0.1540	1.5000	0.6500	
0.0450	0.2340	2.0000	0.7300	
0.0540	0.3160	2.5000	1.0200	
0.0610	0.4000	7.7000	1.2000	
0.0680	0.5000	0.0000	0.0000	

	AREA	

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PEAK FLOW REDUCTION [Qout/Qin](%)= 89.36
TIME SHIFT OF PEAK FLOW (min)= 12.00
MAXIMUM STORAGE USED (ha.m.)= 1.9681

CALIB
STANDHYD (0161)
ID= 1 DT= 2.0 min

Area (ha)= 3.49
Total Imp(%)= 35.00
Dir. Conn.(%)= 35.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 1.22 2.27
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 152.53 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.25 6.033	2.50 12.033	17.97 18.03	2.25			
0.067	1.25 6.067	2.50 12.067	17.97 18.07	2.25			
0.100	1.25 6.100	2.50 12.100	17.97 18.10	2.25			
0.133	1.25 6.133	2.50 12.133	17.97 18.13	2.25			
0.167	1.25 6.167	2.50 12.167	17.97 18.17	2.25			
0.200	1.25 6.200	2.50 12.200	17.97 18.20	2.25			
0.233	1.25 6.233	2.50 12.233	17.97 18.23	2.25			
0.267	1.25 6.267	2.50 12.267	17.97 18.27	2.25			
0.300	1.25 6.300	2.50 12.300	17.97 18.30	2.25			
0.333	1.25 6.333	2.50 12.333	17.97 18.33	2.25			
0.367	1.25 6.367	2.50 12.367	17.97 18.37	2.25			
0.400	1.25 6.400	2.50 12.400	17.97 18.40	2.25			
0.433	1.25 6.433	2.50 12.433	17.97 18.43	2.25			
0.467	1.25 6.467	2.50 12.467	17.97 18.47	2.25			
0.500	1.25 6.500	2.50 12.500	17.96 18.50	2.25			
0.533	1.25 6.533	2.50 12.533	9.24 18.53	2.25			
0.567	1.25 6.567	2.50 12.567	9.24 18.57	2.25			
0.600	1.25 6.600	2.50 12.600	9.24 18.60	2.25			
0.633	1.25 6.633	2.50 12.633	9.24 18.63	2.25			
0.667	1.25 6.667	2.50 12.667	9.24 18.67	2.25			
0.700	1.25 6.700	2.50 12.700	9.24 18.70	2.25			
0.733	1.25 6.733	2.50 12.733	9.24 18.73	2.25			
0.767	1.25 6.767	2.50 12.767	9.24 18.77	2.25			
0.800	1.25 6.800	2.50 12.800	9.24 18.80	2.25			
0.833	1.25 6.833	2.50 12.833	9.24 18.83	2.25			
0.867	1.25 6.867	2.50 12.867	9.24 18.87	2.25			
0.900	1.25 6.900	2.50 12.900	9.24 18.90	2.25			
0.933	1.25 6.933	2.50 12.933	9.24 18.93	2.25			
0.967	1.25 6.967	2.50 12.967	9.24 18.97	2.25			
1.000	1.25 7.000	2.50 13.000	9.22 19.00	2.25			
1.033	1.25 7.033	2.50 13.033	1.75 19.03	2.25			
1.067	1.25 7.067	2.50 13.067	1.75 19.07	2.25			
1.100	1.25 7.100	2.50 13.100	1.75 19.10	2.25			
1.133	1.25 7.133	2.50 13.133	1.75 19.13	2.25			
1.167	1.25 7.167	2.50 13.167	1.75 19.17	2.25			
1.200	1.25 7.200	2.50 13.200	1.75 19.20	2.25			
1.233	1.25 7.233	2.50 13.233	1.75 19.23	2.25			
1.267	1.25 7.267	2.50 13.267	1.75 19.27	2.25			
1.300	1.25 7.300	2.50 13.300	1.75 19.30	2.25			
1.333	1.25 7.333	2.50 13.333	1.75 19.33	2.25			
1.367	1.25 7.367	2.50 13.367	1.75 19.37	2.25			
1.400	1.25 7.400	2.50 13.400	1.75 19.40	2.25			
1.433	1.25 7.433	2.50 13.433	1.75 19.43	2.25			
1.467	1.25 7.467	2.50 13.467	1.75 19.47	2.25			
1.500	1.25 7.500	2.50 13.500	1.76 19.50	2.25			
1.533	1.25 7.533	2.50 13.533	10.23 19.53	2.25			
1.567	1.25 7.567	2.50 13.567	10.23 19.57	2.25			
1.600	1.25 7.600	2.50 13.600	10.23 19.60	2.25			
1.633	1.25 7.633	2.50 13.633	10.23 19.63	2.25			
1.667	1.25 7.667	2.50 13.667	10.23 19.67	2.25			
1.700	1.25 7.700	2.50 13.700	10.23 19.70	2.25			
1.733	1.25 7.733	2.50 13.733	10.23 19.73	2.25			
1.767	1.75 7.767	2.50 13.767	10.23 19.77	2.25			
1.800	2.25 7.800	2.50 13.800	10.23 19.80	2.25			
1.833	2.25 7.833	2.50 13.833	10.23 19.83	2.25			
1.867	2.25 7.867	2.50 13.867	10.23 19.87	2.25			
1.900	2.25 7.900	2.50 13.900	10.23 19.90	2.25			
1.933	2.25 7.933	2.50 13.933	10.23 19.93	2.25			
1.967	2.25 7.967	2.50 13.967	10.23 19.97	2.25			
2.000	2.25 8.000	2.50 14.000	10.22 20.00	2.25			
2.033	1.62 8.033	3.37 14.033	3.74 20.03	1.50			
2.067	1.62 8.067	3.37 14.067	3.74 20.07	1.50			
2.100	1.62 8.100	3.37 14.100	3.74 20.10	1.50			

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2.133	1.62 8.133	3.37 14.133	3.74 20.13	1.50
2.167	1.62 8.167	3.37 14.167	3.74 20.17	1.50
2.200	1.62 8.200	3.37 14.200	3.74 20.20	1.50
2.233	1.62 8.233	3.37 14.233	3.74 20.23	1.50
2.267	1.62 8.267	3.37 14.267	3.74 20.27	1.50
2.300	1.62 8.300	3.37 14.300	3.74 20.30	1.50
2.333	1.62 8.333	3.37 14.333	3.74 20.33	1.50
2.367	1.62 8.367	3.37 14.367	3.74 20.37	1.50
2.400	1.62 8.400	3.37 14.400	3.74 20.40	1.50
2.433	1.62 8.433	3.37 14.433	3.74 20.43	1.50
2.467	1.62 8.467	3.37 14.467	3.74 20.47	1.50
2.500	1.62 8.500	3.37 14.500	3.74 20.50	1.50
2.533	1.62 8.533	3.37 14.533	3.74 20.53	1.50
2.567	1.62 8.567	3.37 14.567	3.74 20.57	1.50
2.600	1.62 8.600	3.37 14.600	3.74 20.60	1.50
2.633	1.62 8.633	3.37 14.633	3.74 20.63	1.50
2.667	1.62 8.667	3.37 14.667	3.74 20.67	1.50
2.700	1.62 8.700	3.37 14.700	3.74 20.70	1.50
2.733	1.62 8.733	3.37 14.733	3.74 20.73	1.50
2.767	1.62 8.767	3.37 14.767	3.74 20.77	1.50
2.800	1.62 8.800	3.37 14.800	3.74 20.80	1.50
2.833	1.62 8.833	3.37 14.833	3.74 20.83	1.50
2.867	1.62 8.867	3.37 14.867	3.74 20.87	1.50
2.900	1.62 8.900	3.37 14.900	3.74 20.90	1.50
2.933	1.62 8.933	3.37 14.933	3.74 20.93	1.50
2.967	1.62 8.967	3.37 14.967	3.74 20.97	1.50
3.000	1.62 9.000	3.37 15.000	3.74 21.00	1.50
3.033	1.62 9.033	3.37 15.033	3.74 21.03	1.50
3.067	1.62 9.067	3.37 15.067	3.74 21.07	1.50
3.100	1.62 9.100	3.37 15.100	3.74 21.10	1.50
3.133	1.62 9.133	3.37 15.133	3.74 21.13	1.50
3.167	1.62 9.167	3.37 15.167	3.74 21.17	1.50
3.200	1.62 9.200	3.37 15.200	3.74 21.20	1.50
3.233	1.62 9.233	3.37 15.233	3.74 21.23	1.50
3.267	1.62 9.267	3.37 15.267	3.74 21.27	1.50
3.300	1.62 9.300	3.37 15.300	3.74 21.30	1.50
3.333	1.62 9.333	3.37 15.333	3.74 21.33	1.50
3.367	1.62 9.367	3.37 15.367	3.74 21.37	1.50
3.400	1.62 9.400	3.37 15.400	3.74 21.40	1.50
3.433	1.62 9.433	3.37 15.433	3.74 21.43	1.50
3.467	1.62 9.467	3.37 15.467	3.74 21.47	1.50
3.500	1.62 9.500	3.37 15.500	3.74 21.50	1.50
3.533	1.62 9.533	4.49 15.533	3.74 21.53	1.50
3.567	1.62 9.567	4.49 15.567	3.74 21.57	1.50
3.600	1.62 9.600	4.49 15.600	3.74 21.60	1.50
3.633	1.62 9.633	4.49 15.633	3.74 21.63	1.50
3.667	1.62 9.667	4.49 15.667	3.74 21.67	1.50
3.700	1.62 9.700	4.49 15.700	3.74 21.70	1.50
3.733	1.62 9.733	4.49 15.733	3.74 21.73	1.50
3.767	1.62 9.767	4.49 15.767	3.74 21.77	1.50
3.800	1.62 9.800	4.49 15.800	3.74 21.80	1.50
3.833	1.62 9.833	4.49 15.833	3.74 21.83	1.50
3.867	1.62 9.867	4.49 15.867	3.74 21.87	1.50
3.900	1.62 9.900	4.49 15.900	3.74 21.90	1.50
3.933	1.62 9.933	4.49 15.933	3.74 21.93	1.50
3.967	1.62 9.967	4.49 15.967	3.74 21.97	1.50
4.000	1.62 10.000	4.49 16.000	3.74 22.00	1.50
4.033	2.00 10.033	5.74 16.033	2.25 22.03	1.50
4.067	2.00 10.067	5.74 16.067	2.25 22.07	1.50
4.100	2.00 10.100	5.74 16.100	2.25 22.10	1.50
4.133	2.00 10.133	5.74 16.133	2.25 22.13	1.50
4.167	2.00 10.167	5.74 16.167	2.25 22.17	1.50
4.200	2.00 10.200	5.74 16.200	2.25 22.20	1.50
4.233	2.00 10.233	5.74 16.233	2.25 22.23	1.50
4.267	2.00 10.267	5.74 16.267	2.25 22.27	1.50
4.300	2.00 10.300	5.74 16.300	2.25 22.30	1.50
4.333	2.00 10.333	5.74 16.333	2.25 22.33	1.50
4.367	2.00 10.367	5.74 16.367	2.25 22.37	1.50
4.400	2.00 10.400	5.74 16.400	2.25 22.40	1.50
4.433	2.00 10.433	5.74 16.433	2.25 22.43	1.50
4.467	2.00 10.467	5.74 16.467	2.25 22.47	1.50
4.500	2.00 10.500	5.74 16.500	2.25 22.50	1.50
4.533	2.00 10.533	7.74 16.533	2.25 22.53	1.50
4.567	2.00 10.567	7.74 16.567	2.25 22.57	1.50
4.600	2.00 10.600	7.74 16.600	2.25 22.60	1.50
4.633	2.00 10.633	7.74 16.633	2.25 22.63	1.50
4.667	2.00 10.667	7.74 16.667	2.25 22.67	1.50
4.700	2.00 10.700	7.74 16.700	2.25 22.70	1.50
4.733	2.00 10.733	7.74 16.733	2.25 22.73	1.50
4.767	2.00 10.767	7.74 16.767	2.25 22.77	1.50
4.800	2.00 10.800	7.74 16.800	2.25 22.80	1.50
4.833	2.00 10.833	7.74 16.833	2.25 22.83	1.50
4.867	2.00 10.867	7.74 16.867	2.25 22.87	1.50
4.900	2.00 10.900	7.74 16.900	2.25 22.90	1.50
4.933	2.00 10.933	7.74 16.933	2.25 22.93	1.50
4.967	2.00 10.967	7.74 16.967	2.25 22.97	1.50
5.000	2.00 11.000	7.74 17.000	2.25 23.00	1.50

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

V V I SSSSS U U A L (v 6.1.2002)

HRP9-EX_50-100 YEAR-2096 IDF.OUT

V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y Y M M O O
000 T T H H Y Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb48ca06caf\abc870e7-a266-44b7-a74b-003aa600ac8b\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb48ca06caf\abc870e7-a266-44b7-a74b-003aa600ac8b\scenar

DATE: 03/24/2023 TIME: 11:19:38

USER:

COMMENTS: _____

** SIMULATION : Run 12 **

| MASS STORM | Filename: C:\Users\AbirA\AppData
| | ata\Local\Temp\
| | 1abcacf8-2ffc-4655-a8c2-4873468fd2c8\c7ff0caf
| Ptotal=136.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	'	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.37	6.25	2.74	12.25	19.70	18.25	2.46	
0.50	1.37	6.50	2.74	12.50	19.70	18.50	2.46	
0.75	1.37	6.75	2.74	12.75	10.12	18.75	2.46	
1.00	1.37	7.00	2.74	13.00	10.12	19.00	2.46	
1.25	1.37	7.25	2.74	13.25	1.92	19.25	2.46	
1.50	1.37	7.50	2.74	13.50	1.92	19.50	2.46	
1.75	1.37	7.75	2.74	13.75	11.22	19.75	2.46	
2.00	2.46	8.00	2.74	14.00	11.22	20.00	2.46	
2.25	1.78	8.25	3.69	14.25	4.10	20.25	1.64	
2.50	1.78	8.50	3.69	14.50	4.10	20.50	1.64	
2.75	1.78	8.75	3.69	14.75	4.10	20.75	1.64	
3.00	1.78	9.00	3.69	15.00	4.10	21.00	1.64	
3.25	1.78	9.25	4.38	15.25	4.10	21.25	1.64	
3.50	1.78	9.50	4.38	15.50	4.10	21.50	1.64	
3.75	1.78	9.75	4.92	15.75	4.10	21.75	1.64	
4.00	1.78	10.00	4.92	16.00	4.10	22.00	1.64	
4.25	2.19	10.25	6.29	16.25	2.46	22.25	1.64	
4.50	2.19	10.50	6.29	16.50	2.46	22.50	1.64	
4.75	2.19	10.75	8.48	16.75	2.46	22.75	1.64	
5.00	2.19	11.00	8.48	17.00	2.46	23.00	1.64	
5.25	2.19	11.25	13.13	17.25	2.46	23.25	1.64	
5.50	2.19	11.50	13.13	17.50	2.46	23.50	1.64	
5.75	2.19	11.75	56.91	17.75	2.46	23.75	1.64	
6.00	2.19	12.00	151.03	18.00	2.46	24.00	1.64	

| CALIB |
| NASHYD (1060) | Area (ha)= 51.71 Curve Number (CN)= 82.0
| ID= 1 DT= 6.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.48

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	'	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46	
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46	

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0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46	
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46	
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46	
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46	
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46	
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46	
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46	
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46	
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46	
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46	
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46	
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46	
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46	
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46	
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46	
1.800	1.92	7.800	2.74	13.800	11.22	19.80	2.46	
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46	
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46	
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64	
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64	
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64	
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64	
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64	
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64	
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64	
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64	
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64	
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64	
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64	
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64	
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64	
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64	
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64	
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64	
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64	
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64	
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64	
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64	
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64	
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64	
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64	
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64	
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64	
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64	
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64	
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64	
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64	
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64	
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64	
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64	
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64	
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64	
5.500	2.19	11.500	13.14	17.500	2.46	23.50	1.64	
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64	
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64	
5.800	2.19	11.800	103.98	17.800	2.46	23.80	1.64	
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64	
6.000	2.19	12.000	151.02	18.000	2.46	24.00	1.64	

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 6.754 (i)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 92.607
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.677

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0160) | Area (ha)= 9.15
| ID= 1 DT= 3.0 min | Total Imp(%)= 48.00 Dir. Conn.(%)= 48.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.39	4.76
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	246.98	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
	mm/hr		mm/hr			mm/hr		mm/hr

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hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46	
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46	
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46	
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46	
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46	
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46	
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46	
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46	
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46	
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46	
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46	
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46	
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46	
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46	
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46	
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46	
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46	
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46	
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46	
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46	
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46	
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46	
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46	
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46	
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46	
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46	
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46	
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46	
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46	
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46	
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46	
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46	
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46	
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46	
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46	
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46	
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46	
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46	
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46	
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46	
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64	
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64	
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64	
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64	
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64	
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64	
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64	
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64	
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64	
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64	
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64	
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64	
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64	
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64	
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64	
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64	
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64	
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64	
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64	
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64	
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64	
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64	
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64	
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64	
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64	
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64	
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64	
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64	
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64	
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64	
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64	
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64	
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64	
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64	
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64	
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64	
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64	
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64	
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64	
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64	
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64	
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64	
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64	
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64	
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64	
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64	

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4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 92.98
over (min) 6.00 12.00
Storage Coeff. (min)= 3.03 (ii) 9.21 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.11

PEAK FLOW (cms)= 1.83 0.91 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 135.30 70.64 101.68
TOTAL RAINFALL (mm)= 136.80 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.52 0.74

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0003) |
1 + 2 = 3
ID1= 1 (1060): 51.71 6.754 12.30 92.61
+ ID2= 2 (0160): 9.15 2.671 12.00 101.68
=====

ID = 3 (0003): 60.86 7.412 12.30 93.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0009) | OVERFLOW IS OFF
| IN= 2--> OUT= 1 |
DT= 5.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m) | (cms) (ha.m)
0.0000 0.0000 | 0.4500 0.5700
0.0200 0.0400 | 0.9300 0.5750
0.0350 0.1540 | 1.5000 0.6500
0.0450 0.2340 | 2.6000 0.7300
0.0540 0.3160 | 5.2000 1.0200
0.0610 0.4000 | 7.7000 1.2000
0.0680 0.5000 | 0.0000 0.0000

AREA PPEAK TPEAK
(ha) (cms) (hrs)
INFLOW : ID= 2 (0003) 60.860 7.412 12.30 93.97
OUTFLOW: ID= 1 (0009) 60.860 6.741 12.50 93.96

PEAK FLOW REDUCTION [Qout/Qin](%)= 90.95
TIME SHIFT OF PEAK FLOW (min)= 12.00

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(ha.m.)= 1.1310

CALIB			
STANDHYD (0161)	Area (ha)=	3.49	
ID= 1 DT= 2.0 min	Total Imp(%)=	35.00	Dir. Conn.(%)= 35.00

	IMPERVIOUS	PERVIOUS (I)	
Surface Area (ha)=	1.22	2.27	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	2.00	2.00	
Length (m)=	152.53	40.00	
Mannings n	=	0.013	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.37	6.933	2.74	12.033	19.70	18.03	2.46		
0.067	1.37	6.967	2.74	12.067	19.70	18.07	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46		
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.233	1.37	6.233	2.74	12.233	19.70	18.23	2.46		
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46		
0.367	1.37	6.367	2.74	12.367	19.70	18.37	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46		
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46		
0.500	1.37	6.500	2.74	12.500	19.68	18.50	2.46		
0.533	1.37	6.533	2.74	12.533	10.12	18.53	2.46		
0.567	1.37	6.567	2.74	12.567	10.12	18.57	2.46		
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46		
0.633	1.37	6.633	2.74	12.633	10.12	18.63	2.46		
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46		
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46		
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46		
0.767	1.37	6.767	2.74	12.767	10.12	18.77	2.46		
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46		
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46		
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46		
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46		
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46		
0.967	1.37	6.967	2.74	12.967	10.12	18.97	2.46		
1.000	1.37	7.000	2.74	13.000	10.11	19.00	2.46		
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46		
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46		
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46		
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.500	1.37	7.500	2.74	13.500	1.93	19.50	2.46		
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46		
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46		
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.767	1.92	7.767	2.74	13.767	11.22	19.77	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46		
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46		
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46		
2.000	2.46	8.000	2.74	14.000	11.20	20.00	2.46		
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64		
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64		
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		

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2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64

HRP9-EX_50-100 YEAR-2096 IDF.OUT

5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.500	2.19	11.500	13.19	17.500	2.46	23.50	1.64
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.767	2.19	11.767	104.09	17.767	2.46	23.77	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64
6.000	2.19	12.000	150.85	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 100.86
over (min) 5.00 10.00
Storage Coeff. (min)= 2.27 (ii) 9.93 (iii)
Unit Hyd. Tpeak (min)= 4.00 10.00
Unit Hyd. peak (cms)= 0.39 0.11

TOTALS
PEAK FLOW (cms)= 0.51 0.46 0.947 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 135.30 75.33 96.32
TOTAL RAINFALL (mm)= 136.80 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.55 0.70

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0161):	3.49	0.947	12.00	96.32
+ ID2= 2 (0009):	60.86	6.741	12.50	93.96
ID = 3 (0005):	64.35	6.933	12.50	94.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	1.29	Curve Number (CN)=	75.0
NASHYD (0162)	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.40		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	18.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	18.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	18.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	18.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46

HRP9-EX_50-100 YEAR-2096 IDF.OUT

1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.11	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 0.124

PEAK FLOW (cms)= 0.165 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 80.238
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.587

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0162):	1.29	0.165	12.25	80.24
+ ID2= 2 (0005):	64.35	6.933	12.50	94.00
ID = 3 (0007):	65.64	7.070	12.50	93.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

D

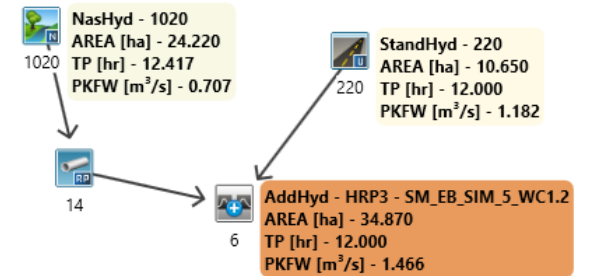
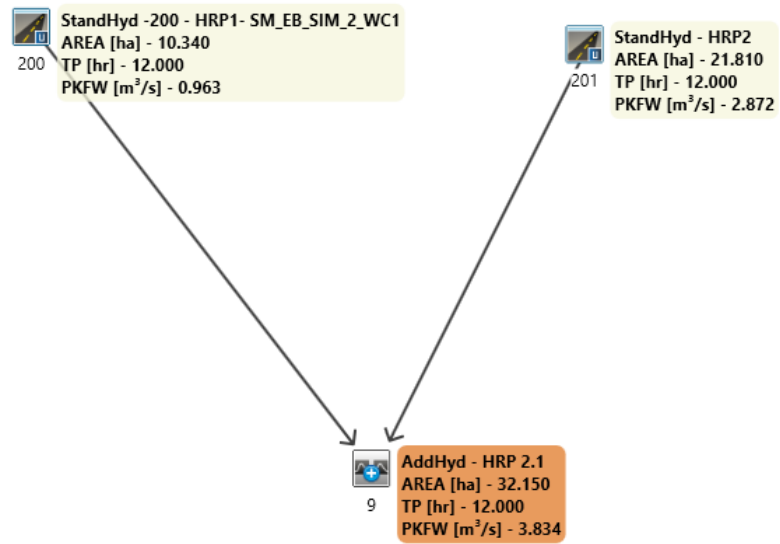
Hydrology – Proposed Condition VO Output – No SWM

- D.1 VO Schematics
- D.2 Input Parameters Calculation
- D.3 VO Output 2-year to 100-year
- D.4 VO Output Regional Storm
- D.5 VO Output – 50-year and 100-year Storms 2096 IDF

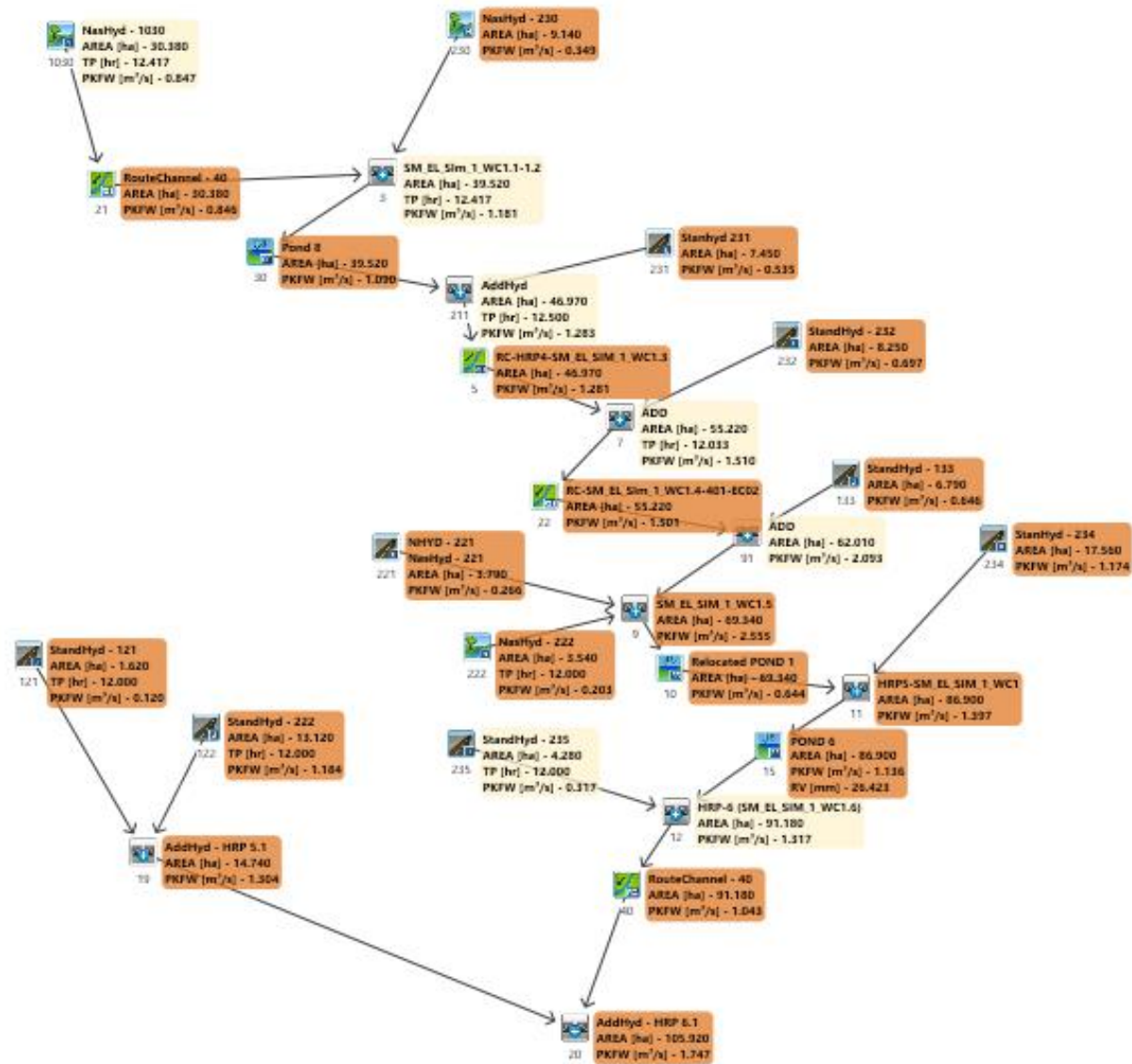


D.1 VO Schematics

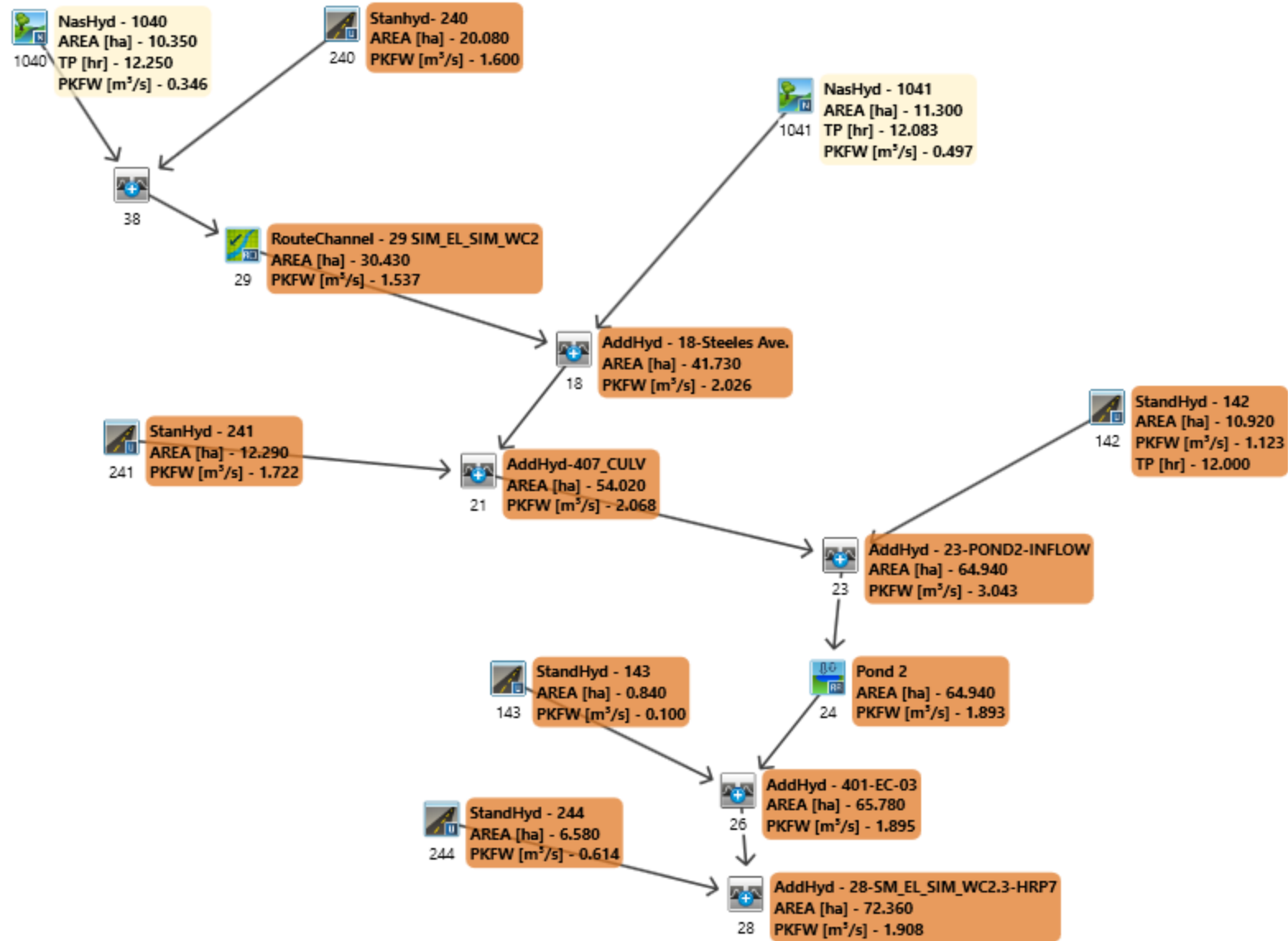




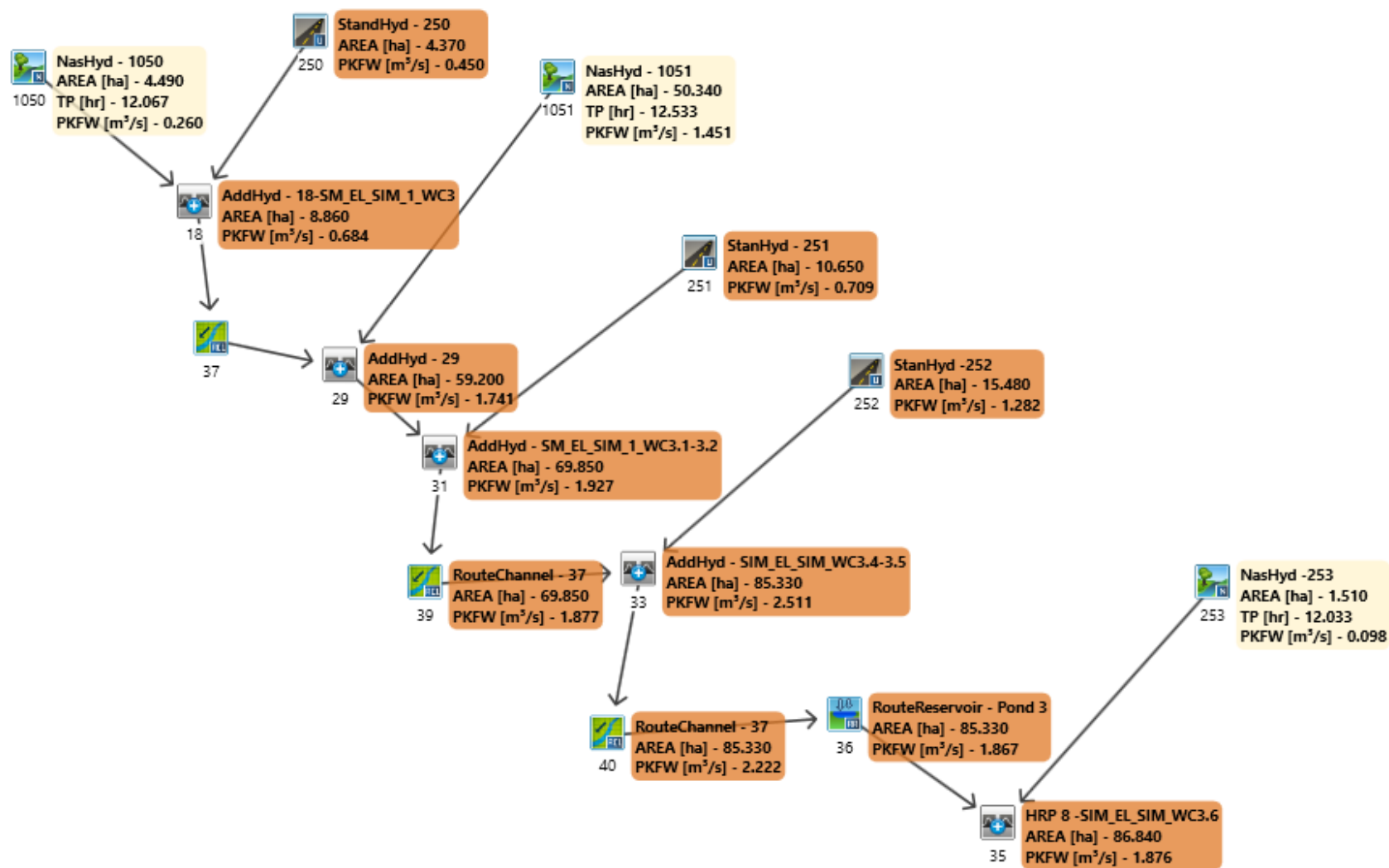
Scenario: HRP1-3_PR



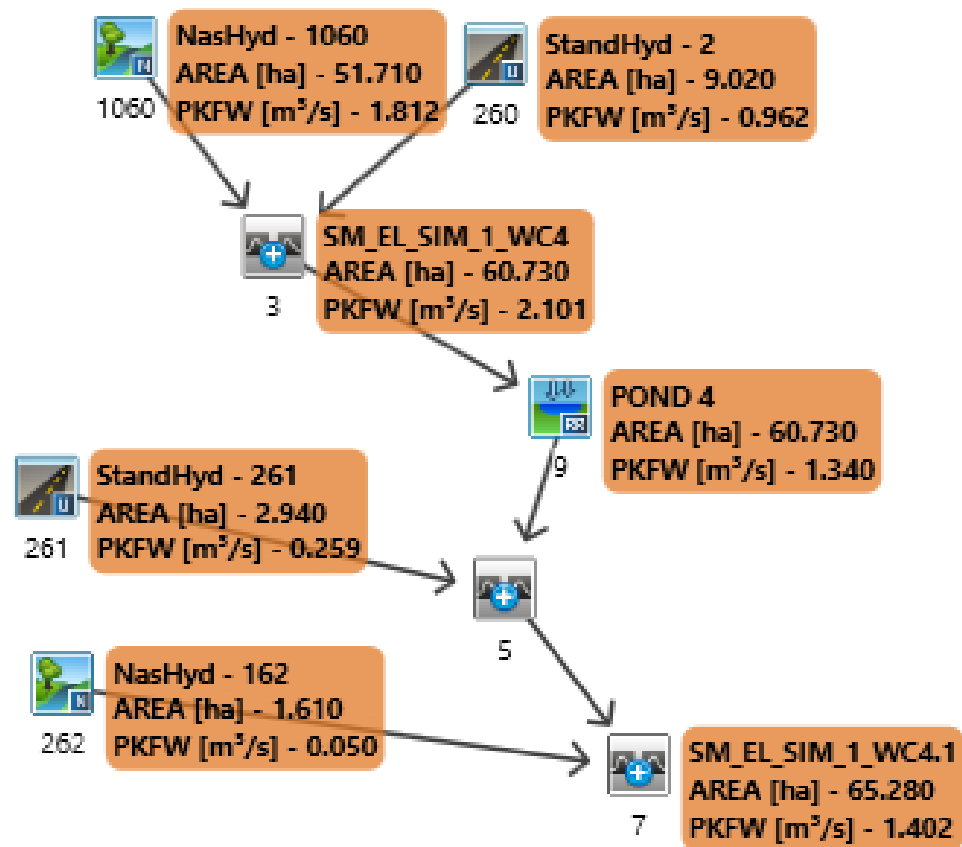
Scenario: HRP6.1-PR-PR-EX-Pond1-6



Scenario: HRP7-PR



Scenario: HRP8-PR



Scenario: HRP9-PR

D.2 Input Parameters Calculation



Project: GTAW
Project No.: 60347240
Date: Wednesday, December 15, 2021
Modelled by: A.Ignacio

Last Update 6/23/2022

PROPOSED CONDITIONS

Culvert ID	Catchment ID	Hydrograph Classification	T _p Method	Total Drainage Area (ha)	IA (mm)	Weighted Runoff Coeff.	Modified CN Value	Modified CN Value AMC III	Time to ¹ Peak, T _p (hr)	Percent Imperv. (%)
0	200	STANDHYD	-	10.34	1.50	0.65	72	87	-	50
0	201	STANDHYD	-	21.81	1.50	0.75	72	87	-	70
SM_EB_SIM_5_WC1.1	1020	NASHYD	Bransby	24.22	5.00	0.53	79	91	0.454	5
0	220	STANDHYD	-	10.65	1.50	0.67	72	87	-	55
0	121	STANDHYD	-	1.62	1.50	0.54	72	87	-	28
0	122	STANDHYD	-	13.20	1.50	0.62	72	87	-	44
0	221	STANDHYD	-	3.79	1.50	0.53	72	87	-	27
0	222	NASHYD	Bransby	3.54	5.00	0.43	75	88	0.150	5
SM_EL_SIM_1_WC1.1	1030	NASHYD	Bransby	30.38	5.00	0.49	77	90	0.505	7
0	230	NASHYD	Bransby	9.14	5.00	0.56	82	92	0.422	15
0	231	STANDHYD	-	7.45	1.50	0.63	77	89	-	24
0	232	STANDHYD	-	8.25	1.50	0.59	72	87	-	39
0	233	STANDHYD	-	6.79	1.50	0.48	62	80	-	47
0	234	STANDHYD	-	17.56	1.50	0.54	72	87	-	28
0	235	STANDHYD	-	4.28	1.50	0.55	72	87	-	30
SIM_EL_SIM_1_WC2	1040	NASHYD	Bransby	10.35	5.00	0.45	75	88	0.285	0
0	240	STANDHYD	-	20.08	1.50	0.61	72	87	-	42
SIM_EL_SIM_1_WC2.2	1041	NASHYD	Bransby	11.30	5.00	0.48	77	90	0.261	6
0	241	STANDHYD	-	12.29	1.50	0.79	75	88	-	73
0	142	STANDHYD	-	10.92	1.50	0.53	62	80	-	53
0	143	STANDHYD	-	0.84	1.50	0.67	72	87	-	55
0	244	STANDHYD	-	6.58	1.50	0.62	72	87	-	45
0	1050	NASHYD	Bransby	4.49	5.00	0.50	77	90	0.169	0
0	250	STANDHYD	-	4.37	1.50	0.71	79	91	-	46
0	1051	NASHYD	Bransby	50.34	5.00	0.56	82	92	0.628	5
0	251	STANDHYD	-	10.65	1.50	0.58	72	87	-	37
0	252	STANDHYD	-	15.48	1.50	0.59	69	84	-	45
0	253	NASHYD	Bransby	1.51	5.00	0.40	75	88	0.112	0
0	1060	NASHYD	Bransby	51.71	5.00	0.56	82	92	0.476	8
0	260	STANDHYD	-	9.02	1.50	0.62	66	83	-	55
0	261	STANDHYD	-	2.94	1.50	0.61	72	87	-	41
0	262	NASHYD	Airport	1.61	5.00	0.40	75	88	0.397	0

Note: 1 - Minimum T_c is 10 min. therefore, minimum T_p is 6.7 min.

Project:

GTAW

Project No.:

60347240

Date:

Wednesday, December 15, 2021

Modelled by:

A.Ignacio

PROPOSED CONDITIONS

P = 127.2 mm
** 100-year Total Precipitation **

Culvert ID	Catchment ID	Soil Group	Land Use Area (ha)							Instantaneous Unit Hydrograph	Weighted CN Based on Area and Land Use					Total Weighted CN	Total Weighted Runoff Coeff.	CN III	S	IA	Q	IA*	S*	CN*III	CN*
			Woodland	Pasture & Other Unimproved Land	Cultivated & other Improved Land	Lake/ Wetpond	Imperv. Area	Perv. Total	Total		Woodland	Pasture & Other Unimproved Land	Cultivated & other Improved Land	Lake/ Wetpond	Imperv. Area										
	200	C		5.18			5.16	5.18	10.34	STANDHYD	-	76.0	-	-	48.9	76	0.65	89	31.4	6.3	96.0	1.5	38.9	86.7	72
SM_EB_SIM_5_WC1.1	201	C		6.44			15.37	6.44	21.81	STANDHYD	-	76.0	-	-	69.1	76	0.75	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	1020	C		6.23	16.79		1.20	23.02	24.22	NASHYD	-	19.6	56.8	-	4.8	81	0.53	91	25.1	5.0	101.3	5.0	25.2	91.0	79
	220	C		4.83			5.82	4.83	10.65	STANDHYD	-	76.0	-	-	53.6	76	0.67	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	121	C		1.16			0.46	1.16	1.62	STANDHYD	-	76.0	-	-	27.7	76	0.54	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	122	C		7.33			5.87	7.33	13.20	STANDHYD	-	76.0	-	-	43.6	76	0.62	89	31.4	6.3	96.0	1.5	38.9	86.7	72
SM_EL_SIM_1_WC1.1	221	C		2.77			1.02	2.77	3.79	STANDHYD	-	76.0	-	-	26.3	76	0.53	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	222	C		3.37			0.18	3.37	3.54	NASHYD	-	72.2	-	-	4.9	77	0.43	89	31.4	6.3	96.0	5.0	33.4	88.4	75
	1030	C		18.37	9.75		2.25	28.12	30.38	NASHYD	-	46.0	26.3	-	7.3	80	0.49	90	28.2	5.6	98.7	5.0	29.2	89.7	77
	230	C		2.61	5.19		1.34	7.80	9.14	NASHYD	-	21.7	46.6	-	14.3	83	0.56	92	22.1	4.4	104.1	5.0	21.3	92.3	82
	231	C		0.15	5.49		1.81	5.64	7.45	STANDHYD	-	2.0	79.8	-	23.8	82	0.63	91	25.1	5.0	101.3	1.5	30.2	89.4	77
	232	C		5.05			3.19	5.05	8.25	STANDHYD	-	76.0	-	-	38.0	76	0.59	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	233	C		3.57		1.23	2.00	4.80	6.79	STANDHYD	-	56.6	-	12.8	28.8	69	0.48	84	48.4	9.7	83.3	1.5	64.1	79.9	62
	234	C		12.61			4.96	12.61	17.56	STANDHYD	-	76.0	-	-	27.7	76	0.54	89	31.4	6.3	96.0	1.5	38.9	86.7	72
SIM_EL_SIM_1_WC2	235	C		2.98			1.30	2.98	4.28	STANDHYD	-	76.0	-	-	29.8	76	0.55	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	1040	C		6.99	3.36		0.00	10.35	10.35	NASHYD	-	51.3	26.7	-	0.0	78	0.45	89	31.4	6.3	96.0	5.0	33.4	88.4	75
SIM_EL_SIM_1_WC2.2	240	C		11.60			8.48	11.60	20.08	STANDHYD	-	76.0	-	-	41.4	76	0.61	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	1041	C		7.12	3.47		0.71	10.59	11.30	NASHYD	-	47.9	25.2	-	6.2	79	0.48	90	28.2	5.6	98.7	5.0	29.2	89.7	77
	241	C		1.27	2.00		9.02	3.27	12.29	STANDHYD	-	29.6	50.1	-	71.9	80	0.79	90	28.2	5.6	98.7	1.5	34.5	88.1	75
	142	C		5.17		1.70	4.05	6.87	10.92	STANDHYD	-	57.2	-	12.4	36.3	70	0.53	84	48.4	9.7	83.3	1.5	64.1	79.9	62
	143	C		0.38			0.46	0.38	0.84	STANDHYD	-	76.0	-	-	53.8	76	0.67	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	244	C		3.63			2.95	3.63	6.58	STANDHYD	-	76.0	-	-	43.9	76	0.62	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	1050	C	1.16		3.32		0.00	4.49	4.49	NASHYD	18.4	-	60.8	-	0.0	79	0.50	90	28.2	5.6	98.7	5.0	29.2	89.7	77
	250	C			2.38		1.99	2.38	4.37	STANDHYD	-	-	82.0	-	44.6	82	0.71	92	22.1	4.4	104.1	1.5	26.1	90.7	79
	1051	C		3.09	44.70		2.55	47.79	50.34	NASHYD	-	4.7	72.8	-	5.0	82	0.56	92	22.1	4.4	104.1	5.0	21.3	92.3	82
	251	C		6.72			3.93	6.72	10.65	STANDHYD	-	76.0	-	-	36.2	76	0.58	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	252	C		8.46		0.74	6.28	9.20	15.48	STANDHYD	-	69.9	-	4.0	39.8	74	0.59	87	38.0	7.6	90.8	1.5	48.3	84.0	69
	253	C		1.51			0.00	1.51	1.51	NASHYD	-	76.0	-	-	0.0	76	0.40	89	31.4	6.3	96.0	5.0	33.4	88.4	75
	1060	C		5.56	42.06		4.08	47.63	51.71	NASHYD	-	8.2	66.7	-	7.7	83	0.56	92	22.1	4.4	104.1	5.0	21.3	92.3	82
	260	C		4.07		0.57	4.38	4.64	9.02	STANDHYD	-	66.6	-	6.2	47.6	73	0.62	86	41.3	8.3	88.2	1.5	53.3	82.6	66
	261	C		1.73			1.21	1.73	2.94	STANDHYD	-	76.0	-	-	40.3	76	0.61	89	31.4	6.3	96.0	1.5	38.9	86.7	72
	262	C		1.61				1.61	1.61	NASHYD	-	76.0	-	-	-	76	0.40	89	31.4	6.3	96.0	5.0	33.4	88.4	75

Note:
*Table may be revised depending on the actual land use.
*Modified initial abstraction will be changed according to the hydrologic modeling application. (OTTHYMO 89: IA = 1.5 mm (NASHYD & STANDHYD); VO2: IA = 1.5 mm (STANDHYD) & IA = 5 mm (NASHYD))

MTO Drainage Management Manual - Design Chart 1.09: Soil Conservation Service Curve NumbMTO Drainage Management Manual - Design Chart 1.07: Runoff Coefficients

Soil Group	Land Use				
	Woodland	Pasture & Other Unimproved Land	Cultivated & other Improved Land	Lake/ Wetpond	Imperv. Area
A	50	58	66	50	98
AB	54	62	70	50	98
B	58	65	74	50	98
BC	65	71	78	50	98
C	71	76	82	50	98
CD	74	79	84	50	98
D	77	81	86	50	98

Soil Group	Runoff Coefficients*				
	Woodland	Pasture & Other Unimproved Land	Cultivated & other Improved Land	Lake/ Wetpond	Imperv. Area
A	0.08	0.1	0.22	0.05	0.9
AB	0.08	0.1	0.22	0.05	0.9
B	0.25	0.28	0.35	0.05	0.9
BC	0.25	0.28	0.35	0.05	0.9
C	0.35	0.4	0.55	0.05	0.9
CD	0.35	0.4	0.55	0.05	0.9
D	0.35	0.4	0.55	0.05	0.9

* Based on 'Flat' (Slope: 0-5%) Topography

Project: GTAW

Project No.: 60347240

Date: _____ Wednesday, December 15, 2021

Modelled by: A.Ignacio

PROPOSED CONDITIONS

[illegible]

Project: GTAW
Project No.: 60347240
Date: Wednesday, December 15, 2021
Modelled by: A.Ignacio

Impervious Area Calculations - Proposed Conditions

Catchment ID	Total Drainage Area (ha)	Impervious Area (ha)	Pervious Area (ha)	Percent Imperv. (%)	Hydrograph Classification
200	10.34	5.16	5.18	49.91	STANDHYD
201	21.81	15.37	6.44	70.47	STANDHYD
1020	24.22	1.20	23.02	4.94	NASHYD
220	10.65	5.82	4.83	54.64	STANDHYD
121	1.62	0.46	1.16	28.30	STANDHYD
122	13.20	5.87	7.33	44.45	STANDHYD
221	3.79	1.02	2.77	26.88	STANDHYD
222	3.54	0.18	3.37	5.00	NASHYD
1030	30.38	2.25	28.12	7.41	NASHYD
230	9.14	1.34	7.80	14.63	NASHYD
231	7.45	1.81	5.64	24.34	STANDHYD
232	8.25	3.19	5.05	38.73	STANDHYD
233	6.79	3.22	3.57	47.46	STANDHYD
234	17.56	4.96	12.61	28.22	STANDHYD
235	4.28	1.30	2.98	30.42	STANDHYD
1040	10.35	0.00	10.35	0.00	NASHYD
240	20.08	8.48	11.60	42.22	STANDHYD
1041	11.30	0.71	10.59	6.28	NASHYD
241	12.29	9.02	3.27	73.37	STANDHYD
142	10.92	5.75	5.17	52.67	STANDHYD
143	0.84	0.46	0.38	54.89	STANDHYD
244	6.58	2.95	3.63	44.79	STANDHYD
1050	4.49	0.00	4.49	0.00	NASHYD
250	4.37	1.99	2.38	45.52	STANDHYD
1051	50.34	2.55	47.79	5.07	NASHYD
251	10.65	3.93	6.72	36.91	STANDHYD
252	15.48	7.02	8.46	45.36	STANDHYD
253	1.51	0.00	1.51	0.00	NASHYD
1060	51.71	4.08	47.63	7.89	NASHYD
260	9.02	4.96	4.07	54.94	STANDHYD
261	2.94	1.21	1.73	41.14	STANDHYD
262	1.61	0.00	1.61	0.00	NASHYD

D.3 VO Output 2-year to 100-year



HRP1-3-PR_2-100 YEAR.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
V V I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\fbf48bb4-4502-4063-b6bc-09700dd0b570\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\fbf48bb4-4502-4063-b6bc-09700dd0b570\scenar

DATE: 03/24/2023 TIME: 09:44:52

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\dfcc04d8-8cb6-4e9e-84f3-3535a51cec77\571fbdef
Ptotal= 57.60 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

CALIB
NASHYD (1020) Area (ha)= 24.22 Curve Number (CN)= 79.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.53

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69	
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69	
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69	
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69	
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69	
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69	
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69	
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69	
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69	
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69	
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69	
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69	
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69	
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69	
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69	
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69	
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69	
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69	
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69	
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69	
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69	
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69	
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69	
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69	
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69	
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69	
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69	
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69	
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69	
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69	
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69	
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69	
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69	
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69	
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69	
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69	
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69	
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69	

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 0.707 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 23.632
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.400

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTEPIPE(0014) PIPE Number = 1.00

HRP1-3-PR_2-100 YEAR.OUT
IN= 2----> OUT= 1 | Width (mm)=2400.00 Height (mm)= 900.00
DT= 5.0 min | Length (m)= 207.00
Slope (m/m)= 0.003
Manning n = 0.020

<----- TRAVEL TIME TABLE ----->						
DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME min		
0.05	.235E+02	0.0	0.35	9.87		
0.09	.471E+02	0.1	0.54	6.37		
0.14	.706E+02	0.2	0.69	4.98		
0.19	.941E+02	0.4	0.82	4.21		
0.24	.118E+03	0.5	0.93	3.71		
0.28	.141E+03	0.7	1.03	3.36		
0.33	.165E+03	0.9	1.12	3.09		
0.38	.188E+03	1.1	1.20	2.89		
0.43	.212E+03	1.3	1.27	2.72		
0.47	.235E+03	1.5	1.33	2.59		
0.52	.259E+03	1.7	1.40	2.47		
0.57	.282E+03	2.0	1.45	2.38		
0.62	.306E+03	2.2	1.51	2.29		
0.66	.329E+03	2.5	1.55	2.22		
0.71	.353E+03	2.7	1.60	2.16		
0.76	.377E+03	3.0	1.64	2.10		
0.81	.400E+03	3.3	1.68	2.05		
0.85	.424E+03	3.5	1.72	2.00		
0.90	.447E+03	3.8	1.76	1.96		
<---- hydrograph ----> <-pipe / channel->						
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (1020)	24.22	0.71	12.42	23.03	0.29	1.03
OUTFLOW: ID= 1 (0014)	24.22	0.70	12.42	23.03	0.28	1.03

STANDHYD (0220)
ID= 1 DT= 3.0 min | Area (ha)= 10.65
Total Imp(%)= 55.00 Dir. Conn.(%)= 55.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.86	4.79
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	266.46	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		

HRP1-3-PR_2-100 YEAR.OUT									
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69		
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69		
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69		

HRP1-3-PR_2-100 YEAR.OUT

Max.Eff.Inten.(mm/hr)= 63.59 26.27
over (min) 6.00 15.00
Storage Coeff. (min)= 4.48 (ii) 12.28 (iii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.22 0.09

TOTALS
PEAK FLOW (cms)= 1.00 0.22 1.182 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 40.00
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.69

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0014):	24.22	0.704	12.42	23.03
+ ID2= 2 (0220):	10.65	1.182	12.00	40.00
ID = 3 (0006):	34.87	1.466	12.00	28.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (0200)	Area (ha)=	10.34
ID= 1 DT= 3.0 min	Total Imp(%)=	50.00
	Dir. Conn.(%)=	50.00

	IMPERVIOUS (ha)=	PERVIOUS (i) (ha)=
Surface Area	5.17	5.17
Dep. Storage	1.50	1.50
Average Slope	2.00	0.40
Length	262.55	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04

HRP1-3-PR_2-100 YEAR.OUT							
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 18.47
over (min) 6.00 27.00

Storage Coeff. (min)= 4.44 (ii) 26.92 (ii)
Unit Hyd. Tpeak (min)= 6.00 27.00
Unit Hyd. peak (cms)= 0.22 0.04

PEAK FLOW (cms)= 0.88 0.15
TIME TO PEAK (hrs)= 12.00 12.35
RUNOFF VOLUME (mm)= 56.10 20.32
TOTAL RAINFALL (mm)= 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35

HRP1-3-PR_2-100 YEAR.OUT

TOTALS
(iii)
0.963
12.00
38.21
57.60
0.66

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0201)
ID= 1 DT= 4.0 min

Area (ha)= 21.81
Total Imp(%)= 70.00
Dir. Conn.(%)= 70.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 15.27 6.54
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 381.31 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	0.58	6.067	1.15	12.067	0.39	18.07	1.04
0.133	0.58	6.133	1.15	12.133	0.29	18.13	1.04
0.200	0.58	6.200	1.15	12.200	0.29	18.20	1.04
0.267	0.58	6.267	1.15	12.267	0.29	18.27	1.04
0.333	0.58	6.333	1.15	12.333	0.29	18.33	1.04
0.400	0.58	6.400	1.15	12.400	0.29	18.40	1.04
0.467	0.58	6.467	1.15	12.467	0.29	18.47	1.04
0.533	0.58	6.533	1.15	12.533	0.28	18.53	1.04
0.600	0.58	6.600	1.15	12.600	0.28	18.60	1.04
0.667	0.58	6.667	1.15	12.667	0.28	18.67	1.04
0.733	0.58	6.733	1.15	12.733	0.28	18.73	1.04
0.800	0.58	6.800	1.15	12.800	0.28	18.80	1.04
0.867	0.58	6.867	1.15	12.867	0.28	18.87	1.04
0.933	0.58	6.933	1.15	12.933	0.28	18.93	1.04
1.000	0.58	7.000	1.15	13.000	0.28	19.00	1.04
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04
1.533	0.58	7.533	1.15	13.533	2.76	19.53	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04
1.800	0.92	7.800	1.15	13.800	4.72	19.80	1.04
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69

HRP1-3-PR_2-100 YEAR.OUT							
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69
3.533	0.75	9.533	1.96	15.533	1.73	21.53	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69
4.533	0.92	10.533	3.11	16.533	1.04	22.53	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69
5.533	0.92	11.533	14.74	17.533	1.04	23.53	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69
5.800	0.92	11.800	53.68	17.800	1.04	23.80	0.69
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 26.28
over (min) 5.00 12.00
Storage Coeff. (min)= 5.55 (ii) 11.58 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.22 0.10

TOTALS
(iii)
2.872
12.00
45.37
57.60
0.79

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0200): 10.34 0.963 12.00 38.21
+ ID2= 2 (0201): 21.81 2.872 12.00 45.37
=====

ID = 3 (0009): 32.15 3.834 12.00 43.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y Y M M 0 0

000 T T H H Y M M 000
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USER:

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*****
** SIMULATION : Run 02                               **
*****
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Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.25	0.77	6.25	1.54	12.25	11.66	18.25	1.38
0.50	0.77	6.50	1.54	12.50	11.66	18.50	1.38
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38
1.25	0.77	7.25	1.54	13.25	1.68	19.25	1.38
1.50	0.77	7.50	1.54	13.50	1.68	19.50	1.38
1.75	0.77	7.75	1.54	13.75	6.38	19.75	1.38
2.00	1.38	8.00	1.54	14.00	6.38	20.00	1.38
2.25	1.00	8.25	2.07	14.25	2.38	20.25	0.92
2.50	1.00	8.50	2.07	14.50	2.38	20.50	0.92
2.75	1.00	8.75	2.07	14.75	2.38	20.75	0.92
3.00	1.00	9.00	2.07	15.00	2.38	21.00	0.92
3.25	1.00	9.25	2.46	15.25	2.38	21.25	0.92
3.50	1.00	9.50	2.46	15.50	2.38	21.50	0.92
3.75	1.00	9.75	2.76	15.75	2.38	21.75	0.92
4.00	1.00	10.00	2.76	16.00	2.38	22.00	0.92
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92
5.75	1.23	11.75	31.95	17.75	2.38	23.75	0.92
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.083	0.77	6.983	1.54	12.083	11.07	18.08	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38

1.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	5.68	19.08	1.38
1.167	0.77	7.167	1.54	13.167	5.68	19.17	1.38
1.250	0.77	7.250	1.54	13.250	5.68	19.25	1.38
1.333	0.77	7.333	1.54	13.333	5.68	19.33	1.38
1.417	0.77	7.417	1.54	13.417	5.68	19.41	1.38
1.500	0.77	7.500	1.54	13.500	5.68	19.50	1.38
1.583	0.77	7.583	1.54	13.583	5.68	19.58	1.38
1.667	0.77	7.667	1.54	13.667	5.68	19.67	1.38
1.750	0.77	7.750	1.54	13.750	5.68	19.75	1.38
1.833	0.38	7.833	1.54	13.833	5.68	19.83	1.38
1.917	1.38	7.917	1.54	13.917	5.68	19.92	1.38
1.000	1.38	8.000	2.07	14.000	5.68	20.00	0.92
2.083	1.90	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.90	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.90	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.90	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.90	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.90	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.90	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.90	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.90	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.90	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.90	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.90	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.90	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.90	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.90	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.90	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.90	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.90	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.90	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.90	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.90	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.90	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.90	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.90	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.3		

PEAK FLOW	(cms)=	1.153 (i)
TIME TO PEAK	(hrs)=	12.417
RUNOFF VOLUME	(mm)=	37.002
TOTAL RAINFALL	(mm)=	76.800
RUNOFF COEFFICIENT	=	0.482

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTEPIPE(0014)	PIPE Number	= 1.00	
IN= 2--> OUT= 1	Width (mm)	=2400.00	Height (mm)= 900.00
DT= 5.0 min	Length (m)	= 207.00	
-----	Slope (m/m)	= 0.003	
	Manning n	= 0.020	

TRAVEL TIME TABLE				
DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME min
0.05	.235E+02	0.0	0.35	9.87
0.09	.471E+02	0.1	0.54	6.37
0.14	.706E+02	0.2	0.69	4.98

HRP1-3-PR_2-100 YEAR.OUT						
0.19	.941E+02	0.4	0.82	4.21		
0.24	.118E+03	0.5	0.93	3.71		
0.28	.141E+03	0.7	1.03	3.36		
0.33	.165E+03	0.9	1.12	3.09		
0.38	.188E+03	1.1	1.20	2.89		
0.43	.212E+03	1.3	1.27	2.72		
0.47	.235E+03	1.5	1.33	2.59		
0.52	.259E+03	1.7	1.40	2.47		
0.57	.282E+03	2.0	1.45	2.38		
0.62	.306E+03	2.2	1.51	2.29		
0.66	.329E+03	2.5	1.55	2.22		
0.71	.353E+03	2.7	1.60	2.16		
0.76	.377E+03	3.0	1.64	2.10		
0.81	.400E+03	3.3	1.68	2.05		
0.85	.424E+03	3.5	1.72	2.00		
0.90	.447E+03	3.8	1.76	1.96		
<---- hydrograph ----> <-pipe / channel-->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (1020)	24.22	1.15	12.42	37.00	0.39	1.22
OUTFLOW: ID= 1 (0014)	24.22	1.15	12.42	37.00	0.39	1.22

CALIB			
STANDHYD (0220)			
ID= 1 DT= 3.0 min			
	Area (ha)=	10.65	
	Total Imp(%)=	55.00	Dir. Conn.(%)= 55.00

	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	5.86	4.79
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	266.46	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.050	0.77	7.050	1.54	13.050	1.00	19.05	1.38
1.100	0.77	7.100	1.54	13.100	1.00	19.10	1.38
1.150	0.77	7.150	1.54	13.150	1.00	19.15	1.38
1.200	0.77	7.200	1.54	13.200	1.00	19.20	1.38
1.250	0.77	7.250	1.54	13.250	1.00	19.25	1.38
1.300	0.77	7.300	1.54	13.300	1.00	19.30	1.38
1.350	0.77	7.350	1.54	13.350	1.00	19.35	1.38
1.400	0.77	7.400	1.54	13.400	1.00	19.40	1.38
1.450	0.77	7.450	1.54	13.450	1.00	19.45	1.38
1.500	0.77	7.500	1.54	13.500	1.00	19.50	1.38
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92

HRP1-3-PR_2-100 YEAR.OUT						
2.250	1.00	8.250	2.07	14.250	2.30	20.25 0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30 0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35 0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40 0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45 0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50 0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55 0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60 0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65 0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70 0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75 0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80 0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85 0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90 0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95 0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00 0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05 0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10 0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15 0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20 0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25 0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30 0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35 0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40 0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45 0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50 0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55 0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60 0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65 0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70 0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75 0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80 0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85 0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90 0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95 0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00 0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05 0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10 0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15 0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20 0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25 0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30 0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35 0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40 0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45 0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50 0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55 0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60 0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65 0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70 0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75 0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80 0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85 0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90 0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95 0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00 0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05 0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10 0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15 0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20 0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25 0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30 0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35 0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40 0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45 0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50 0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55 0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60 0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65 0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70 0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75 0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80 0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85 0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90 0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95 0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00 0.92

Max.Eff.Inten.(mm/hr)=	84.79	42.25				
over (min)	6.00	12.00				
Storage Coeff. (min)=	3.99 (ii)	10.95 (ii)				
Unit Hyd. Tpeak (min)=	6.00	12.00				
Unit Hyd. peak (cms)=	0.24	0.10				
TOTALS						
PEAK FLOW (cms)=	1.35	0.39	1.701 (iii)			
TIME TO PEAK (hrs)=	12.00	12.05	12.00			
RUNOFF VOLUME (mm)=	75.38	32.57	56.07			

RUNOFF COEFFICIENT = 0.98 0.42 HRP1-3-PR_2-100 YEAR.OUT 0.73

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ta = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0014):	24.22	1.150	12.42	37.00
+ ID2= 2 (0220):	10.65	1.701	12.00	56.07
=====				
ID = 3 (0006):	34.87	2.206	12.00	42.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0200)			
ID= 1 DT= 3.0 min	Area (ha)=	10.34	
	Total Imp(%)=	50.00	Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.17	5.17
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	0.40
Length (m)=	262.55	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.050	0.77 6.050	1.54 12.050	11.06 18.05	1.38					
0.100	0.77 6.100	1.54 12.100	11.06 18.10	1.38					
0.150	0.77 6.150	1.54 12.150	11.06 18.15	1.38					
0.200	0.77 6.200	1.54 12.200	11.06 18.20	1.38					
0.250	0.77 6.250	1.54 12.250	11.06 18.25	1.38					
0.300	0.77 6.300	1.54 12.300	11.06 18.30	1.38					
0.350	0.77 6.350	1.54 12.350	11.06 18.35	1.38					
0.400	0.77 6.400	1.54 12.400	11.06 18.40	1.38					
0.450	0.77 6.450	1.54 12.450	11.06 18.45	1.38					
0.500	0.77 6.500	1.54 12.500	11.06 18.50	1.38					
0.550	0.77 6.550	1.54 12.550	5.60 18.55	1.38					
0.600	0.77 6.600	1.54 12.600	5.60 18.60	1.38					
0.650	0.77 6.650	1.54 12.650	5.60 18.65	1.38					
0.700	0.77 6.700	1.54 12.700	5.60 18.70	1.38					
0.750	0.77 6.750	1.54 12.750	5.60 18.75	1.38					
0.800	0.77 6.800	1.54 12.800	5.60 18.80	1.38					
0.850	0.77 6.850	1.54 12.850	5.60 18.85	1.38					
0.900	0.77 6.900	1.54 12.900	5.60 18.90	1.38					
0.950	0.77 6.950	1.54 12.950	5.60 18.95	1.38					
1.000	0.77 7.000	1.54 13.000	5.60 19.00	1.38					
1.050	0.77 7.050	1.54 13.050	1.00 19.05	1.38					
1.100	0.77 7.100	1.54 13.100	1.00 19.10	1.38					
1.150	0.77 7.150	1.54 13.150	1.00 19.15	1.38					
1.200	0.77 7.200	1.54 13.200	1.00 19.20	1.38					
1.250	0.77 7.250	1.54 13.250	1.00 19.25	1.38					
1.300	0.77 7.300	1.54 13.300	1.00 19.30	1.38					
1.350	0.77 7.350	1.54 13.350	1.00 19.35	1.38					
1.400	0.77 7.400	1.54 13.400	1.00 19.40	1.38					
1.450	0.77 7.450	1.54 13.450	1.00 19.45	1.38					
1.500	0.77 7.500	1.54 13.500	1.00 19.50	1.38					
1.550	0.77 7.550	1.54 13.550	6.30 19.55	1.38					
1.600	0.77 7.600	1.54 13.600	6.30 19.60	1.38					
1.650	0.77 7.650	1.54 13.650	6.30 19.65	1.38					
1.700	0.77 7.700	1.54 13.700	6.30 19.70	1.38					
1.750	0.77 7.750	1.54 13.750	6.30 19.75	1.38					
1.800	1.38 7.800	1.54 13.800	6.30 19.80	1.38					
1.850	1.38 7.850	1.54 13.850	6.30 19.85	1.38					
1.900	1.38 7.900	1.54 13.900	6.30 19.90	1.38					
1.950	1.38 7.950	1.54 13.950	6.30 19.95	1.38					
2.000	1.38 8.000	1.54 14.000	6.20 20.00	1.38					
2.050	1.00 8.050	2.07 14.050	2.30 20.05	0.92					
2.100	1.00 8.100	2.07 14.100	2.30 20.10	0.92					
2.150	1.00 8.150	2.07 14.150	2.30 20.15	0.92					
2.200	1.00 8.200	2.07 14.200	2.30 20.20	0.92					
2.250	1.00 8.250	2.07 14.250	2.30 20.25	0.92					
2.300	1.00 8.300	2.07 14.300	2.30 20.30	0.92					
2.350	1.00 8.350	2.07 14.350	2.30 20.35	0.92					

HRP1-3-PR_2-100 YEAR.OUT				
2.400	1.00 8.400	2.07 14.400	2.30 20.40	0.92
2.450	1.00 8.450	2.07 14.450	2.30 20.45	0.92
2.500	1.00 8.500	2.07 14.500	2.30 20.50	0.92
2.550	1.00 8.550	2.07 14.550	2.30 20.55	0.92
2.600	1.00 8.600	2.07 14.600	2.30 20.60	0.92
2.650	1.00 8.650	2.07 14.650	2.30 20.65	0.92
2.700	1.00 8.700	2.07 14.700	2.30 20.70	0.92
2.750	1.00 8.750	2.07 14.750	2.30 20.75	0.92
2.800	1.00 8.800	2.07 14.800	2.30 20.80	0.92
2.850	1.00 8.850	2.07 14.850	2.30 20.85	0.92
2.900	1.00 8.900	2.07 14.900	2.30 20.90	0.92
2.950	1.00 8.950	2.07 14.950	2.30 20.95	0.92
3.000	1.00 9.000	2.07 15.000	2.30 21.00	0.92
3.050	1.00 9.050	2.46 15.050	2.30 21.05	0.92
3.100	1.00 9.100	2.46 15.100	2.30 21.10	0.92
3.150	1.00 9.150	2.46 15.150	2.30 21.15	0.92
3.200	1.00 9.200	2.46 15.200	2.30 21.20	0.92
3.250	1.00 9.250	2.46 15.250	2.30 21.25	0.92
3.300	1.00 9.300	2.46 15.300	2.30 21.30	0.92
3.350	1.00 9.350	2.46 15.350	2.30 21.35	0.92
3.400	1.00 9.400	2.46 15.400	2.30 21.40	0.92
3.450	1.00 9.450	2.46 15.450	2.30 21.45	0.92
3.500	1.00 9.500	2.46 15.500	2.30 21.50	0.92
3.550	1.00 9.550	2.76 15.550	2.30 21.55	0.92
3.600	1.00 9.600	2.76 15.600	2.30 21.60	0.92
3.650	1.00 9.650	2.76 15.650	2.30 21.65	0.92
3.700	1.00 9.700	2.76 15.700	2.30 21.70	0.92
3.750	1.00 9.750	2.76 15.750	2.30 21.75	0.92
3.800	1.00 9.800	2.76 15.800	2.30 21.80	0.92
3.850	1.00 9.850	2.76 15.850	2.30 21.85	0.92
3.900	1.00 9.900	2.76 15.900	2.30 21.90	0.92
3.950	1.00 9.950	2.76 15.950	2.30 21.95	0.92
4.000	1.00 10.000	2.77 16.000	2.30 22.00	0.92
4.050	1.23 10.050	3.53 16.050	1.38 22.05	0.92
4.100	1.23 10.100	3.53 16.100	1.38 22.10	0.92
4.150	1.23 10.150	3.53 16.150	1.38 22.15	0.92
4.200	1.23 10.200	3.53 16.200	1.38 22.20	0.92
4.250	1.23 10.250	3.53 16.250	1.38 22.25	0.92
4.300	1.23 10.300	3.53 16.300	1.38 22.30	0.92
4.350	1.23 10.350	3.53 16.350	1.38 22.35	0.92
4.400	1.23 10.400	3.53 16.400	1.38 22.40	0.92
4.450	1.23 10.450	3.53 16.450	1.38 22.45	0.92
4.500	1.23 10.500	3.53 16.500	1.38 22.50	0.92
4.550	1.23 10.550	4.76 16.550	1.38 22.55	0.92
4.600	1.23 10.600	4.76 16.600	1.38 22.60	0.92
4.650	1.23 10.650	4.76 16.650	1.38 22.65	0.92
4.700	1.23 10.700	4.76 16.700	1.38 22.70	0.92
4.750	1.23 10.750	4.76 16.750	1.38 22.75	0.92
4.800	1.23 10.800	4.76 16.800	1.38 22.80	0.92
4.850	1.23 10.850	4.76 16.850	1.38 22.85	0.92
4.900	1.23 10.900	4.76 16.900	1.38 22.90	0.92
4.950	1.23 10.950	4.76 16.950	1.38 22.95	0.92
5.000	1.23 11.000	4.76 17.000	1.38 23.00	0.92
5.050	1.23 11.050	7.37 17.050	1.38 23.05	0.92
5.100	1.23 11.100	7.37 17.100	1.38 23.10	0.92
5.150	1.23 11.150	7.37 17.150	1.38 23.15	0.92
5.200	1.23 11.200	7.37 17.200	1.38 23.20	0.92
5.250	1.23 11.250	7.37 17.250	1.38 23.25	0.92
5.300	1.23 11.300	7.37 17.300	1.38 23.30	0.92
5.350	1.23 11.350	7.37 17.350	1.38 23.35	0.92
5.400	1.23 11.400	7.37 17.400	1.38 23.40	0.92
5.450	1.23 11.450	7.37 17.450	1.38 23.45	0.92
5.500	1.23 11.500	7.39 17.500	1.38 23.50	0.92
5.550	1.23 11.550	31.95 17.550	1.38 23.55	0.92
5.600	1.23 11.600	31.95 17.600	1.38 23.60	0.92
5.650	1.23 11.650	31.95 17.650	1.38 23.65	0.92
5.700	1.23 11.700	31.95 17.700	1.38 23.70	0.92
5.750	1.23 11.750	31.98 17.750	1.38 23.75	0.92
5.800	1.23 11.800	84.79 17.800	1.38 23.80	0.92
5.850	1.23 11.850	84.79 17.850	1.38 23.85	0.92
5.900	1.23 11.900	84.79 17.900	1.38 23.90	0.92
5.950	1.23 11.950	84.79 17.950	1.38 23.95	0.92
6.000	1.23 12.000	84.75 18.000	1.38 24.00	0.92
Max.Eff.Inten.(mm/hr)=		84.79	36.09	
over (min)		6.00	24.00	
Storage Coeff. (min)=		3.96 (ii)	21.15 (ii)	
Unit Hyd. Tpeak (min)=		6.00	24.00	
Unit Hyd. peak (cms)=		0.24	0.85	
PEAK FLOW (cms)=		1.19	0.28	*TOTALS*
TIME TO PEAK (hrs)=		12.00	12.25	1.358 (iii)
RUNOFF VOLUME (mm)=		75.30	32.57	53.93
TOTAL RAINFALL (mm)=		76.80	76.80	76.80
RUNOFF COEFFICIENT =		0.98	0.42	0.70

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

4.290	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92
4.533	1.23	10.533	3.53	16.533	1.38	22.53	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
5.000	1.23	11.000	7.37	17.000	1.38	23.00	0.92
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.533	1.23	11.533	19.66	17.533	1.38	23.53	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.800	1.23	11.800	71.57	17.800	1.38	23.80	0.92
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	15.27	6.54
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	381.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

--- TRANSFORMED HYTEOGRAPH ---									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.067	0.77	6.067	1.54	12.067	11.07	18.07	1.38		
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38		
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38		
0.533	0.77	6.533	1.54	12.533	8.37	18.53	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38		
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38		
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38		
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38		
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38		
1.533	0.77	7.533	1.54	13.533	3.69	19.53	1.38		
1.600	0.77	7.600	1.54	13.600	3.69	19.60	1.38		
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38		
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38		
1.800	1.23	7.800	1.54	13.800	6.30	19.80	1.38		
1.867	1.23	7.867	1.54	13.867	6.30	19.87	1.38		
1.933	1.23	7.933	1.54	13.933	6.30	19.93	1.38		
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38		
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92		
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92		
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92		
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92		
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92		
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92		
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92		
2.800	1.00	8.800	2.07	14.800	2.				

Max. Eff. Inten. (mm/hr)=	84.79	42.25	
over (min)	5.00	12.00	
Storage Coeff. (min)=	4.95 (ii)	10.32 (ii)	
Unit Hyd. Tpeak (min)=	4.00	12.00	
Unit Hyd. peak (cms)=	0.24	0.18	
			TOTALS
PEAK FLOW (cms)=	3.48	0.55	3.986 (iii)
TIME TO PEAK (hrs)=	12.00	1.87	12.00
=	75.39	32.57	62.48
TOTAL RAINFALL (mm)=	76.80	76.80	76.80
RUNOFF COEFFICIENT =	0.98	0.42	0.81

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)	AREA	QPEAK	TPEAK	R. V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0200):	10.34	1.358	12.00	53.93
+ ID2= 2 (0201):	21.81	3.986	12.00	62.48
ID = 3 (0009):	32.15	5.344	12.00	59.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V	V	I	SSSS	U	U	A	L		(v 6.1.2002)
			SS	U	U	A	A		
V	V	I	SS	U	U	AAAA	L		
V	V	I	SS	U	U	A	L		
	W	I	SSSS	UUUU	A	A	LLLL		

000	TTTT	TTTT	H	H	Y	Y	M	M	000	TM
0 0	T	T	H	H	Y	Y	M	M	0 0	
0 0	T	T	H	H	Y	Y	M	M	0 0	
000	T	T	H	H	Y	Y	M	M	000	

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***** D E T A I L E D   O U T P U T *****

Input  filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voim.dat
Output filename: C:\Users\Abira\AppData\Local\Civica\VM5\1b04af95-7c1b-43ad-8aec-1bb44ca06caf\%70fc15d-a0a3-4e6b-b3ab-a2e78763a9d9\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VM5\1b04af95-7c1b-43ad-8aec-1bb44ca06caf\%70fc15d-a0a3-4e6b-b3ab-a2e78763a9d9\scenar

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DATE: 03/24/2023 TIME: 09:44:51

HRP1-3-PR_2-100 YEAR.OUT

USER:

COMMENTS:

** SIMULATION : Run 03 **

MASS STORM
Filename: C:\Users\Abira\AppData\Local\Temp\dfcc04d8-8cb6-4e9e-84f3-3535a51cec77\1913d010
Ptotal= 88.80 mm
Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07

CALIB
NASHYD (1020)
ID= 1 DT= 5.0 min
Area (ha)= 24.22
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.53
Curve Number (CN)= 79.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07

HRP1-3-PR_2-100 YEAR.OUT

2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 1.454 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 46.406
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.523

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTEPIPE(0014)	PIPE Number	= 1.00
IN= 2---> OUT= 1	Width (mm)=2400.00	Height (mm)= 900.00
DT= 5.0 min	Length (m)= 207.00	
	Slope (m/m)= 0.003	
	Manning n	= 0.020

DEPTH	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(cu.m.)	(cms)	(m/s)	min
0.05	.235E+02	0.0	0.35	9.87
0.09	.471E+02	0.1	0.54	6.37
0.14	.706E+02	0.2	0.69	4.98
0.19	.941E+02	0.4	0.82	4.21
0.24	.118E+03	0.5	0.93	3.71
0.28	.141E+03	0.7	1.03	3.36
0.33	.165E+03	0.9	1.12	3.09
0.38	.188E+03	1.1	1.20	2.89
0.43	.212E+03	1.3	1.27	2.72
0.47	.235E+03	1.5	1.33	2.59
0.52	.259E+03	1.7	1.40	2.47
0.57	.282E+03	2.0	1.45	2.38
0.62	.306E+03	2.2	1.51	2.29
0.66	.329E+03	2.5	1.55	2.22
0.71	.353E+03	2.7	1.60	2.16
0.76	.377E+03	3.0	1.64	2.10
0.81	.400E+03	3.3	1.68	2.05
0.85	.424E+03	3.5	1.72	2.00

HRP1-3-PR_2-100 YEAR.OUT
0.90 .447E+03 3.8 1.76 1.96
<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (1828) 24.22 1.45 12.42 46.41 0.46 1.31
OUTFLOW: ID= 1 (0014) 24.22 1.45 12.42 46.41 0.46 1.31

CALIB
STANDHYD (0228)
ID= 1 DT= 3.0 min
Area (ha)= 10.65
Total Imp(%)= 55.00 Dir. Conn.(%)= 55.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.86 4.79
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 266.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.050 0.89 6.950 1.78 12.050 12.79 18.05 1.60
0.100 0.89 6.100 1.78 12.100 12.79 18.10 1.60
0.150 0.89 6.150 1.78 12.150 12.79 18.15 1.60
0.200 0.89 6.200 1.78 12.200 12.79 18.20 1.60
0.250 0.89 6.250 1.78 12.250 12.79 18.25 1.60
0.300 0.89 6.300 1.78 12.300 12.79 18.30 1.60
0.350 0.89 6.350 1.78 12.350 12.79 18.35 1.60
0.400 0.89 6.400 1.78 12.400 12.79 18.40 1.60
0.450 0.89 6.450 1.78 12.450 12.79 18.45 1.60
0.500 0.89 6.500 1.78 12.500 12.78 18.50 1.60
0.550 0.89 6.550 1.78 12.550 6.57 18.55 1.60
0.600 0.89 6.600 1.78 12.600 6.57 18.60 1.60
0.650 0.89 6.650 1.78 12.650 6.57 18.65 1.60
0.700 0.89 6.700 1.78 12.700 6.57 18.70 1.60
0.750 0.89 6.750 1.78 12.750 6.57 18.75 1.60
0.800 0.89 6.800 1.78 12.800 6.57 18.80 1.60
0.850 0.89 6.850 1.78 12.850 6.57 18.85 1.60
0.900 0.89 6.900 1.78 12.900 6.57 18.90 1.60
0.950 0.89 6.950 1.78 12.950 6.57 18.95 1.60
1.000 0.89 7.000 1.78 13.000 6.57 19.00 1.60
1.050 0.89 7.050 1.78 13.050 1.24 19.05 1.60
1.100 0.89 7.100 1.78 13.100 1.24 19.10 1.60
1.150 0.89 7.150 1.78 13.150 1.24 19.15 1.60
1.200 0.89 7.200 1.78 13.200 1.24 19.20 1.60
1.250 0.89 7.250 1.78 13.250 1.24 19.25 1.60
1.300 0.89 7.300 1.78 13.300 1.24 19.30 1.60
1.350 0.89 7.350 1.78 13.350 1.24 19.35 1.60
1.400 0.89 7.400 1.78 13.400 1.24 19.40 1.60
1.450 0.89 7.450 1.78 13.450 1.24 19.45 1.60
1.500 0.89 7.500 1.78 13.500 1.25 19.50 1.60
1.550 0.89 7.550 1.78 13.550 7.28 19.55 1.60
1.600 0.89 7.600 1.78 13.600 7.28 19.60 1.60
1.650 0.89 7.650 1.78 13.650 7.28 19.65 1.60
1.700 0.89 7.700 1.78 13.700 7.28 19.70 1.60
1.750 0.89 7.750 1.78 13.750 7.28 19.75 1.60
1.800 1.60 7.800 1.78 13.800 7.28 19.80 1.60
1.850 1.60 7.850 1.78 13.850 7.28 19.85 1.60
1.900 1.60 7.900 1.78 13.900 7.28 19.90 1.60
1.950 1.60 7.950 1.78 13.950 7.28 19.95 1.60
2.000 1.60 8.000 1.78 14.000 7.28 20.00 1.60
2.050 1.15 8.050 2.40 14.050 2.66 20.05 1.07
2.100 1.15 8.100 2.40 14.100 2.66 20.10 1.07
2.150 1.15 8.150 2.40 14.150 2.66 20.15 1.07
2.200 1.15 8.200 2.40 14.200 2.66 20.20 1.07
2.250 1.15 8.250 2.40 14.250 2.66 20.25 1.07
2.300 1.15 8.300 2.40 14.300 2.66 20.30 1.07
2.350 1.15 8.350 2.40 14.350 2.66 20.35 1.07
2.400 1.15 8.400 2.40 14.400 2.66 20.40 1.07
2.450 1.15 8.450 2.40 14.450 2.66 20.45 1.07
2.500 1.15 8.500 2.40 14.500 2.66 20.50 1.07
2.550 1.15 8.550 2.40 14.550 2.66 20.55 1.07
2.600 1.15 8.600 2.40 14.600 2.66 20.60 1.07
2.650 1.15 8.650 2.40 14.650 2.66 20.65 1.07
2.700 1.15 8.700 2.40 14.700 2.66 20.70 1.07
2.750 1.15 8.750 2.40 14.750 2.66 20.75 1.07
2.800 1.15 8.800 2.40 14.800 2.66 20.80 1.07
2.850 1.15 8.850 2.40 14.850 2.66 20.85 1.07
2.900 1.15 8.900 2.40 14.900 2.66 20.90 1.07
2.950 1.15 8.950 2.40 14.950 2.66 20.95 1.07

HRP1-3-PR_2-100 YEAR.OUT
3.000 1.15 9.000 2.40 15.000 2.66 21.00 1.07
3.050 1.15 9.050 2.84 15.050 2.66 21.05 1.07
3.100 1.15 9.100 2.84 15.100 2.66 21.10 1.07
3.150 1.15 9.150 2.84 15.150 2.66 21.15 1.07
3.200 1.15 9.200 2.84 15.200 2.66 21.20 1.07
3.250 1.15 9.250 2.84 15.250 2.66 21.25 1.07
3.300 1.15 9.300 2.84 15.300 2.66 21.30 1.07
3.350 1.15 9.350 2.84 15.350 2.66 21.35 1.07
3.400 1.15 9.400 2.84 15.400 2.66 21.40 1.07
3.450 1.15 9.450 2.84 15.450 2.66 21.45 1.07
3.500 1.15 9.500 2.84 15.500 2.66 21.50 1.07
3.550 1.15 9.550 3.20 15.550 2.66 21.55 1.07
3.600 1.15 9.600 3.20 15.600 2.66 21.60 1.07
3.650 1.15 9.650 3.20 15.650 2.66 21.65 1.07
3.700 1.15 9.700 3.20 15.700 2.66 21.70 1.07
3.750 1.15 9.750 3.20 15.750 2.66 21.75 1.07
3.800 1.15 9.800 3.20 15.800 2.66 21.80 1.07
3.850 1.15 9.850 3.20 15.850 2.66 21.85 1.07
3.900 1.15 9.900 3.20 15.900 2.66 21.90 1.07
3.950 1.15 9.950 3.20 15.950 2.66 21.95 1.07
4.000 1.15 10.000 3.20 16.000 2.66 22.00 1.07
4.050 1.42 10.050 4.08 16.050 1.60 22.05 1.07
4.100 1.42 10.100 4.08 16.100 1.60 22.10 1.07
4.150 1.42 10.150 4.08 16.150 1.60 22.15 1.07
4.200 1.42 10.200 4.08 16.200 1.60 22.20 1.07
4.250 1.42 10.250 4.08 16.250 1.60 22.25 1.07
4.300 1.42 10.300 4.08 16.300 1.60 22.30 1.07
4.350 1.42 10.350 4.08 16.350 1.60 22.35 1.07
4.400 1.42 10.400 4.08 16.400 1.60 22.40 1.07
4.450 1.42 10.450 4.08 16.450 1.60 22.45 1.07
4.500 1.42 10.500 4.09 16.500 1.60 22.50 1.07
4.550 1.42 10.550 5.51 16.550 1.60 22.55 1.07
4.600 1.42 10.600 5.51 16.600 1.60 22.60 1.07
4.650 1.42 10.650 5.51 16.650 1.60 22.65 1.07
4.700 1.42 10.700 5.51 16.700 1.60 22.70 1.07
4.750 1.42 10.750 5.51 16.750 1.60 22.75 1.07
4.800 1.42 10.800 5.51 16.800 1.60 22.80 1.07
4.850 1.42 10.850 5.51 16.850 1.60 22.85 1.07
4.900 1.42 10.900 5.51 16.900 1.60 22.90 1.07
4.950 1.42 10.950 5.51 16.950 1.60 22.95 1.07
5.000 1.42 11.000 5.51 17.000 1.60 23.00 1.07
5.050 1.42 11.050 8.52 17.050 1.60 23.05 1.07
5.100 1.42 11.100 8.52 17.100 1.60 23.10 1.07
5.150 1.42 11.150 8.52 17.150 1.60 23.15 1.07
5.200 1.42 11.200 8.52 17.200 1.60 23.20 1.07
5.250 1.42 11.250 8.52 17.250 1.60 23.25 1.07
5.300 1.42 11.300 8.52 17.300 1.60 23.30 1.07
5.350 1.42 11.350 8.52 17.350 1.60 23.35 1.07
5.400 1.42 11.400 8.52 17.400 1.60 23.40 1.07
5.450 1.42 11.450 8.52 17.450 1.60 23.45 1.07
5.500 1.42 11.500 8.54 17.500 1.60 23.50 1.07
5.550 1.42 11.550 36.94 17.550 1.60 23.55 1.07
5.600 1.42 11.600 36.94 17.600 1.60 23.60 1.07
5.650 1.42 11.650 36.94 17.650 1.60 23.65 1.07
5.700 1.42 11.700 36.94 17.700 1.60 23.70 1.07
5.750 1.42 11.750 36.97 17.750 1.60 23.75 1.07
5.800 1.42 11.800 98.04 17.800 1.60 23.80 1.07
5.850 1.42 11.850 98.04 17.850 1.60 23.85 1.07
5.900 1.42 11.900 98.04 17.900 1.60 23.90 1.07
5.950 1.42 11.950 98.04 17.950 1.60 23.95 1.07
6.000 1.42 12.000 97.99 18.000 1.60 24.00 1.07

Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min) 6.00 12.00
Storage Coeff. (min)= 3.77 (ii) 10.33 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.24 0.10

TOTALS
PEAK FLOW (cms)= 1.56 0.50 2.024 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 87.30 40.96 66.45
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.75

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

HRP1-3-PR_2-100 YEAR.OUT

ID1= 1 (0014): 24.22 1.452 12.42 46.41
+ ID2= 2 (0220): 10.65 2.024 12.00 66.45
=====

ID = 3 (0006): 34.87 2.685 12.00 52.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0200) |
ID= 1 DT= 3.0 min

Area (ha)= 10.34
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.17 5.17
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 0.40
Length (m)= 262.55 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.050 0.89 | 6.050 1.78 | 12.050 12.79 | 18.05 1.60
0.100 0.89 | 6.100 1.78 | 12.100 12.79 | 18.10 1.60
0.150 0.89 | 6.150 1.78 | 12.150 12.79 | 18.15 1.60
0.200 0.89 | 6.200 1.78 | 12.200 12.79 | 18.20 1.60
0.250 0.89 | 6.250 1.78 | 12.250 12.79 | 18.25 1.60
0.300 0.89 | 6.300 1.78 | 12.300 12.79 | 18.30 1.60
0.350 0.89 | 6.350 1.78 | 12.350 12.79 | 18.35 1.60
0.400 0.89 | 6.400 1.78 | 12.400 12.79 | 18.40 1.60
0.450 0.89 | 6.450 1.78 | 12.450 12.79 | 18.45 1.60
0.500 0.89 | 6.500 1.78 | 12.500 12.78 | 18.50 1.60
0.550 0.89 | 6.550 1.78 | 12.550 6.57 | 18.55 1.60
0.600 0.89 | 6.600 1.78 | 12.600 6.57 | 18.60 1.60
0.650 0.89 | 6.650 1.78 | 12.650 6.57 | 18.65 1.60
0.700 0.89 | 6.700 1.78 | 12.700 6.57 | 18.70 1.60
0.750 0.89 | 6.750 1.78 | 12.750 6.57 | 18.75 1.60
0.800 0.89 | 6.800 1.78 | 12.800 6.57 | 18.80 1.60
0.850 0.89 | 6.850 1.78 | 12.850 6.57 | 18.85 1.60
0.900 0.89 | 6.900 1.78 | 12.900 6.57 | 18.90 1.60
0.950 0.89 | 6.950 1.78 | 12.950 6.57 | 18.95 1.60
1.000 0.89 | 7.000 1.78 | 13.000 6.57 | 19.00 1.60
1.050 0.89 | 7.050 1.78 | 13.050 1.24 | 19.05 1.60
1.100 0.89 | 7.100 1.78 | 13.100 1.24 | 19.10 1.60
1.150 0.89 | 7.150 1.78 | 13.150 1.24 | 19.15 1.60
1.200 0.89 | 7.200 1.78 | 13.200 1.24 | 19.20 1.60
1.250 0.89 | 7.250 1.78 | 13.250 1.24 | 19.25 1.60
1.300 0.89 | 7.300 1.78 | 13.300 1.24 | 19.30 1.60
1.350 0.89 | 7.350 1.78 | 13.350 1.24 | 19.35 1.60
1.400 0.89 | 7.400 1.78 | 13.400 1.24 | 19.40 1.60
1.450 0.89 | 7.450 1.78 | 13.450 1.24 | 19.45 1.60
1.500 0.89 | 7.500 1.78 | 13.500 1.25 | 19.50 1.60
1.550 0.89 | 7.550 1.78 | 13.550 7.28 | 19.55 1.60
1.600 0.89 | 7.600 1.78 | 13.600 7.28 | 19.60 1.60
1.650 0.89 | 7.650 1.78 | 13.650 7.28 | 19.65 1.60
1.700 0.89 | 7.700 1.78 | 13.700 7.28 | 19.70 1.60
1.750 0.89 | 7.750 1.78 | 13.750 7.28 | 19.75 1.60
1.800 1.60 | 7.800 1.78 | 13.800 7.28 | 19.80 1.60
1.850 1.60 | 7.850 1.78 | 13.850 7.28 | 19.85 1.60
1.900 1.60 | 7.900 1.78 | 13.900 7.28 | 19.90 1.60
1.950 1.60 | 7.950 1.78 | 13.950 7.28 | 19.95 1.60
2.000 1.60 | 8.000 1.78 | 14.000 7.28 | 20.00 1.60
2.050 1.15 | 8.050 2.40 | 14.050 2.66 | 20.05 1.07
2.100 1.15 | 8.100 2.40 | 14.100 2.66 | 20.10 1.07
2.150 1.15 | 8.150 2.40 | 14.150 2.66 | 20.15 1.07
2.200 1.15 | 8.200 2.40 | 14.200 2.66 | 20.20 1.07
2.250 1.15 | 8.250 2.40 | 14.250 2.66 | 20.25 1.07
2.300 1.15 | 8.300 2.40 | 14.300 2.66 | 20.30 1.07
2.350 1.15 | 8.350 2.40 | 14.350 2.66 | 20.35 1.07
2.400 1.15 | 8.400 2.40 | 14.400 2.66 | 20.40 1.07
2.450 1.15 | 8.450 2.40 | 14.450 2.66 | 20.45 1.07
2.500 1.15 | 8.500 2.40 | 14.500 2.66 | 20.50 1.07
2.550 1.15 | 8.550 2.40 | 14.550 2.66 | 20.55 1.07
2.600 1.15 | 8.600 2.40 | 14.600 2.66 | 20.60 1.07
2.650 1.15 | 8.650 2.40 | 14.650 2.66 | 20.65 1.07
2.700 1.15 | 8.700 2.40 | 14.700 2.66 | 20.70 1.07
2.750 1.15 | 8.750 2.40 | 14.750 2.66 | 20.75 1.07
2.800 1.15 | 8.800 2.40 | 14.800 2.66 | 20.80 1.07
2.850 1.15 | 8.850 2.40 | 14.850 2.66 | 20.85 1.07
2.900 1.15 | 8.900 2.40 | 14.900 2.66 | 20.90 1.07
2.950 1.15 | 8.950 2.40 | 14.950 2.66 | 20.95 1.07
3.000 1.15 | 9.000 2.40 | 15.000 2.66 | 21.00 1.07
3.050 1.15 | 9.050 2.84 | 15.050 2.66 | 21.05 1.07
3.100 1.15 | 9.100 2.84 | 15.100 2.66 | 21.10 1.07

HRP1-3-PR_2-100 YEAR.OUT

3.150 1.15 | 9.150 2.84 | 15.150 2.66 | 21.15 1.07
3.200 1.15 | 9.200 2.84 | 15.200 2.66 | 21.20 1.07
3.250 1.15 | 9.250 2.84 | 15.250 2.66 | 21.25 1.07
3.300 1.15 | 9.300 2.84 | 15.300 2.66 | 21.30 1.07
3.350 1.15 | 9.350 2.84 | 15.350 2.66 | 21.35 1.07
3.400 1.15 | 9.400 2.84 | 15.400 2.66 | 21.40 1.07
3.450 1.15 | 9.450 2.84 | 15.450 2.66 | 21.45 1.07
3.500 1.15 | 9.500 2.84 | 15.500 2.66 | 21.50 1.07
3.550 1.15 | 9.550 3.20 | 15.550 2.66 | 21.55 1.07
3.600 1.15 | 9.600 3.20 | 15.600 2.66 | 21.60 1.07
3.650 1.15 | 9.650 3.20 | 15.650 2.66 | 21.65 1.07
3.700 1.15 | 9.700 3.20 | 15.700 2.66 | 21.70 1.07
3.750 1.15 | 9.750 3.20 | 15.750 2.66 | 21.75 1.07
3.800 1.15 | 9.800 3.20 | 15.800 2.66 | 21.80 1.07
3.850 1.15 | 9.850 3.20 | 15.850 2.66 | 21.85 1.07
3.900 1.15 | 9.900 3.20 | 15.900 2.66 | 21.90 1.07
3.950 1.15 | 9.950 3.20 | 15.950 2.66 | 21.95 1.07
4.000 1.15 | 10.000 3.20 | 16.000 2.66 | 22.00 1.07
4.050 1.42 | 10.050 4.08 | 16.050 1.60 | 22.05 1.07
4.100 1.42 | 10.100 4.08 | 16.100 1.60 | 22.10 1.07
4.150 1.42 | 10.150 4.08 | 16.150 1.60 | 22.15 1.07
4.200 1.42 | 10.200 4.08 | 16.200 1.60 | 22.20 1.07
4.250 1.42 | 10.250 4.08 | 16.250 1.60 | 22.25 1.07
4.300 1.42 | 10.300 4.08 | 16.300 1.60 | 22.30 1.07
4.350 1.42 | 10.350 4.08 | 16.350 1.60 | 22.35 1.07
4.400 1.42 | 10.400 4.08 | 16.400 1.60 | 22.40 1.07
4.450 1.42 | 10.450 4.08 | 16.450 1.60 | 22.45 1.07
4.500 1.42 | 10.500 4.09 | 16.500 1.60 | 22.50 1.07
4.550 1.42 | 10.550 5.51 | 16.550 1.60 | 22.55 1.07
4.600 1.42 | 10.600 5.51 | 16.600 1.60 | 22.60 1.07
4.650 1.42 | 10.650 5.51 | 16.650 1.60 | 22.65 1.07
4.700 1.42 | 10.700 5.51 | 16.700 1.60 | 22.70 1.07
4.750 1.42 | 10.750 5.51 | 16.750 1.60 | 22.75 1.07
4.800 1.42 | 10.800 5.51 | 16.800 1.60 | 22.80 1.07
4.850 1.42 | 10.850 5.51 | 16.850 1.60 | 22.85 1.07
4.900 1.42 | 10.900 5.51 | 16.900 1.60 | 22.90 1.07
4.950 1.42 | 10.950 5.51 | 16.950 1.60 | 22.95 1.07
5.000 1.42 | 11.000 5.51 | 17.000 1.60 | 23.00 1.07
5.050 1.42 | 11.050 8.52 | 17.050 1.60 | 23.05 1.07
5.100 1.42 | 11.100 8.52 | 17.100 1.60 | 23.10 1.07
5.150 1.42 | 11.150 8.52 | 17.150 1.60 | 23.15 1.07
5.200 1.42 | 11.200 8.52 | 17.200 1.60 | 23.20 1.07
5.250 1.42 | 11.250 8.52 | 17.250 1.60 | 23.25 1.07
5.300 1.42 | 11.300 8.52 | 17.300 1.60 | 23.30 1.07
5.350 1.42 | 11.350 8.52 | 17.350 1.60 | 23.35 1.07
5.400 1.42 | 11.400 8.52 | 17.400 1.60 | 23.40 1.07
5.450 1.42 | 11.450 8.52 | 17.450 1.60 | 23.45 1.07
5.500 1.42 | 11.500 8.54 | 17.500 1.60 | 23.50 1.07
5.550 1.42 | 11.550 36.94 | 17.550 1.60 | 23.55 1.07
5.600 1.42 | 11.600 36.94 | 17.600 1.60 | 23.60 1.07
5.650 1.42 | 11.650 36.94 | 17.650 1.60 | 23.65 1.07
5.700 1.42 | 11.700 36.94 | 17.700 1.60 | 23.70 1.07
5.750 1.42 | 11.750 36.97 | 17.750 1.60 | 23.75 1.07
5.800 1.42 | 11.800 98.04 | 17.800 1.60 | 23.80 1.07
5.850 1.42 | 11.850 98.04 | 17.850 1.60 | 23.85 1.07
5.900 1.42 | 11.900 98.04 | 17.900 1.60 | 23.90 1.07
5.950 1.42 | 11.950 98.04 | 17.950 1.60 | 23.95 1.07
6.000 1.42 | 12.000 97.99 | 18.000 1.60 | 24.00 1.07

Max.Eff.Inten.(mm/hr)= 98.04 51.50
over (min) 6.00 21.00
Storage Coeff. (min)= 3.73 (ii) 18.65 (ii)
Unit Hyd. Tpeak (min)= 6.00 21.00
Unit Hyd. peak (cms)= 0.25 0.06

TOTALS

PEAK FLOW (cms)= 1.38 0.39 1.637 (iii)
TIME TO PEAK (hrs)= 12.00 12.20 12.00
RUNOFF VOLUME (mm)= 87.30 40.96 64.13
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.72

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0201) |
ID= 1 DT= 4.0 min

Area (ha)= 21.81
Total Imp(%)= 70.00 Dir. Conn.(%)= 70.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 15.27 6.54
Dep. Storage (mm)= 1.50 1.50

Average Slope (%)= 2.00
Length (m)= 381.31
Mannings n = 0.013

HRP1-3-PR-2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	0.89	6.067	1.78	12.067	12.80	18.07	1.60		
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60		
0.533	0.89	6.533	1.78	12.533	9.68	18.53	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.533	0.89	7.533	1.78	13.533	4.26	19.53	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.800	1.42	7.800	1.78	13.800	7.28	19.80	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07		
3.533	1.15	9.533	3.02	15.533	2.66	21.53	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07		
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07		
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07		
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07		
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07		
4.533	1.42	10.533	4.08	16.533	1.60	22.53	1.07		
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07		
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07		
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07		
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07		
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07		
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07		
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07		

HRP1-3-PR-2-100 YEAR.OUT									
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07		
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07		
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07		
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07		
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07		
5.533	1.42	11.533	22.73	17.533	1.60	23.53	1.07		
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07		
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07		
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07		
5.800	1.42	11.800	82.75	17.800	1.60	23.80	1.07		
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07		
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07		
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.06		
Max.Eff.Inten.(mm/hr)= 98.04 53.17									
over (min) 5.00 12.00									
Storage Coeff. (min)= 4.67 (ii) 9.74 (ii)									
Unit Hyd. Tpeak (min)= 4.00 12.00									
Unit Hyd. peak (cms)= 0.24 0.11									
TOTALS									
PEAK FLOW (cms)= 4.04 0.78 4.783 (iii)									
TIME TO PEAK (hrs)= 12.00 12.07 12.00									
RUNOFF VOLUME (mm)= 87.30 40.96 73.40									
TOTAL RAINFALL (mm)= 88.80 88.80 88.80									
RUNOFF COEFFICIENT = 0.98 0.46 0.83									

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CIV = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0200):	10.34	1.637	12.00	64.13	
+ ID2= 2 (0201):	21.81	4.783	12.00	73.40	
=====					
ID = 3 (0009):	32.15	6.339	12.00	70.54	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\df3180fd-3ba5-45d3-9861-ec500f754a0\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\df3180fd-3ba5-45d3-9861-ec500f754a0\scenar

DATE: 03/24/2023 TIME: 09:44:51

USER:

COMMENTS: _____

** SIMULATION : Run 04 **

| MASS STORM | Filename: C:\Users\AbirA\AppData

HRP1-3-PR_2-100_YEAR.OUT

ata\Local\Temp\
dfcc04d8-8cb6-4e9e-84f3-3535a51cec77\cdfb3d47
Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86
2.00	1.86	8.00	2.06	14.00	8.46	20.00	1.86
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24

CALIB
NASHYD (1020)
ID= 1 DT= 5.0 min
Area (ha)= 24.22
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.53
Curve Number (CN)= 79.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.03	6.083	2.06	12.083	14.86	18.08	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24

HRP1-3-PR_2-100_YEAR.OUT

3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 1.831 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 58.188
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.564

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTEPIPE(0014)
ID= 2 ---> OUT= 1
DT= 5.0 min
PIPE Number = 1.00
Width (mm)=2400.00
Length (m)= 287.00
Slope (m/m)= 0.003
Manning n = 0.020
Height (mm)= 900.00

DEPTH	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME		
(m)	(cu.m.)	(cms)	(m/s)	min		
0.05	.235E+02	0.0	0.35	9.87		
0.09	.471E+02	0.1	0.54	6.37		
0.14	.706E+02	0.2	0.69	4.98		
0.19	.941E+02	0.4	0.82	4.21		
0.24	.118E+03	0.5	0.93	3.71		
0.28	.141E+03	0.7	1.03	3.36		
0.33	.165E+03	0.9	1.12	3.09		
0.38	.188E+03	1.1	1.20	2.89		
0.43	.212E+03	1.3	1.27	2.72		
0.47	.235E+03	1.5	1.33	2.59		
0.52	.259E+03	1.7	1.40	2.47		
0.57	.282E+03	2.0	1.45	2.38		
0.62	.306E+03	2.2	1.51	2.29		
0.66	.329E+03	2.5	1.55	2.22		
0.71	.353E+03	2.7	1.60	2.16		
0.76	.377E+03	3.0	1.64	2.10		
0.81	.400E+03	3.3	1.68	2.05		
0.85	.424E+03	3.5	1.72	2.00		
0.90	.447E+03	3.8	1.76	1.96		
<---- hydrograph ---->					<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (1020)	24.22	1.83	12.42	58.19	0.54	1.42
OUTFLOW: ID= 1 (0014)	24.22	1.83	12.42	58.19	0.54	1.42

CALIB
STANDHYD (0220)
ID= 1 DT= 3.0 min
Area (ha)= 10.65
Total Imp(%)= 55.00
Dir. Conn.(%)= 55.00

HRP1-3-PR_2-100 YEAR.OUT

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.86	4.79
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	266.46	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24

HRP1-3-PR_2-100 YEAR.OUT							
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24

Max.Eff.Inten.(mm/hr)= 113.93 66.98
over (min) 6.00 12.00
Storage Coeff. (min)= 3.55 (ii) 9.73 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.11

PEAK FLOW (cms)= 1.82 0.65 2.423 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 181.70 51.59 79.15
TOTAL RAINFALL (mm)= 183.20 183.20 183.20
RUNOFF COEFFICIENT = 0.99 0.50 0.77

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)		
ID1= 1 (0014):	24.22	1.830	12.42	58.19
+ ID2= 2 (0020):	10.65	2.423	12.00	79.15
=====				
ID = 3 (0006):	34.87	3.284	12.00	64.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0200)				
ID= 1 DT= 3.0 min	Area (ha)=	10.34		
	Total Imp(%)=	50.00	Dir. Conn.(%)=	50.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	5.17	5.17		
Dep. Storage (mm)=	1.50	1.50		

Average Slope (m)= 2.00 0.40
Length (m)= 262.55 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP1-3-PR_2-100 YEAR.OUT

HRP1-3-PR_2-100 YEAR.OUT

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24

3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24

Max.Eff.Inten.(mm/hr)= 113.93 65.04
over (min)= 6.00 18.00
Storage Coeff. (min)= 3.51 (ii) 17.10 (ii)
Unit Hyd. Tpeak (min)= 6.00 18.00
Unit Hyd. peak (cms)= 0.25 0.06
PEAK FLOW (cms)= 1.61 0.52 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.15 1.996 (iii)
RUNOFF VOLUME (mm)= 101.70 51.59 76.64
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.50 0.74

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD @ 201
ID= 1 DT= 4.0 min
Area (ha)= 21.81
Total Imp(%)= 70.00
Dir. Conn.(%)= 70.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 15.27 6.54
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 381.31 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	1.03	6.067	2.06	12.067	14.87	18.07	1.86
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86

HRP1-3-PR_2-100 YEAR.OUT											
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86				
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86				
0.533	1.03	6.533	2.06	12.533	11.25	18.53	1.86				
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86				
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86				
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86				
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86				
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86				
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86				
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86				
1.067	1.03	7.067	2.06	13.067	1.45	19.07	1.86				
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86				
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86				
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86				
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86				
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86				
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86				
1.533	1.03	7.533	2.06	13.533	4.95	19.53	1.86				
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86				
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86				
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86				
1.800	1.05	7.800	2.06	13.800	8.46	19.80	1.86				
1.867	1.06	7.867	2.06	13.867	8.46	19.87	1.86				
1.933	1.06	7.933	2.06	13.933	8.46	19.93	1.86				
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86				
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24				
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24				
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24				
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24				
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24				
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24				
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24				
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24				
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24				
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24				
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24				
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24				
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24				
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24				
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24				
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24				
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24				
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24				
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24				
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24				
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24				
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24				
3.533	1.34	9.533	3.51	15.533	3.10	21.53	1.24				
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24				
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24				
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24				
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24				
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24				
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24				
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24				
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24				
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24				
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24				
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24				
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24				
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24				
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24				
4.533	1.65	10.533	5.57	16.533	1.86	22.53	1.24				
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24				
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24				
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24				
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24				
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24				
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24				
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24				
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24				
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24				
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24				
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24				
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24				
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24				
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24				
5.533	1.65	11.533	26.42	17.533	1.86	23.53	1.24				
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24				
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24				
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24				
5.800	1.65	11.800	96.17	17.800	1.86	23.80	1.24				
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24				
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24				
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24				

Max.Eff.Inten.(mm/hr)= 113.93 66.99

HRP1-3-PR_2-100 YEAR.OUT			
over (min)	5.00	12.00	
Storage Coeff. (min)=	4.40 (ii)	9.17 (ii)	
Unit Hyd. Tpeak (min)=	4.00	12.00	
Unit Hyd. peak (cms)=	0.25	0.11	
PEAK FLOW (cms)=	4.72	0.90	*TOTALS* 5.578 (iii)
TIME TO PEAK (hrs)=	12.00	12.07	12.00
RUNOFF VOLUME (mm)=	101.70	51.59	86.67
TOTAL RAINFALL (mm)=	103.20	103.20	103.20
RUNOFF COEFFICIENT =	0.99	0.50	0.84
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES: CN* = 72.0 Ia = Dep. Storage (Above)			
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.			
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.			

ADD HYD (0009)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0200):	10.34	1.996	12.00	76.64	
+ ID2= 2 (0201):	21.81	5.578	12.00	86.67	
=====					
ID = 3 (0009):	32.15	7.573	12.00	83.59	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V	V	I	SSSS	U	U	A	L	(v 6.1.2002)
V	V	I	SS	U	U	A	A	L
V	V	I	SS	UUU	AAAA	L		
V	V	I	SS	U	U	A	A	L
VV	I	SSSS	UUUU	A	A	LLLL		
000	TTTT	TTTT	H	H	Y	M	M	000 TM
0	0	T	T	H	H	Y	MM	MM 0 0
0	0	T	T	H	H	Y	M	M 0 0
000	T	T	H	H	Y	M	M	000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\7206ddb1-e969-4320-b11e-b94cf3a04184\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\7206ddb1-e969-4320-b11e-b94cf3a04184\scenar

DATE: 03/24/2023 TIME: 09:44:51

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 05 **
*****
```

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\dfcc04d8-8cb6-4e9e-84f3-3535a51cec77\95accb52
Ptotal=115.20 mm	Comments: Mass 24-Hour SCS Type II Design Storm

```

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

```

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr		hrs	mm/hr	hrs	mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07	
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07	
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07	
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07	
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07	
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07	

HRP1-3-PR_2-100 YEAR.OUT

1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38

| CALIB
| NASHYD (1020) | Area (ha)= 24.22 Curve Number (CN)= 79.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.53

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38

HRP1-3-PR_2-100 YEAR.OUT

4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 2.155 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 68.330
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.593

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ROUTEPIPE(0014) | PIPE Number = 1.00
| IN= 2---> OUT= 1 | Width (mm)=2400.00 Height (mm)= 900.00
| DT= 5.0 min | Length (m)= 207.00
| Slope (m/m)= 0.003
Manning n = 0.020

----- TRAVEL TIME TABLE -----

DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV. TIME min
0.05	.235E+02	0.0	0.35	9.87
0.09	.471E+02	0.1	0.54	6.37
0.14	.706E+02	0.2	0.69	4.98
0.19	.941E+02	0.4	0.82	4.21
0.24	.118E+03	0.5	0.93	3.71
0.28	.141E+03	0.7	1.03	3.36
0.33	.165E+03	0.9	1.12	3.09
0.38	.188E+03	1.1	1.20	2.89
0.43	.212E+03	1.3	1.27	2.72
0.47	.235E+03	1.5	1.33	2.59
0.52	.259E+03	1.7	1.40	2.47
0.57	.282E+03	2.0	1.45	2.38
0.62	.306E+03	2.2	1.51	2.29
0.66	.329E+03	2.5	1.55	2.22
0.71	.353E+03	2.7	1.60	2.16
0.76	.377E+03	3.0	1.64	2.10
0.81	.400E+03	3.3	1.68	2.05
0.85	.424E+03	3.5	1.72	2.00
0.90	.447E+03	3.8	1.76	1.96

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (1020) 24.22 2.16 12.42 68.33 0.60 1.49
OUTFLOW: ID= 1 (0014) 24.22 2.16 12.42 68.33 0.60 1.49

| CALIB
| STANDHYD (0220) | Area (ha)= 10.65
| ID= 1 DT= 3.0 min | Total Imp(%)= 55.00 Dir. Conn.(%)= 55.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.86 4.79
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 266.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07

HRP1-3-PR_2-100 YEAR.OUT									
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		

HRP1-3-PR_2-100 YEAR.OUT									
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38		
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38		
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38		
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38		
Max.Eff.Inten.(mm/hr)= 127.18 78.96									
over (min) 6.00 12.00									
Storage Coeff. (min)= 3.39 (ii) 9.31 (ii)									
Unit Hyd. Tpeak (min)= 6.00 12.00									
Unit Hyd. peak (cms)= 0.26 0.11									
TOTALS									
PEAK FLOW (cms)= 2.04 0.77 2.764 (iii)									
TIME TO PEAK (hrs)= 12.00 12.05 12.00									
RUNOFF VOLUME (mm)= 113.70 60.84 89.91									
TOTAL RAINFALL (mm)= 115.20 115.20 115.20									
RUNOFF COEFFICIENT = 0.99 0.53 0.78									
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

MOD HYD (0006)									
1 + 2 = 3									
AREA QPEAK TPEAK R.V.									
(ha) (cms) (hrs) (mm)									
ID1= 1 (0014):	24.22	2.155	12.42	68.33					
+ ID2= 2 (0220):	10.65	2.764	12.00	89.91					
=====									
ID = 3 (0006):	34.87	3.800	12.00	74.92					
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

CALIB									
STANDHYD (0200)									
1 DT= 3.0 min									
Area (ha)= 10.34									
Total Imp(%)= 50.00									
Dir. Conn.(%)= 50.00									
IMPERVIOUS PERVIOUS (i)									
Surface Area (ha)= 5.17 5.17									
Dep. Storage (mm)= 1.50 1.50									
Average Slope (%)= 2.00 0.40									
Length (m)= 262.55 40.00									
Mannings n = 0.813 0.250									
NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.									

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		

HRP1-3-PR_2-100 YEAR.OUT									
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		

HRP1-3-PR_2-100 YEAR.OUT									
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38		
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38		
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38		
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38		

Max.Eff.Inten.(mm/hr)=	127.18	76.00
over (min)	6.00	18.00
Storage Coeff. (min)=	3.36 (ii)	16.08 (iii)
Unit Hyd. Tpeak (min)=	6.00	18.00
Unit Hyd. peak (cms)=	0.26	0.07
TOTALS		
PEAK FLOW (cms)=	1.80	0.64
TIME TO PEAK (hrs)=	12.00	12.00
RUNOFF VOLUME (mm)=	113.70	60.84
TOTAL RAINFALL (mm)=	115.20	115.20
RUNOFF COEFFICIENT =	0.99	0.53
		0.76

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0201)	Area (ha)= 21.81
ID= 1 DT= 4.0 min	Total Imp(%)= 70.00 Dir. Conn.(%)= 70.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	15.27	6.54	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	381.31	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.067	1.15	6.067	2.30	12.067	16.60	18.07	2.07		
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07		
0.533	1.15	6.533	2.30	12.533	12.56	18.53	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07		
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		

HRP1-3-PR_2-100 YEAR.OUT

1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07
1.533	1.15	7.533	2.30	13.533	5.53	19.53	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07
1.800	1.84	7.800	2.30	13.800	9.45	19.80	2.07
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.533	1.50	9.533	3.92	15.533	3.46	21.53	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.533	1.84	10.533	6.22	16.533	2.07	22.53	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.533	1.84	11.533	29.49	17.533	2.07	23.53	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.800	1.84	11.800	107.36	17.800	2.07	23.80	1.38
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 78.97
over (min) 5.00 12.00
Storage Coeff. (min)= 4.21 (ii) 8.78 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.26 0.11

TOTALS
PEAK FLOW (cms)= 5.29 1.08 6.319 (iii)
TIME TO PEAK (hrs)= 12.00 12.07
RUNOFF VOLUME (mm)= 113.79 60.84 97.84
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53 0.85

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

HRP1-3-PR_2-100 YEAR.OUT

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0000)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0200):	10.34	2.275	12.00	87.27
+ ID2= 2 (0201):	21.81	6.319	12.00	97.84
ID = 3 (0000):	32.15	8.593	12.00	94.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V	V	I	SSSS	U	U	A	L	(v 6.1.2002)
V	V	I	SS	U	U	A	L	
V	V	I	SS	U	U	AAAA	L	
V	V	I	SS	U	U	A	L	
VV	I	SSSS	UUUU	A	A	LLLL		
000	TTTT	TTTT	H	H	Y	Y	M	M 000 TM
0	0	T	T	H	H	Y	Y	MM 0 0
0	0	T	T	H	H	Y	Y	M 0 0
000	T	T	H	H	Y	Y	M	M 000

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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\Abira\AppData\Local\Clivica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\532e51c1-bf86-4b4a-b053-383fbb85ee31\scenar
Summary filename: C:\Users\Abira\AppData\Local\Clivica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\532e51c1-bf86-4b4a-b053-383fbb85ee31\scenar

DATE: 03/24/2023 TIME: 09:44:51

USER:

COMMENTS: _____

** SIMULATION : Run 06

MASS STORM | Filename: C:\Users\Abira\AppData\Local\Temp\dfcc04d8-8cb6-4e9e-84f3-3535a51cec77\2985551a
| Ptotal=127.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53

HRP1-3-PR_2-100 YEAR.OUT									
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53		
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53		
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53		

CALIB									
NASHYD (1020)	Area	(ha)=	24.22	Curve Number	(CN)=	79.0			
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00				
	U.H. Tp(hrs)=	0.53							

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53		
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53		
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53		
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53		
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53		
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53		

HRP1-3-PR_2-100 YEAR.OUT									
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53		
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53		

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW	(cms)=	2.486	(i)						
TIME TO PEAK	(hrs)=	12.417							
RUNOFF VOLUME	(mm)=	78.707							
TOTAL RAINFALL	(mm)=	127.200							
RUNOFF COEFFICIENT	=	0.619							

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTEPIPE(0014)	PIPE Number	=	1.00						
IN= 2---> OUT= 1	Width	(mm)=	2400.00	Height	(mm)=	900.00			
DT= 5.0 min	Length	(m)=	207.00						
	Slope	(m/m)=	0.003						
	Manning n	=	0.020						

TRAVEL TIME TABLE						
DEPTH	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME		
(m)	(cu.m.)	(cms)	(m/s)	min		
0.05	.235E+02	0.0	0.35	9.87		
0.09	.471E+02	0.1	0.54	6.37		
0.14	.706E+02	0.2	0.69	4.98		
0.19	.941E+02	0.4	0.82	4.21		
0.24	.118E+03	0.5	0.93	3.71		
0.28	.141E+03	0.7	1.03	3.36		
0.33	.165E+03	0.9	1.12	3.09		
0.38	.188E+03	1.1	1.20	2.89		
0.43	.212E+03	1.3	1.27	2.72		
0.47	.235E+03	1.5	1.33	2.59		
0.52	.259E+03	1.7	1.40	2.47		
0.57	.282E+03	2.0	1.45	2.38		
0.62	.306E+03	2.2	1.51	2.29		
0.66	.329E+03	2.5	1.55	2.22		
0.71	.353E+03	2.7	1.60	2.16		
0.76	.377E+03	3.0	1.64	2.10		
0.81	.400E+03	3.3	1.68	2.05		
0.85	.424E+03	3.5	1.72	2.00		
0.90	.447E+03	3.8	1.76	1.96		
<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (1020)	24.22	2.49	12.42	78.71	0.67	1.56
OUTFLOW: ID= 1 (0014)	24.22	2.49	12.42	78.71	0.67	1.56

CALIB									
STANDHYD (0220)	Area	(ha)=	10.65						
ID= 1 DT= 3.0 min	Total Imp(%)=	55.00	Dir. Conn.(%)=	55.00					

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	5.86	4.79		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	266.46	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		

HRP1-3-PR_2-100 YEAR.OUT									
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		

HRP1-3-PR_2-100 YEAR.OUT									
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53		
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53		
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53		
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53		
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53		
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53		
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53		
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53		
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53		
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53		
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53		
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53		
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53		

Max.Eff.Inten.(mm/hr)=	140.43	91.28	
over (min)	6.00	9.00	
Storage Coeff. (min)=	3.26 (ii)	8.95 (ii)	
Unit Hyd. Tpeak (min)=	6.00	9.00	
Unit Hyd. peak (cms)=	0.26	0.13	
PEAK FLOW (cms)=	2.26	0.95	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.05	3.187 (iii)
RUNOFF VOLUME (mm)=	125.70	70.39	12.00
TOTAL RAINFALL (mm)=	127.20	127.20	100.81
RUNOFF COEFFICIENT =	0.99	0.55	0.79

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0014):	24.22	2.488	12.42	78.71
+ ID2= 2 (0020):	10.65	3.187	12.00	100.81
ID = 3 (0006):	34.87	4.404	12.00	85.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0200)				
ID= 1 DT= 3.0 min				
Area (ha)=	10.34			
Total Imp(%)=	50.00	Dir. Conn.(%)=	50.00	
Surface Area (ha)=	5.17	IMPERVIOUS	PERVIOUS (i)	
Dep. Storage (mm)=	1.50	1.50		
Average Slope (%)=	2.00	0.40		
Length (m)=	262.55	40.00		
Mannings n =	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		

HRP1-3-PR 2-100 YEAR OUT

HRP1-3-PR 2-100 YEAR OUT

TOTALS

72.0 Ia = Dep. Storage (Above)

```
| CALIB  
| STANDHYD ( 0201)  
| ID= 1 DT= 4.0 min
```

IMPERVIOUS PERVIOUS (1)

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

HRP1-3-PR_2-100 YEAR.OUT

HRP1-3-PR_2-100 YEAR.OUT

2.400	1.65		8.400	3.43		14.400	3.82		20.40	1.53
2.467	1.65		8.467	3.43		14.467	3.82		20.47	1.53
2.533	1.65		8.533	3.43		14.533	3.82		20.53	1.53
2.600	1.65		8.600	3.43		14.600	3.82		20.60	1.53
2.667	1.65		8.667	3.43		14.667	3.82		20.67	1.53
2.733	1.65		8.733	3.43		14.733	3.82		20.73	1.53
2.800	1.65		8.800	3.43		14.800	3.82		20.80	1.53
2.867	1.65		8.867	3.43		14.867	3.82		20.87	1.53
2.933	1.65		8.933	3.43		14.933	3.82		20.93	1.53
3.000	1.65		9.000	3.43		15.000	3.82		21.00	1.53
3.067	1.65		9.067	4.07		15.067	3.82		21.07	1.53
3.133	1.65		9.133	4.07		15.133	3.82		21.13	1.53
3.200	1.65		9.200	4.07		15.200	3.82		21.20	1.53
3.267	1.65		9.267	4.07		15.267	3.82		21.27	1.53
3.333	1.65		9.333	4.07		15.333	3.82		21.33	1.53
3.400	1.65		9.400	4.07		15.400	3.82		21.40	1.53
3.467	1.65		9.467	4.07		15.467	3.82		21.47	1.53
3.533	1.65		9.533	4.32		15.533	3.82		21.53	1.53
3.600	1.65		9.600	4.58		15.600	3.82		21.60	1.53
3.667	1.65		9.667	4.58		15.667	3.82		21.67	1.53
3.733	1.65		9.733	4.58		15.733	3.82		21.73	1.53
3.800	1.65		9.800	4.58		15.800	3.82		21.80	1.53
3.867	1.65		9.867	4.58		15.867	3.82		21.87	1.53
3.933	1.65		9.933	4.58		15.933	3.82		21.93	1.53
4.000	1.65		10.000	4.58		16.000	3.82		22.00	1.53
4.067	2.04		10.067	5.85		16.067	2.29		22.07	1.53
4.133	2.04		10.133	5.85		16.133	2.29		22.13	1.53
4.200	2.04		10.200	5.85		16.200	2.29		22.20	1.53
4.267	2.04		10.267	5.85		16.267	2.29		22.27	1.53
4.333	2.04		10.333	5.85		16.333	2.29		22.33	1.53
4.400	2.04		10.400	5.85		16.400	2.29		22.40	1.53
4.467	2.04		10.467	5.85		16.467	2.29		22.47	1.53
4.533	2.04		10.533	6.87		16.533	2.29		22.53	1.53
4.600	2.04		10.600	7.89		16.600	2.29		22.60	1.53
4.667	2.04		10.667	7.89		16.667	2.29		22.67	1.53
4.733	2.04		10.733	7.89		16.733	2.29		22.73	1.53
4.800	2.04		10.800	7.89		16.800	2.29		22.80	1.53
4.867	2.04		10.867	7.89		16.867	2.29		22.87	1.53
4.933	2.04		10.933	7.89		16.933	2.29		22.93	1.53
5.000	2.04		11.000	7.89		17.000	2.29		23.00	1.53
5.067	2.04		11.067	12.21		17.067	2.29		23.07	1.53
5.133	2.04		11.133	12.21		17.133	2.29		23.13	1.53
5.200	2.04		11.200	12.21		17.200	2.29		23.20	1.53
5.267	2.04		11.267	12.21		17.267	2.29		23.27	1.53
5.333	2.04		11.333	12.21		17.333	2.29		23.33	1.53
5.400	2.04		11.400	12.21		17.400	2.29		23.40	1.53
5.467	2.04		11.467	12.21		17.467	2.29		23.47	1.53
5.533	2.04		11.533	32.56		17.533	2.29		23.53	1.53
5.600	2.04		11.600	52.92		17.600	2.29		23.60	1.53
5.667	2.04		11.667	52.92		17.667	2.29		23.67	1.53
5.733	2.04		11.733	52.92		17.733	2.29		23.73	1.53
5.800	2.04		11.800	118.54		17.800	2.29		23.80	1.53
5.867	2.04		11.867	140.43		17.867	2.29		23.87	1.53
5.933	2.04		11.933	140.43		17.933	2.29		23.93	1.53
6.000	2.04		12.000	140.43		18.000	2.29		24.00	1.52

Max.Eff.Inten.(mm/hr)=	140.43	91.29
over (min)	5.00	12.00
Storage Coeff. (min)=	4.04 (ii)	8.43 (ii)
Unit Hyd. Tpeak (min)=	4.00	12.00
Unit Hyd. peak (cms)=	0.27	0.12
		TOTALS
PEAK FLOW (cms)=	5.05	1.27
TIME TO PEAK (hrs)=	12.00	12.07
RUNOFF VOLUME (mm)=	125.70	70.39
TOTAL RAINFALL (mm)=	127.20	127.20
RUNOFF COEFFICIENT =	0.99	0.55
		0.86

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
Cv = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0200):	10.34	2.562	12.00	98.04
+ ID2= 2 (0201):	21.81	7.068	12.00	109.11
=====				
ID = 3 (0009):	32.15	9.628	12.00	105.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

V V I SSSS U U A L (v 6.1.2002)

V V I SS U U A A L

V V I SS U U AAAAA L

V V I SS U U A A L

VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM

O O T T T H H Y Y MM MM O O

O O T T H H Y M M O O O

000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat

Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\bd185163-3e19-404f-96ae-7d85ceb5bb2a\scenar

Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\bd185163-3e19-404f-96ae-7d85ceb5bb2a\scenar

DATE: 03/24/2023 TIME: 10:20:57

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\40229a5b-2c49-4605-a664-9259a6a78fe6\571fbdef

Ptotal= 57.60 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs											
Mass curve time step = 15.00 min											
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN			
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr			
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04				
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04				
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04				
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04				
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04				
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04				
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04				
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04				
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69				
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69				
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69				
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69				
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69				
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69				
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69				
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69				
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69				
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69				
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69				
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69				
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69				
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69				
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69				
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69				

CALIB

NASHYD (1030) Area (ha)= 30.38 Curve Number (CN)= 77.0

ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69	
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69	
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69	
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69	
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69	
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69	
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69	
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69	
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69	
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69	
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69	
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69	
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69	
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69	
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69	
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69	
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69	
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69	
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69	
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69	
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69	
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69	
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69	
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69	
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69	
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69	
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69	
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69	
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69	
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69	
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69	
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69	
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69	
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69	
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69	
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69	
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69	
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69	

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 0.847 (1)

TIME TO PEAK (hrs)= 12.417

RUNOFF VOLUME (mm)= 21.535

TOTAL RAINFALL (mm)= 57.600

RUNOFF COEFFICIENT = 0.374

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0021)

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
| IN= 2--> OUT= 1 | Routing time step (min)'= 4.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0000 /0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 /0.0000	Main Channel	
6.00	100.67	0.0000		
7.00	101.00	0.0000		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.145E+02	0.0	0.34	13.16
0.09	100.09	.327E+02	0.1	0.51	8.00
0.14	100.14	.545E+02	0.1	0.64	7.02
0.19	100.19	.800E+02	0.2	0.75	6.00
0.24	100.24	.109E+03	0.3	0.85	5.31
0.28	100.28	.142E+03	0.5	0.94	4.81
0.33	100.33	.178E+03	0.7	1.02	4.42
0.39	100.39	.226E+03	1.0	1.17	3.84
0.44	100.44	.279E+03	1.3	1.30	3.47
0.50	100.50	.336E+03	1.7	1.40	3.21
0.55	100.55	.399E+03	2.2	1.49	3.02
0.61	100.61	.466E+03	2.7	1.57	2.87
0.66	100.66	.539E+03	3.3	1.63	2.75
0.72	100.72	.616E+03	3.9	1.69	2.66
0.78	100.78	.690E+03	4.5	1.75	2.58
0.83	100.83	.766E+03	5.2	1.80	2.51
0.89	100.89	.879E+03	6.0	1.84	2.45
0.94	100.94	.977E+03	6.8	1.88	2.39
1.00	101.00	.108E+04	7.7	1.92	2.35

<---- hydrograph ---->					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
					MAX DEPTH
					MAX VEL
					(m/s)
INFLOW : ID= 2 (1030)		30.38	0.85	12.42	21.54
OUTFLOW: ID= 1 (0021)		30.38	0.85	12.42	21.54

CALIB			
NASHYD (0230)			
Area (ha)=		9.14	Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min		Ia (mm)=	# of Linear Res.(N)= 3.00
		U.H. Tp(hrs)=	0.42

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.583	0.58	6.583	1.15	12.583	8.29	18.58	1.04		
0.667	0.58	6.667	1.15	12.667	8.29	18.67	1.04		
0.750	0.58	6.750	1.15	12.750	8.29	18.75	1.04		
0.833	0.58	6.833	1.15	12.833	8.29	18.83	1.04		
0.917	0.58	6.917	1.15	12.917	8.29	18.92	1.04		
1.000	0.58	7.000	1.15	13.000	8.29	19.00	1.04		
1.083	0.58	7.083	1.15	13.083	8.29	19.08	1.04		
1.167	0.58	7.167	1.15	13.167	8.29	19.17	1.04		
1.250	0.58	7.250	1.15	13.250	8.29	19.25	1.04		
1.333	0.58	7.333	1.15	13.333	8.29	19.33	1.04		
1.417	0.58	7.417	1.15	13.417	8.29	19.42	1.04		
1.500	0.58	7.500	1.15	13.500	8.29	19.50	1.04		
1.583	0.58	7.583	1.15	13.583	8.29	19.58	1.04		
1.667	0.58	7.667	1.15	13.667	8.29	19.67	1.04		
1.750	0.58	7.750	1.15	13.750	8.29	19.75	1.04		
1.833	1.04	7.833	1.15	13.833	8.29	19.83	1.04		
1.917	1.04	7.917	1.15	13.917	8.29	19.92	1.04		
2.000	1.04	8.000	1.15	14.000	8.29	20.00	1.04		
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69		
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69		
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69		
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69		

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW	(cms)=	0.349 (1)
TIME TO PEAK	(hrs)=	12.250
RUNOFF VOLUME	(mm)=	25.531
TOTAL RAINFALL	(mm)=	57.600
RUNOFF COEFFICIENT	=	0.443

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0021):	30.38	0.846	12.42	21.54
+ ID2= 2 (0230):	9.14	0.349	12.25	25.53
ID = 3 (0003):	39.52	1.181	12.42	22.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)				
IN= 2--> OUT= 1				
DT= 5.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	2.7760	0.2010
	1.0940	0.0700	3.2380	0.2400
	1.8140	0.1110	3.7590	0.2830
	2.2340	0.1460	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0003)	39.520	1.181	12.42	22.46
OUTFLOW: ID= 1 (0030)	39.520	1.090	12.58	22.46
PEAK FLOW REDUCTION [Qout/Qin](%)=	92.32			
TIME SHIFT OF PEAK FLOW	(min)= 10.00			
MAXIMUM STORAGE USED	(ha.m.)= 0.0699			

CALIB				HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT			
STANDHYD (0231)				Area (ha)=	7.45		
ID= 1 DT= 2.0 min				Total Imp(%)=	24.00	Dir. Conn.(%)=	24.00

Surface Area	(ha)=	1.79	5.66
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	1.10
Length	(m)=	222.86	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04	
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04	
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04	
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04	
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04	
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04	
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04	
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04	
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04	
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04	
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04	
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04	
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04	
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04	
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04	
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04	
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04	
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04	
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04	
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04	
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04	
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04	
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04	
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04	
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04	
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04	
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04	
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04	
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04	
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04	
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04	
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04	
1.767	0.81	7.767	1.15	13.767	4.72	19.77	1.04	
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04	
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04	
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04	
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69	
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69	
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69	
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69	
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69	
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69	
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT							
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69		
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69		

Max.Eff.Inten.(mm/hr)=	63.59	36.03	
over (min)	5.00	18.00	
Storage Coeff. (min)=	4.02 (ii)	16.72 (ii)	
Unit Hyd. Tpeak (min)=	4.00	18.00	
Unit Hyd. peak (cms)=	0.28	0.07	
PEAK FLOW (cms)=	0.31	0.32	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.17	0.535 (iii)
RUNOFF VOLUME (mm)=	56.10	28.13	34.85
TOTAL RAINFALL (mm)=	57.60	57.60	57.60
RUNOFF COEFFICIENT =	0.97	0.49	0.60

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0211)				
1	2	3		
			AREA	QPEAK
			(ha)	(cms)
ID1= 1 (0231):	7.45	0.535	12.00	34.85
+ ID2= 2 (0030):	39.52	1.090	12.58	22.46
=====				
ID = 3 (0211):	46.97	1.283	12.50	24.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)	
IN= 2---->	OUT= 1

Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.485E+01	0.0	0.34	4.39
0.09	100.09	.109E+02	0.1	0.51	2.93
0.14	100.14	.182E+02	0.1	0.64	2.34
0.19	100.19	.267E+02	0.2	0.75	2.00
0.24	100.24	.364E+02	0.3	0.85	1.77
0.28	100.28	.473E+02	0.5	0.94	1.60
0.33	100.33	.594E+02	0.7	1.02	1.47
0.39	100.39	.753E+02	1.0	1.17	1.28
0.44	100.44	.928E+02	1.3	1.30	1.16
0.50	100.50	.112E+03	1.7	1.40	1.07
0.55	100.55	.133E+03	2.2	1.49	1.01
0.61	100.61	.155E+03	2.7	1.57	0.96
0.66	100.66	.180E+03	3.3	1.63	0.92

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0.72	100.72	.205E+03	3.9	1.69
0.78	100.78	.233E+03	4.5	1.75
0.83	100.83	.262E+03	5.2	1.80
0.89	100.89	.293E+03	6.0	1.84
0.94	100.94	.326E+03	6.8	1.89
1.00	101.00	.360E+03	7.7	1.92

<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0211)	46.97	1.28	12.50	24.42	0.43
OUTFLOW: ID= 1 (0005)	46.97	1.28	12.53	24.42	0.43

CALIB	
STANDHYD (0232)	
ID= 1 DT= 3.0 min	

Area (ha)= 8.25
Total Imp(%)= 39.00 Dir. Conn.(%)= 39.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 3.22		5.03
Dep. Storage	(mm)= 15.00		1.50
Average Slope	(%)= 2.00		2.00
Length	(m)= 234.52		40.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 25.28
over (min) 6.00 18.00
Storage Coeff. (min)= 4.15 (ii) 16.38 (iii)
Unit Hyd. Tpeak (min)= 6.00 18.00
Unit Hyd. peak (cms)= 0.23 0.07

TOTALS

PEAK FLOW (cms)= 0.55 0.20 0.697 (iii)
TIME TO PEAK (hrs)= 12.00 12.15 12.00
RUNOFF VOLUME (mm)= 42.60 20.32 29.01
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.74 0.35 0.50

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

ADD HYD (0007)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0232):	8.25	0.697	12.00	29.01
+ ID2= 2 (0005):	46.97	1.281	12.53	24.42
=====				
ID = 3 (0007):	55.22	1.510	12.03	25.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2--> OUT= 1 Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m) (m/s)
INFLOW : ID= 2 (0007)	55.22	1.51	12.03	25.11	0.47 1.34
OUTFLOW: ID= 1 (0022)	55.22	1.50	12.03	25.11	0.46 1.34

CALIB
STANDHYD (0133)
ID= 1 DT= 3.0 min
Area (ha)= 6.79
Total Imp(%)= 47.00 Dir. Conn.(%)= 47.00

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	3.19	3.60		
Dep. Storage	(mm)=	15.00	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	212.76	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 18.99
over (min) 6.00 15.00
Storage Coeff. (min)= 3.91 (ii) 12.79 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

TOTALS

PEAK FLOW (cms)= 0.55 0.12 0.646 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 42.60 14.86 27.90
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.74 0.26 0.48

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0091) |
1 + 2 = 3
ID1= 1 (0133): AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
+ ID2= 2 (0022): 6.79 0.646 12.00 27.90
55.22 1.501 12.03 25.11
=====

ID = 3 (0091): 62.01 2.093 12.03 25.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0222) | Area (ha)= 3.54 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.15

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.083 0.58 | 6.083 1.15 | 12.083 8.30 | 18.08 1.04
0.167 0.58 | 6.167 1.15 | 12.167 8.29 | 18.17 1.04
0.250 0.58 | 6.250 1.15 | 12.250 8.29 | 18.25 1.04
0.333 0.58 | 6.333 1.15 | 12.333 8.29 | 18.33 1.04
0.417 0.58 | 6.417 1.15 | 12.417 8.29 | 18.42 1.04
0.500 0.58 | 6.500 1.15 | 12.500 8.29 | 18.50 1.04
0.583 0.58 | 6.583 1.15 | 12.583 4.26 | 18.58 1.04
0.667 0.58 | 6.667 1.15 | 12.667 4.26 | 18.67 1.04
0.750 0.58 | 6.750 1.15 | 12.750 4.26 | 18.75 1.04
0.833 0.58 | 6.833 1.15 | 12.833 4.26 | 18.83 1.04
0.917 0.58 | 6.917 1.15 | 12.917 4.26 | 18.92 1.04
1.000 0.58 | 7.000 1.15 | 13.000 4.26 | 19.00 1.04
1.083 0.58 | 7.083 1.15 | 13.083 0.81 | 19.08 1.04
1.167 0.58 | 7.167 1.15 | 13.167 0.81 | 19.17 1.04
1.250 0.58 | 7.250 1.15 | 13.250 0.81 | 19.25 1.04
1.333 0.58 | 7.333 1.15 | 13.333 0.81 | 19.33 1.04
1.417 0.58 | 7.417 1.15 | 13.417 0.81 | 19.42 1.04
1.500 0.58 | 7.500 1.15 | 13.500 0.81 | 19.50 1.04

HRP6-1-PR-PR-EX_POND1-6_2-100 YEAR.OUT												
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04					
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04					
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04					
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04					
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04					
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04					
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69					
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69					
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69					
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69					
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69					
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69					
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69					
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69					
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69					
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69					
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69					
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69					
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69					
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69					
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69					
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69					
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69					
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69					
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69					
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69					
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69					
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69					
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69					
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69					
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69					
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69					
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69					
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69					
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69					
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69					
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69					
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69					
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69					
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69					
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69					
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69					
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69					
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69					
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69					
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69					
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69					
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69					
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69					
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69					
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69					
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69					
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69					
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69					

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.203 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 20.040
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.348

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0221)			
ID= 1 DT= 5.0 min			

	Area (ha)=	3.79	
	Total Imp(%)=	27.00	Dir. Conn.(%)= 27.00

	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	1.02	2.77
Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	2.00	2.00
Length	(m)=	158.95	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----												
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04					
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04					
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04					

HRP6-1-PR-PR-EX_POND1-6_2-100 YEAR.OUT												
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04					
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04					
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04					
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04					
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04					
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04					
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04					
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04					
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04					
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04					
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04					
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04					
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04					
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04					
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04					
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04					
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04					
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04					
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04					
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04					
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04					
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69					
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69					
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69					
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69					
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69					
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69					
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69					
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69					
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69					
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69					
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69					
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69					
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69					
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69					
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69					
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69					
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69					
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69					
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69					
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69					
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69					
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69					
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69					
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69					
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69					
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69					
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69					
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69					
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69					
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69					
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69					
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69					
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69					
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69					
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69					
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69					
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69					
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69					
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69					
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69					
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69					
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69					
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69					
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69					
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69					
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69					
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69					
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69					

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

THAN THE STORAGE COEFFICIENT.

((iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)					
1	2	3	AREA	QPEAK	TPEAK
			(ha)	(cms)	(hrs)
					R.V.
					(mm)
ID1= 1 (0221):	3.79	0.266	12.00	30.87	
+ ID2= 2 (0222):	3.54	0.203	12.00	20.04	
=====					
ID = 3 (0009):	7.33	0.469	12.00	25.64	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0009)					
3	2	1	AREA	QPEAK	TPEAK
			(ha)	(cms)	(hrs)
					R.V.
					(mm)
ID= 3 (0009):	7.33	0.469	12.00	25.64	
+ ID2= 2 (0091):	62.01	2.093	12.03	25.41	
=====					
ID = 1 (0009):	69.34	2.555	12.00	25.44	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)				
OVERFLOW IS OFF				
IN= 2--> OUT= 1				
DT= 4.0 min				
=====				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	3.2510	1.2472
	0.6750	0.7720	3.7840	1.3920
	1.6680	0.9849	4.5560	1.5300
	2.4150	1.1060	0.0000	0.0000
=====				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0009)	69.340	2.555	12.00	25.44
OUTFLOW: ID= 1 (0010)	69.340	0.644	13.43	25.43

PEAK FLOW REDUCTION [Qout/qin](%)= 25.21

TIME SHIFT OF PEAK FLOW (min)= 06.00

MAXIMUM STORAGE USED (ha.m.)= 0.7369

CALIB			
STANDHYD (0234)			
ID= 1 DT= 3.0 min			
=====			
	Area	(ha)=	17.56
	Total Imp(%)=	28.00	Dir. Conn.(%)= 28.00
=====			
	IMPERVIOUS	PERVIOUS (l)	
Surface Area	(ha)=	4.92	12.64
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	342.15	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
5.450	0.92	[11.450	5.53	[17.450	1.04		23.45	0.69	
5.500	0.92	[11.500	5.54	[17.500	1.04		23.50	0.69	
5.550	0.92	[11.550	23.96	[17.550	1.04		23.55	0.69	
5.600	0.92	[11.600	23.96	[17.600	1.04		23.60	0.69	
5.650	0.92	[11.650	23.96	[17.650	1.04		23.65	0.69	
5.700	0.92	[11.700	23.96	[17.700	1.04		23.70	0.69	
5.750	0.92	[11.750	23.98	[17.750	1.04		23.75	0.69	
5.800	0.92	[11.800	63.59	[17.800	1.04		23.80	0.69	
5.850	0.92	[11.850	63.59	[17.850	1.04		23.85	0.69	
5.900	0.92	[11.900	63.59	[17.900	1.04		23.90	0.69	
5.950	0.92	[11.950	63.59	[17.950	1.04		23.95	0.69	
6.000	0.92	[12.000	63.56	[18.000	1.04		24.00	0.69	
Max.Eff.Inten.(mm/hr)=	63.59		25.28						
over (min)	6.00		18.00						
Storage Coeff. (min)=	5.20 (ii)		17.44 (ii)						
Unit Hyd. Tpeak (min)=	6.00		18.00						
Unit Hyd. peak (cms)=	0.20		0.06						
					TOTALS				
PEAK FLOW (cms)=	0.82		0.49		1.174 (iii)				
TIME TO PEAK (hrs)=	12.00		12.15		12.00				
RUNOFF VOLUME (mm)=	56.10		20.32		30.34				
TOTAL RAINFALL (mm)=	57.60		57.60		57.60				
RUNOFF COEFFICIENT =	0.97		0.35		0.53				

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0010):	69.34	0.644	13.43	25.43
+ ID2= 2 (0234):	17.56	1.174	12.00	30.34
=====				
ID = 3 (0011):	86.90	1.397	12.00	26.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)		OVERFLOW IS OFF			
IN= 2--> OUT= 1					
DT= 5.0 min					

	OUTFLOW	STORAGE	OUTFLOW	STORAGE	
	(cms)	(ha.m.)	(cms)	(ha.m.)	
	0.0000	0.0000	9.4690	0.3520	
	0.4100	0.1040	0.0000	0.0000	
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0011)	86.900	1.397	12.00	26.42	
OUTFLOW: ID= 1 (0015)	86.900	1.136	12.13	26.42	

PEAK FLOW REDUCTION [Qout/Qin](%)= 81.32
TIME SHIFT OF PEAK FLOW (min)= 8.00
MAXIMUM STORAGE USED (ha.m.)= 0.1239

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB			
STANDHYD (0235)			
ID= 1 DT= 2.0 min			

		Area (ha)=	4.28
		Total Imp(%)=	30.00
		Dir. Conn.(%)=	30.00
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.28	3.00
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	168.92	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	0.58	6.033	1.15	12.033	8.29		18.03	1.04	
0.067	0.58	6.067	1.15	12.067	8.29		18.07	1.04	
0.100	0.58	6.100	1.15	12.100	8.29		18.10	1.04	
0.133	0.58	6.133	1.15	12.133	8.29		18.13	1.04	
0.167	0.58	6.167	1.15	12.167	8.29		18.17	1.04	

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
0.200	0.58		6.200	1.15	12.200	8.29		18.20	1.04
0.233	0.58		6.233	1.15	12.233	8.29		18.23	1.04
0.267	0.58		6.267	1.15	12.267	8.29		18.27	1.04
0.300	0.58		6.300	1.15	12.300	8.29		18.30	1.04
0.333	0.58		6.333	1.15	12.333	8.29		18.33	1.04
0.367	0.58		6.367	1.15	12.367	8.29		18.37	1.04
0.400	0.58		6.400	1.15	12.400	8.29		18.40	1.04
0.433	0.58		6.433	1.15	12.433	8.29		18.43	1.04
0.467	0.58		6.467	1.15	12.467	8.29		18.47	1.04
0.500	0.58		6.500	1.15	12.500	8.29		18.50	1.04
0.533	0.58		6.533	1.15	12.533	4.26		18.53	1.04
0.567	0.58		6.567	1.15	12.567	4.26		18.57	1.04
0.600	0.58		6.600	1.15	12.600	4.26		18.60	1.04
0.633	0.58		6.633	1.15	12.633	4.26		18.63	1.04
0.667	0.58		6.667	1.15	12.667	4.26		18.67	1.04
0.700	0.58		6.700	1.15	12.700	4.26		18.70	1.04
0.733	0.58		6.733	1.15	12.733	4.26		18.73	1.04
0.767	0.58		6.767	1.15	12.767	4.26		18.77	1.04
0.800	0.58		6.800	1.15	12.800	4.26		18.80	1.04
0.833	0.58		6.833	1.15	12.833	4.26		18.83	1.04
0.867	0.58		6.867	1.15	12.867	4.26		18.87	1.04
0.900	0.58		6.900	1.15	12.900	4.26		18.90	1.04
0.933	0.58		6.933	1.15	12.933	4.26		18.93	1.04
0.967	0.58		6.967	1.15	12.967	4.26		18.97	1.04
1.000	0.58		7.000	1.15	13.000	4.26		19.00	1.04
1.033	0.58		7.033	1.15	13.033	0.81		19.03	1.04
1.067	0.58		7.067	1.15	13.067	0.81		19.07	1.04
1.100	0.58		7.100	1.15	13.100	0.81		19.10	1.04
1.133	0.58		7.133	1.15	13.133	0.81		19.13	1.04
1.167	0.58		7.167	1.15	13.167	0.81		19.17	1.04
1.200	0.58		7.200	1.15	13.200	0.81		19.20	1.04
1.233	0.58		7.233	1.15	13.233	0.81		19.23	1.04
1.267	0.58		7.267	1.15	13.267	0.81		19.27	1.04
1.300	0.58		7.300	1.15	13.300	0.81		19.30	1.04
1.333	0.58		7.333	1.15	13.333	0.81		19.33	1.04
1.367	0.58		7.367	1.15	13.367	0.81		19.37	1.04
1.400	0.58		7.400	1.15	13.400	0.81		19.40	1.04
1.433	0.58		7.433	1.15	13.433	0.81		19.43	1.04
1.467	0.58		7.467	1.15	13.467	0.81		19.47	1.04
1.500	0.58		7.500	1.15	13.500	0.81		19.50	1.04
1.533	0.58		7.533	1.15	13.533	4.72		19.53	1.04
1.567	0.58		7.567	1.15	13.567	4.72		19.57	1.04
1.600	0.58		7.600	1.15	13.600	4.72		19.60	1.04
1.633	0.58		7.633	1.15	13.633	4.72		19.63	1.04
1.667	0.58		7.667	1.15	13.667	4.72		19.67	1.04
1.700	0.58		7.700	1.15	13.700	4.72		19.70	1.04
1.733	0.58		7.733	1.15	13.733	4.72		19.73	1.04
1.767	0.81		7.767	1.15	13.767	4.72		19.77	1.04
1.800	1.04		7.800	1.15	13.800	4.72		19.80	1.04
1.833	1.04		7.833	1.15	13.833	4.72		19.83	1.04
1.867	1.04		7.867	1.15	13.867	4.72		19.87	1.04
1.900	1.04		7.900	1.15	13.900	4.72		19.90	1.04
1.933	1.04		7.933	1.15	13.933	4.72		19.93	1.04
1.967	1.04		7.967	1.15	13.967	4.72		19.97	1.04
2.000	1.04		8.000	1.15	14.000	4.72		20.00	1.04
2.033	0.75		8.033	1.56	14.033	1.73		20.03	0.69
2.067	0.75		8.067	1.56	14.067	1.73		20.07	0.69
2.100	0.75		8.100	1.56	14.100	1.73		20.10	0.69
2.133	0.75		8.133	1.56	14.133	1.73		20.13	0.69
2.167	0.75		8.167	1.56	14.167	1.73		20.17	0.69
2.200	0.75		8.200	1.56	14.200	1.73		20.20	0.69
2.233	0.75		8.233	1.56	14.233	1.73		20.23	0.69
2.267	0.75		8.267	1.56	14.267	1.73		20.27	0.69
2.300	0.75		8.300	1.56	14.300	1.73		20.30	0.69
2.333	0.75		8.333	1.56	14.333	1.73		20.33	0.69
2.367	0.75		8.367	1.56	14.367	1.73		20.37	0.69
2.400	0.75		8.400	1.56	14.400	1.73		20.40	0.69
2.433	0.75		8.433	1.56	14.433	1.73		20.43	0.69
2.467	0.75		8.467	1.56	14.467	1.73		20.47	0.69
2.500	0.75		8.500	1.56	14.500	1.73		20.50	0.69
2.533	0.75		8.533	1.56	14.533	1.73		20.53	0.69
2.567	0.75		8.567	1.56	14.567	1.73		20.57	0.69
2.600	0.75		8.600	1.56	14.600	1.73		20.60	0.69
2.633	0.75		8.633	1.56	14.633	1.73		20.63	0.69
2.667	0.75		8.667	1.56	14.667	1.73		20.67	0.69
2.700	0.75		8.700	1.56	14.700	1.73		20.70	0.69
2.733	0.75		8.733	1.56	14.733	1.73		20.73	0.69
2.767	0.75		8.767	1.56	14.767	1.73		20.77	0.69
2.800	0.75		8.800	1.56	14.800	1.73		20.80	0.69
2.833	0.75		8.833	1.56	14.833	1.73		20.83	0.69
2.867	0.75		8.867	1.56	14.867	1.73		20.87	0.69
2.900	0.75		8.900	1.56	14.900	1.73		20.90	0.69
2.933	0.75		8.933	1.56	14.933	1.73		20.93	0.69
2.967	0.75		8.967	1.56	14.967	1.73		20.97	0.69
3.000	0.75		9.000	1.56	15.000	1.73		21.00	0.69
3.033	0.75		9.033	1.84	15.033	1.73		21.03	0.69
3.067	0.75		9.067	1.84	15.067	1.73		21.07	0.69

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69		
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69		
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69		
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69		
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69		
Max.Eff.Inten.(mm/hr)=		63.59	25.62						
over (min)		5.00	16.00						
Storage Coeff. (min)=		3.41 (ii)	15.58 (ii)						
Unit Hyd. Tpeak (min)=		4.00	16.00						
Unit Hyd. peak (cms)=		0.31	0.07						
TOTALS									
PEAK FLOW (cms)=		0.22	0.12	0.317 (iii)					
TIME TO PEAK (hrs)=		12.00	12.13	12.00					
RUNOFF VOLUME (mm)=		56.10	20.32	31.05					
TOTAL RAINFALL (mm)=		57.60	57.60	57.60					
RUNOFF COEFFICIENT =		0.97	0.35	0.54					

(i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL									
THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0012)									
1 + 2 = 3									

ID1= 1 (0015):		86.90	1.136	12.13	26.42				
+ ID2= 2 (0235):		4.28	0.317	12.00	31.05				
=====									
ID = 3 (0012):		91.18	1.317	12.13	26.64				
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

ROUTE CHN(0040)									
IN= 2---> OUT= 1									
Routing time step (min)'= 2.00									

<----- DATA FOR SECTION (1.1) ----->									
Distance Elevation Manning									
0.00 101.00 0.0800									
1.00 100.67 0.0800									
2.00 100.33 0.0800 /0.0350 Main Channel									
3.00 100.00 0.0350 Main Channel									
4.00 100.00 0.0350 Main Channel									
5.00 100.33 0.0350 /0.0800 Main Channel									
6.00 100.67 0.0800									
7.00 101.00 0.0800									

<----- TRAVEL TIME TABLE ----->									
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV. TIME				
	(m)	(cu.m.)	(cms)	(m/s)	(min)				
0.05	100.05	.589E+02	0.0	0.34	53.36				
0.09	100.09	.133E+03	0.0	0.51	35.70				
0.14	100.14	.221E+03	0.1	0.64	28.48				
0.19	100.19	.324E+03	0.2	0.75	24.33				
0.24	100.24	.442E+03	0.3	0.85	21.55				
0.28	100.28	.575E+03	0.5	0.94	19.51				
0.33	100.33	.723E+03	0.7	1.02	17.94				
0.39	100.39	.916E+03	1.0	1.17	15.58				
0.44	100.44	.113E+04	1.3	1.30	14.06				
0.50	100.50	.136E+04	1.7	1.40	13.03				
0.55	100.55	.162E+04	2.2	1.49	12.25				
0.61	100.61	.189E+04	2.7	1.57	11.65				
0.66	100.66	.218E+04	3.3	1.63	11.17				
0.72	100.72	.250E+04	3.9	1.69	10.77				
0.78	100.78	.283E+04	4.5	1.75	10.45				
0.83	100.83	.319E+04	5.2	1.80	10.17				
0.89	100.89	.357E+04	6.0	1.84	9.92				
0.94	100.94	.396E+04	6.8	1.88	9.71				
1.00	101.00	.438E+04	7.7	1.92	9.52				

<---- hydrograph ---->									
<-pipe / channel->									
	Area	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL			
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)			
INFLOW : ID= 2 (0012)	91.18	1.32	12.13	26.64	0.44	1.209			
OUTFLOW: ID= 1 (0040)	91.18	1.04	12.37	26.64	0.39	1.19			

CALIB									
STANDHYD (0121)									
Area (ha)= 1.62									
Total Imp(%)= 28.00									
Dir. Conn.(%)= 28.00									
ID= 1 DT= 3.0 min									

IMPERVIOUS PERVIOUS (1)									

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP6.1-PR-PR-EX_POND1-6_2.1									
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
5.000	0.92	11.000	5.53	17.000	1.04	23.00	0.69		
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69		
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69		
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69		
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69		
Max.Eff.Inten.(mm/hr)=			63.59	25.28					
over (min)			6.00	15.00					
Storage Coeff. (min)=			2.55	14.78 (ii)					
Unit Hyd. Tpeak (min)=			6.00	15.00					
Unit Hyd. peak (cms)=			0.29	0.08					
							TOTALS		
PEAK FLOW (cms)=			0.08	0.05			0.120 (iii)		
TIME TO PEAK (hrs)=			12.00	12.15			12.00		
RUNOFF VOLUME (mm)=			56.10	56.32			39.33		
TOTAL RAINFALL (mm)=			57.60	57.60			57.60		
RUNOFF COEFFICIENT =			0.97	0.35			0.53		
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!									
(i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN' = 72.0 Is = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

HRP6.1-PR-CR-EX-POND1-6.2-1									
50	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
50	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
50	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
50	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
50	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
50	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
50	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
50	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
50	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
50	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
50	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
50	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
50	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
50	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
50	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
50	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
50	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
50	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
50	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
50	0.92	11.450	5.53	17.450	1.04	23.45	0.69		
50	0.92	11.500	6.54	17.500	1.04	23.50	0.69		
50	0.92	11.550	23.96	17.550	1.04	23.55	0.69		
50	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
50	0.92	11.650	23.96	17.650	1.04	23.65	0.69		
50	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
50	0.92	11.750	23.98	17.750	1.04	23.75	0.69		
50	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
50	0.92	11.850	63.54	17.850	1.04	23.85	0.69		
50	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
50	0.92	11.950	63.59	17.950	1.04	23.95	0.69		
50	0.92	12.000	63.56	18.000	1.04	24.00	0.69		
(mm/hr)=		63.59	25.28						
(min)		6.00	18.00						
(min)		17.77	17.00	(ii)					
(min)		6.00	18.00						
(cms)=		0.21	0.07						
(cms)=		0.98	0.29	*TOTALS*					
(hrs)=		12.00	12.15	1.184 (iii)					
(mm)=		56.10	20.32	36.06					
PERCENT		57.60	57.60	57.60					
		0.97	0.00	0.63					
DURE SELECTED FOR PERVIOUS LOSSES:									
72.0		Ia = Dep. Storage (Above)							
(DT) SHOULD BE SMALLER OR EQUAL									
STORAGE COEFFICIENT									
DOES NOT INCLUDE BASEFLOW IF ANY.									
=====									
	AREA	QPEAK	TPEAK	R.V.					
	(ha)	(cms)	(hrs)	(mm)					
121):	1.62	0.120	12.00	30.33					
122):	13.12	1.184	12.00	36.06					
=====									
191):	14.74	1.304	12.00	35.43					
=====									
OWS DO NOT INCLUDE BASEFLOWS IF ANY.									
=====									
	AREA	QPEAK	TPEAK	R.V.					
	(ha)	(cms)	(hrs)	(mm)					
191):	14.74	1.304	12.00	35.43					
194):	91.18	1.943	12.37	26.64					
=====									
248):	105.92	1.747	12.03	27.86					
=====									
OWS DO NOT INCLUDE BASEFLOWS IF ANY.									
=====									
SSSSS	U	U	A	L	(v 6.1.2002)				
SS	U	A	A	L					
SS	U	AAAAA	L						
SS	U	A	A	L					
SSSSS	UUUUU	A	LLLLL						
=====									
T	H	H	Y	M	M	000	TM		
T	H	H	Y	M	M	0	0		
T	H	H	Y	M	M	0	0		

000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voind.dat
Output filename: C:\Users\AbirA\AppData\Local\CVica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\vd1770cbc-dca3-4999-af5a-2f9d4e5b7889\scenar
Summary filename: C:\Users\AbirA\AppData\Local\CVica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\vd1770cbc-dca3-4999-af5a-2f9d4e5b7889\scenar

DATE: 03/24/2023 TIME: 10:20:59

USER:

COMMENTS: _____

** SIMULATION : Run 02 **

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\40229a5b-2c49-4605-a664-9259a6a78fe6\fb8e60ca
| | ata\Local\Temp\40229a5b-2c49-4605-a664-9259a6a78fe6\fb8e60ca
| Ptotal= 76.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.77	6.25	1.54	12.25	11.06	18.25	1.38
0.50	0.77	6.50	1.54	12.50	11.06	18.50	1.38
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38
1.25	0.77	7.25	1.54	13.25	1.08	19.25	1.38
1.50	0.77	7.50	1.54	13.50	1.08	19.50	1.38
1.75	0.77	7.75	1.54	13.75	6.30	19.75	1.38
2.00	1.38	8.00	1.54	14.00	6.30	20.00	1.38
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92
3.00	1.00	9.00	2.07	15.00	2.30	21.00	0.92
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92
3.50	1.00	9.50	2.46	15.50	2.30	21.50	0.92
3.75	1.00	9.75	2.76	15.75	2.30	21.75	0.92
4.00	1.00	10.00	2.76	16.00	2.30	22.00	0.92
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92
5.75	1.23	11.75	31.95	17.75	1.38	23.75	0.92
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92

| CALIB |
| NASHYD (1030) | Area (ha)= 30.38 Curve Number (CN)= 77.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| | U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38

0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 1.394 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 34.909
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.455

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ROUTE CHN(0021) |
| IN= 2---> OUT= 1 | Routing time step (min)'= 4.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0000	
1.00	100.67	0.0000	
2.00	100.33	0.0000 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0000	Main Channel
6.00	100.67	0.0000	

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT						
7.00	101.00	0.0000				
<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.05	100.05	.145E+02	0.6	0.34	13.16	
0.09	100.09	.327E+02	0.1	0.51	8.00	
0.14	100.14	.545E+02	0.1	0.64	7.02	
0.19	100.19	.800E+02	0.2	0.75	6.00	
0.24	100.24	.109E+03	0.3	0.85	5.31	
0.28	100.28	.142E+03	0.5	0.94	4.81	
0.33	100.33	.178E+03	0.7	1.02	4.42	
0.39	100.39	.220E+03	1.0	1.17	3.84	
0.44	100.44	.270E+03	1.3	1.30	3.47	
0.50	100.50	.336E+03	1.7	1.40	3.21	
0.55	100.55	.399E+03	2.2	1.49	3.02	
0.61	100.61	.466E+03	2.7	1.57	2.87	
0.66	100.66	.539E+03	3.3	1.63	2.75	
0.72	100.72	.616E+03	3.9	1.69	2.66	
0.78	100.78	.699E+03	4.5	1.75	2.58	
0.83	100.83	.786E+03	5.2	1.80	2.51	
0.89	100.89	.879E+03	6.0	1.84	2.45	
0.94	100.94	.977E+03	6.8	1.88	2.39	
1.00	101.00	.108E+04	7.7	1.92	2.35	
<---- hydrograph ----> <-pipe / channel-->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (1030)	30.38	1.39	12.42	34.91	0.45	1.31
OUTFLOW: ID= 1 (0021)	30.38	1.40	12.42	34.91	0.45	1.31

CALIB			
NASHYD (0230)	Area (ha)=	9.14	Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.42	
NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.			

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	0.77	6.003	1.54	12.003	11.07	18.008	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.00	19.08	1.38
1.167	0.77	7.167	1.54	13.167	1.00	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.00	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.00	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.00	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.00	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT						
3.500	1.00	9.500	2.46	15.500	2.30	21.50
3.583	1.00	9.583	2.76	15.583	2.30	21.58
3.667	1.00	9.667	2.76	15.667	2.30	21.67
3.750	1.00	9.750	2.76	15.750	2.30	21.75
3.833	1.00	9.833	2.76	15.833	2.30	21.83
3.917	1.00	9.917	2.76	15.917	2.30	21.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00
4.083	1.23	10.083	3.53	16.083	1.38	22.08
4.167	1.23	10.167	3.53	16.167	1.38	22.17
4.250	1.23	10.250	3.53	16.250	1.38	22.25
4.333	1.23	10.333	3.53	16.333	1.38	22.33
4.417	1.23	10.417	3.53	16.417	1.38	22.42
4.500	1.23	10.500	3.53	16.500	1.38	22.50
4.583	1.23	10.583	4.76	16.583	1.38	22.58
4.667	1.23	10.667	4.76	16.667	1.38	22.67
4.750	1.23	10.750	4.76	16.750	1.38	22.75
4.833	1.23	10.833	4.76	16.833	1.38	22.83
4.917	1.23	10.917	4.76	16.917	1.38	22.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00
5.083	1.23	11.083	7.37	17.083	1.38	23.08
5.167	1.23	11.167	7.37	17.167	1.38	23.17
5.250	1.23	11.250	7.37	17.250	1.38	23.25
5.333	1.23	11.333	7.37	17.333	1.38	23.33
5.417	1.23	11.417	7.37	17.417	1.38	23.42
5.500	1.23	11.500	7.37	17.500	1.38	23.50
5.583	1.23	11.583	31.95	17.583	1.38	23.58
5.667	1.23	11.667	31.95	17.667	1.38	23.67
5.750	1.23	11.750	31.95	17.750	1.38	23.75
5.833	1.23	11.833	84.78	17.833	1.38	23.83
5.917	1.23	11.917	84.79	17.917	1.38	23.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW (cms)= 0.562 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 40.411
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.526

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0021):	30.38	1.396	12.42	34.91
+ ID2= 2 (0230):	0.14	0.562	12.25	40.41
=====				
ID = 3 (0003):	39.52	1.929	12.42	36.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	2.7760	0.2010
	1.0940	0.0700	3.2380	0.2400
	1.0140	0.1110	3.7590	0.2630
	2.2340	0.1460	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0003)	39.520	1.929	12.42	36.18
OUTFLOW: ID= 1 (0030)	39.520	1.806	12.58	36.18

PEAK FLOW REDUCTION [Qout/Qin](%)= 93.64
TIME SHIFT OF PEAK FLOW (min)= 0.00
MAXIMUM STORAGE USED (ha.m.)= 0.1109

CALIB			
STANDHYD (0231)	Area (ha)=	7.45	
ID= 1 DT= 2.0 min	Total Imp(%)=	24.00	Dir. Conn.(%)= 24.00

	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	1.79	5.66
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	1.10
Length	(m)=	222.86	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	hrs	mm/hr
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38		
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38		
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38		
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38		
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38		
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38		
0.500	0.77	6.500	1.54	12.500	11.05	18.50	1.38		
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38		
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38		
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38		
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38		
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38		
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38		
1.000	0.77	7.000	1.54	13.000	5.67	19.00	1.38		
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38		
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38		
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38		
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38		
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38		
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38		
1.500	0.77	7.500	1.54	13.500	1.09	19.50	1.38		
1.533	0.77	7.533	1.54	13.533	6.38	19.53	1.38		
1.567	0.77	7.567	1.54	13.567	6.38	19.57	1.38		
1.600	0.77	7.600	1.54	13.600	6.38	19.60	1.38		
1.633	0.77	7.633	1.54	13.633	6.38	19.63	1.38		
1.667	0.77	7.667	1.54	13.667	6.38	19.67	1.38		
1.700	0.77	7.700	1.54	13.700	6.38	19.70	1.38		
1.733	0.77	7.733	1.54	13.733	6.38	19.73	1.38		
1.767	1.08	7.767	1.54	13.767	6.38	19.77	1.38		
1.800	1.38	7.800	1.54	13.800	6.38	19.80	1.38		
1.833	1.38	7.833	1.54	13.833	6.38	19.83	1.38		
1.867	1.38	7.867	1.54	13.867	6.38	19.87	1.38		
1.900	1.38	7.900	1.54	13.900	6.38	19.90	1.38		
1.933	1.38	7.933	1.54	13.933	6.38	19.93	1.38		
1.967	1.38	7.967	1.54	13.967	6.38	19.97	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.033	1.08	8.033	2.07	14.033	2.38	20.03	0.92		
2.067	1.08	8.067	2.07	14.067	2.38	20.07	0.92		
2.100	1.08	8.100	2.07	14.100	2.38	20.10	0.92		
2.133	1.08	8.133	2.07	14.133	2.38	20.13	0.92		
2.167	1.08	8.167	2.07	14.167	2.38	20.17	0.92		
2.200	1.08	8.200	2.07	14.200	2.38	20.20	0.92		
2.233	1.08	8.233	2.07	14.233	2.38	20.23	0.92		
2.267	1.08	8.267	2.07	14.267	2.38	20.27	0.92		
2.300	1.08	8.300	2.07	14.300	2.38	20.30	0.92		
2.333	1.08	8.333	2.07	14.333	2.38	20.33	0.92		
2.367	1.08	8.367	2.07	14.367	2.38	20.37	0.92		
2.400	1.08	8.400	2.07	14.400	2.38	20.40	0.92		
2.433	1.08	8.433	2.07	14.433	2.38	20.43	0.92		
2.467	1.08	8.467	2.07	14.467	2.38	20.47	0.92		
2.500	1.08	8.500	2.07	14.500	2.38	20.50	0.92		
2.533	1.08	8.533	2.07	14.533	2.38	20.53	0.92		
2.567	1.08	8.567	2.07	14.567	2.38	20.57	0.92		
2.600	1.08	8.600	2.07	14.600	2.38	20.60	0.92		
2.633	1.08	8.633	2.07	14.633	2.38	20.63	0.92		
2.667	1.08	8.667	2.07	14.667	2.38	20.67	0.92		
2.700	1.08	8.700	2.07	14.700	2.38	20.70	0.92		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
2.733	1.00	8.733	2.07	14.733	2.38	20.73	0.92		
2.767	1.00	8.767	2.07	14.767	2.38	20.77	0.92		
2.800	1.00	8.800	2.07	14.800	2.38	20.80	0.92		
2.833	1.00	8.833	2.07	14.833	2.38	20.83	0.92		
2.867	1.00	8.867	2.07	14.867	2.38	20.87	0.92		
2.900	1.00	8.900	2.07	14.900	2.38	20.90	0.92		
2.933	1.00	8.933	2.07	14.933	2.38	20.93	0.92		
2.967	1.00	8.967	2.07	14.967	2.38	20.97	0.92		
3.000	1.00	9.000	2.07	15.000	2.38	21.00	0.92		
3.033	1.00	9.033	2.46	15.033	2.38	21.03	0.92		
3.067	1.00	9.067	2.46	15.067	2.38	21.07	0.92		
3.100	1.00	9.100	2.46	15.100	2.38	21.10	0.92		
3.133	1.00	9.133	2.46	15.133	2.38	21.13	0.92		
3.167	1.00	9.167	2.46	15.167	2.38	21.17	0.92		
3.200	1.00	9.200	2.46	15.200	2.38	21.20	0.92		
3.233	1.00	9.233	2.46	15.233	2.38	21.23	0.92		
3.267	1.00	9.267	2.46	15.267	2.38	21.27	0.92		
3.300	1.00	9.300	2.46	15.300	2.38	21.30	0.92		
3.333	1.00	9.333	2.46	15.333	2.38	21.33	0.92		
3.367	1.00	9.367	2.46	15.367	2.38	21.37	0.92		
3.400	1.00	9.400	2.46	15.400	2.38	21.40	0.92		
3.433	1.00	9.433	2.46	15.433	2.38	21.43	0.92		
3.467	1.00	9.467	2.46	15.467	2.38	21.47	0.92		
3.500	1.00	9.500	2.46	15.500	2.38	21.50	0.92		
3.533	1.00	9.533	2.76	15.533	2.38	21.53	0.92		
3.567	1.00	9.567	2.76	15.567	2.38	21.57	0.92		
3.600	1.00	9.600	2.76	15.600	2.38	21.60	0.92		
3.633	1.00	9.633	2.76	15.633	2.38	21.63	0.92		
3.667	1.00	9.667	2.76	15.667	2.38	21.67	0.92		
3.700	1.00	9.700	2.76	15.700	2.38	21.70	0.92		
3.733	1.00	9.733	2.76	15.733	2.38	21.73	0.92		
3.767	1.00	9.767	2.76	15.767	2.38	21.77	0.92		
3.800	1.00	9.800	2.76	15.800	2.38	21.80	0.92		
3.833	1.00	9.833	2.76	15.833	2.38	21.83	0.92		
3.867	1.00	9.867	2.76	15.867	2.38	21.87	0.92		
3.900	1.00	9.900	2.76	15.900	2.38	21.90	0.92		
3.933	1.00	9.933	2.76	15.933	2.38	21.93	0.92		
3.967	1.00	9.967	2.76	15.967	2.38	21.97	0.92		
4.000	1.00	10.000	2.77	16.000	2.38	22.00	0.92		
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92		
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92		
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92		
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92		
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92		
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92		
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92		
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92		
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92		
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92		
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92		
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92		
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92		
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92		
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92		
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92		
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92		
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92		
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92		
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92		
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92		
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92		
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92		
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92		
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92		
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92		
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92		
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92		
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92		
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92		
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92		
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92		
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92		
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92		
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92		
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92		
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92		
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92		
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92		
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92		
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92		
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92		
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92		
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92		
5.500	1.23	11.500	7.40	17.500	1.38	23.50	0.92		
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92		
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92		
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
5.633	1.23	[11.633	31.95	[17.633	1.38		23.63	0.92	
5.667	1.23	[11.667	31.95	[17.667	1.38		23.67	0.92	
5.700	1.23	[11.700	31.95	[17.700	1.38		23.70	0.92	
5.733	1.23	[11.733	31.95	[17.733	1.38		23.73	0.92	
5.767	1.23	[11.767	58.44	[17.767	1.38		23.77	0.92	
5.800	1.23	[11.800	84.79	[17.800	1.38		23.80	0.92	
5.833	1.23	[11.833	84.79	[17.833	1.38		23.83	0.92	
5.867	1.23	[11.867	84.79	[17.867	1.38		23.87	0.92	
5.900	1.23	[11.900	84.79	[17.900	1.38		23.90	0.92	
5.933	1.23	[11.933	84.79	[17.933	1.38		23.93	0.92	
5.967	1.23	[11.967	84.79	[17.967	1.38		23.97	0.92	
6.000	1.23	[12.000	84.68	[18.000	1.38		24.00	0.92	

Max.Eff.Inten.(mm/hr)= 84.79 56.37
over (min) 5.00 16.00
Storage Coeff. (min)= 3.59 (ii) 14.21 (ii)
Unit Hyd. Tpeak (min)= 4.00 16.00
Unit Hyd. peak (cms)= 0.30 0.08

TOTALS
PEAK FLOW (cms)= 0.42 0.54 0.835 (iii)
TIME TO PEAK (hrs)= 12.00 12.13 12.00
RUNOFF VOLUME (mm)= 75.30 43.26 50.95
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.56 0.66

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0211)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0231):	7.45	0.835	12.00	50.95
+ ID2= 2 (0030):	39.52	1.806	12.58	36.18
=====				
ID = 3 (0211):	46.97	2.087	12.50	38.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)			
IN= 2---> OUT= 1			
Routing time step (min)'= 2.00			
<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 / 0.0350	
3.00	100.00	0.0350	
4.00	100.00	0.0350	
5.00	100.33	0.0350 / 0.0800	
6.00	100.67	0.0800	
7.00	101.00	0.0800	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.485E+01	0.0	0.34	4.39
0.09	100.09	.109E+02	0.1	0.51	2.93
0.14	100.14	.182E+02	0.1	0.64	2.34
0.19	100.19	.267E+02	0.2	0.75	2.00
0.24	100.24	.364E+02	0.3	0.85	1.77
0.28	100.28	.473E+02	0.5	0.94	1.60
0.33	100.33	.594E+02	0.7	1.02	1.47
0.39	100.39	.753E+02	1.0	1.17	1.28
0.44	100.44	.920E+02	1.3	1.30	1.16
0.50	100.50	.112E+03	1.7	1.40	1.07
0.55	100.55	.133E+03	2.2	1.49	1.01
0.61	100.61	.155E+03	2.7	1.57	0.96
0.66	100.66	.180E+03	3.3	1.63	0.92
0.72	100.72	.205E+03	3.9	1.69	0.89
0.78	100.78	.233E+03	4.5	1.75	0.86
0.83	100.83	.262E+03	5.2	1.80	0.84
0.89	100.89	.293E+03	6.0	1.84	0.82
0.94	100.94	.326E+03	6.8	1.88	0.80
1.00	101.00	.360E+03	7.7	1.92	0.78

<---- hydrograph ---->					
<-pipe / channel->					
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0211)	46.97	2.09	12.50	38.52	0.54 1.47

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
OUTFLOW: ID= 1 (0005) 46.97 2.08 12.50 38.52 0.54 1.47

CALIB
STANDHYD (0232)
ID= 1 DT= 3.0 min
Area (ha)= 8.25
Total Imp(%)= 39.00
Dir. Conn.(%)= 39.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.22 5.03
Dep. Storage (mm)= 15.00 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 234.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN hrs	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38		
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38		
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38		
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38		
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38		
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38		
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38		
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38		
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38		
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38		
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92		
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92		
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92		
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92		
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92		
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92		
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92		
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92		
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92		
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92		
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92		
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92		
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92		
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92		
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92		
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92		
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92		
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT											
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92				
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92				
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92				
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92				
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92				
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92				
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92				
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92				
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92				
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92				
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92				
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92				
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92				
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92				
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92				
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92				
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92				
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92				
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92				
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92				
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92				
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92				
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92				
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92				
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92				
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92				
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92				
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92				
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92				
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92				
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92				
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92				
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92				
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92				
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92				
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92				
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92				
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92				
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92				
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92				
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92				
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92				
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92				
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92				
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92				
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92				
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92				
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92				
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92				
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92				
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92				
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92				
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92				
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92				
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92				
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92				

Max.Eff.Inten.(mm/hr)= 84.79 42.25
over (min) 6.00 15.00
Storage Coeff. (min)= 3.70 (ii) 13.66 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08

TOTALS
PEAK FLOW (cms)= 0.74 0.36 1.042 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 61.80 32.57 43.97
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.80 0.42 0.57

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007) 1 * 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0232):	8.25	1.042	12.00	43.97
+ ID2= 2 (0005):	46.97	2.081	12.50	38.52
ID = 3 (0007):	55.22	2.395	12.03	39.34

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022) IN= 2---> OUT= 1			
Routing time step (min)'= 2.00			
<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.408E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

<---- hydrograph ----> <-pipe / channel->					
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)
INFLOW : ID= 2 (0007)	55.22	2.40	12.03	39.34	0.57
OUTFLOW: ID= 1 (0022)	55.22	2.38	12.03	39.34	0.57

CALIB STANDHYD (0133) ID= 1 DT= 3.0 min		Area (ha)= 6.79 Total Imp(%)= 47.00	Dir. Conn.(%)= 47.00

Surface Area (ha)= 3.19		IMPERVIOUS 3.60
Dep. Storage (mm)= 15.00		1.50
Average Slope (%)= 2.00		2.00
Length (m)= 212.76		40.00
Mannings n = 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT											
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38				
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38				
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38				
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38				
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38				
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38				
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38				
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38				
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38				
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38				
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38				
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38				
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38				
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38				
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38				
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38				
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38				
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38				
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38				
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38				
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92				
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92				
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92				
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92				
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92				
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92				
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92				
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92				
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92				
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92				
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92				
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92				
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92				
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92				
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92				
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92				
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92				
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92				
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92				
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92				
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92				
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92				
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92				
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92				
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92				
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92				
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92				
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92				
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92				
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92				
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92				
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92				
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92				
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92				
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92				
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92				
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92				
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92				
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92				
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92				
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92				
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92				
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92				
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92				
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92				
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92				
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92				
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92				
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92				
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92				
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92				
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92				
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92				
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92				
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92				
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92				
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92				
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92				
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92				
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92				
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92				
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92				
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92				
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92				
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92				
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92				
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92				

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92		
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92		
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92		
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92		
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92		
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92		
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92		
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92		
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92		
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92		
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92		
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92		
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92		
Max.Eff.Inten.(mm/hr)=			84.79	31.53					
over (min)			6.00	12.00					
Storage Coeff. (min)=			3.49 (ii)	11.40 (ii)					
Unit Hyd. Tpeak (min)=			6.00	12.00					
Unit Hyd. peak (cms)=			0.25	0.10					
								TOTALS	
PEAK FLOW (cms)=			0.74	0.21	0.932 (iii)				
TIME TO PEAK (hrs)=			12.00	12.10	12.00				
RUNOFF VOLUME (mm)=			61.80	24.55	42.06				
TOTAL RAINFALL (mm)=			76.80	76.80	76.80				
RUNOFF COEFFICIENT =			0.80	0.32	0.55				
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 62.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

[ADD HYD (0091)]									
[1 + 2 = 3]									
[1 (133)]									
+ ID= 2 (0022) : 55.22 2.379 12.03 39.34									
=====									
ID = 3 (0091) : 62.01 3.230 12.03 39.63									

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

[CALIB]									
[MASHDY (0222)]									
[1 DT= 5.0 min]									
[Area (ha)= 3.54 Curve Number (CN)= 75.0									
[U.H. Tp(hrs)= 0.15 # of Linear Res.(N)= 3.00									

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.									

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.003	0.77	1.683	1.54	12.083	11.07	18.08	1.38		
0.167	0.77	1.617	1.54	12.167	11.06	18.17	1.38		
0.250	0.77	1.6250	1.54	12.250	11.06	18.25	1.38		
0.333	0.77	1.6333	1.54	12.333	11.06	18.33	1.38		
0.417	0.77	1.6417	1.54	12.417	11.06	18.42	1.38		
0.500	0.77	1.6500	1.54	12.500	11.06	18.50	1.38		
0.583	0.77	1.6583	1.54	12.583	5.68	18.58	1.38		
0.667	0.77	1.6667	1.54	12.667	5.68	18.67	1.38		
0.750	0.77	1.6750	1.54	12.750	5.68	18.75	1.38		
0.833	0.77	1.6833	1.54	12.833	5.68	18.83	1.38		
0.917	0.77	1.6917	1.54	12.917	5.68	18.92	1.38		
1.000	0.77	1.7000	1.54	13.000	5.68	19.00	1.38		
1.083	0.77	1.7083	1.54	13.083	1.08	19.08	1.38		
1.167	0.77	1.7167	1.54	13.167	1.08	19.17	1.38		
1.250	0.77	1.7250	1.54	13.250	1.08	19.25	1.38		
1.333	0.77	1.7333	1.54	13.333	1.08	19.33	1.38		
1.417	0.77	1.7417	1.54	13.417	1.08	19.42	1.38		
1.500	0.77	1.7500	1.54	13.500	1.08	19.50	1.38		
1.583	0.77	1.7583	1.54	13.583	6.30	19.58	1.38		
1.667	0.77	1.7667	1.54	13.667	6.30	19.67	1.38		
1.750	0.77	1.7750	1.54	13.750	6.30	19.75	1.38		
1.833	1.38	1.7833	1.54	13.833	6.30	19.83	1.38		
1.917	1.38	1.7917	1.54	13.917	6.30	19.92	1.38		
2.000	1.38	1.8000	1.54	14.000	6.30	20.00	1.38		
2.083	1.00	1.8083	2.07	14.083	2.30	20.08	0.92		
2.167	1.00	1.8167	2.07	14.167	2.30	20.17	0.92		
2.250	1.00	1.8250	2.07	14.250	2.30	20.25	0.92		
2.333	1.00	1.8333	2.07	14.333	2.30	20.33	0.92		
2.417	1.00	1.8417	2.07	14.417	2.30	20.42	0.92		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT											
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92				
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92				
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92				
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92				
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92				
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92				
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92				
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92				
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92				
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92				
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92				
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92				
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92				
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92				
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92				
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92				
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92				
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92				
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92				
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92				
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92				
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92				
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92				
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92				
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92				
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92				
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92				
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92				
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92				
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92				
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92				
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92				
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92				
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92				
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92				
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92				
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92				
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92				
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92				
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92				
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92				
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92				
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92				

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.336 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 32.758
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.427

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0221)			
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.02	2.77
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	158.95	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38		
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38		
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38		
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38		
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38		
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT							
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

ID = 3 (0009): 7.33 0.778 12.00 39.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0009) |
3 + 2 = 1
ID1= 3 (0009): 7.33 0.778 12.00 39.51
+ ID2= 2 (0091): 62.01 3.230 12.03 39.63

ID = 1 (0009): 69.34 3.978 12.00 39.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0010) |
| IN= 2---> OUT= 1 |
DT= 4.0 min
OVERFLOW IS OFF

| OUTFLOW (ha.m.) | | (cms) | | (ha.m.) |
| (ha) | | (cms) | | (hrs) | | (mm) |

0.0000 0.0000		3.2510 1.2472
0.6750 0.7720		3.7840 1.3920
1.6680 0.9849		4.5560 1.5300
2.4150 1.1060		0.0000 0.0000

| AREA QPEAK TPEAK R.V. |
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0009) 69.340 3.978 12.00 39.62
OUTFLOW: ID= 1 (0010) 69.340 1.735 13.03 39.62

PEAK FLOW REDUCTION [qout/qin](%)= 43.61
TIME SHIFT OF PEAK FLOW (min)= 62.00
MAXIMUM STORAGE USED (ha.m.)= 0.9957

| CALIB |
| STANDHYD (0234) |
ID= 1 DT= 3.0 min
Area (ha)= 17.56
Total Imp(%)= 28.00 Dir. Conn.(%)= 28.00

| IMPERVIOUS PERVIOUS (i) |
| Surface Area (ha)= 4.92 12.64 |
| Dep. Storage (mm)= 1.50 1.50 |
| Average Slope (%)= 2.00 2.00 |
| Length (m)= 342.15 40.00 |
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN |
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr |

0.050 0.77 | 6.050 1.54 | 12.050 11.06 | 18.05 1.38
0.100 0.77 | 6.100 1.54 | 12.100 11.06 | 18.10 1.38
0.150 0.77 | 6.150 1.54 | 12.150 11.06 | 18.15 1.38
0.200 0.77 | 6.200 1.54 | 12.200 11.06 | 18.20 1.38
0.250 0.77 | 6.250 1.54 | 12.250 11.06 | 18.25 1.38
0.300 0.77 | 6.300 1.54 | 12.300 11.06 | 18.30 1.38
0.350 0.77 | 6.350 1.54 | 12.350 11.06 | 18.35 1.38
0.400 0.77 | 6.400 1.54 | 12.400 11.06 | 18.40 1.38
0.450 0.77 | 6.450 1.54 | 12.450 11.06 | 18.45 1.38
0.500 0.77 | 6.500 1.54 | 12.500 11.06 | 18.50 1.38
0.550 0.77 | 6.550 1.54 | 12.550 5.68 | 18.55 1.38
0.600 0.77 | 6.600 1.54 | 12.600 5.68 | 18.60 1.38
0.650 0.77 | 6.650 1.54 | 12.650 5.68 | 18.65 1.38
0.700 0.77 | 6.700 1.54 | 12.700 5.68 | 18.70 1.38
0.750 0.77 | 6.750 1.54 | 12.750 5.68 | 18.75 1.38
0.800 0.77 | 6.800 1.54 | 12.800 5.68 | 18.80 1.38
0.850 0.77 | 6.850 1.54 | 12.850 5.68 | 18.85 1.38
0.900 0.77 | 6.900 1.54 | 12.900 5.68 | 18.90 1.38
0.950 0.77 | 6.950 1.54 | 12.950 5.68 | 18.95 1.38
1.000 0.77 | 7.000 1.54 | 13.000 5.68 | 19.00 1.38
1.050 0.77 | 7.050 1.54 | 13.050 1.00 | 19.05 1.38
1.100 0.77 | 7.100 1.54 | 13.100 1.00 | 19.10 1.38
1.150 0.77 | 7.150 1.54 | 13.150 1.00 | 19.15 1.38
1.200 0.77 | 7.200 1.54 | 13.200 1.00 | 19.20 1.38
1.250 0.77 | 7.250 1.54 | 13.250 1.00 | 19.25 1.38
1.300 0.77 | 7.300 1.54 | 13.300 1.00 | 19.30 1.38
1.350 0.77 | 7.350 1.54 | 13.350 1.00 | 19.35 1.38
1.400 0.77 | 7.400 1.54 | 13.400 1.00 | 19.40 1.38
1.450 0.77 | 7.450 1.54 | 13.450 1.00 | 19.45 1.38
1.500 0.77 | 7.500 1.54 | 13.500 1.00 | 19.50 1.38
1.550 0.77 | 7.550 1.54 | 13.550 6.30 | 19.55 1.38
1.600 0.77 | 7.600 1.54 | 13.600 6.30 | 19.60 1.38

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

1.650 0.77 | 7.650 1.54 | 13.650 6.30 | 19.65 1.38
1.700 0.77 | 7.700 1.54 | 13.700 6.30 | 19.70 1.38
1.750 0.77 | 7.750 1.54 | 13.750 6.30 | 19.75 1.38
1.800 1.38 | 7.800 1.54 | 13.800 6.30 | 19.80 1.38
1.850 1.38 | 7.850 1.54 | 13.850 6.30 | 19.85 1.38
1.900 1.38 | 7.900 1.54 | 13.900 6.30 | 19.90 1.38
1.950 1.38 | 7.950 1.54 | 13.950 6.30 | 19.95 1.38
2.000 1.38 | 8.000 1.54 | 14.000 6.29 | 20.00 1.38
2.050 1.00 | 8.050 2.07 | 14.050 2.30 | 20.05 0.92
2.100 1.00 | 8.100 2.07 | 14.100 2.30 | 20.10 0.92
2.150 1.00 | 8.150 2.07 | 14.150 2.30 | 20.15 0.92
2.200 1.00 | 8.200 2.07 | 14.200 2.30 | 20.20 0.92
2.250 1.00 | 8.250 2.07 | 14.250 2.30 | 20.25 0.92
2.300 1.00 | 8.300 2.07 | 14.300 2.30 | 20.30 0.92
2.350 1.00 | 8.350 2.07 | 14.350 2.30 | 20.35 0.92
2.400 1.00 | 8.400 2.07 | 14.400 2.30 | 20.40 0.92
2.450 1.00 | 8.450 2.07 | 14.450 2.30 | 20.45 0.92
2.500 1.00 | 8.500 2.07 | 14.500 2.30 | 20.50 0.92
2.550 1.00 | 8.550 2.07 | 14.550 2.30 | 20.55 0.92
2.600 1.00 | 8.600 2.07 | 14.600 2.30 | 20.60 0.92
2.650 1.00 | 8.650 2.07 | 14.650 2.30 | 20.65 0.92
2.700 1.00 | 8.700 2.07 | 14.700 2.30 | 20.70 0.92
2.750 1.00 | 8.750 2.07 | 14.750 2.30 | 20.75 0.92
2.800 1.00 | 8.800 2.07 | 14.800 2.30 | 20.80 0.92
2.850 1.00 | 8.850 2.07 | 14.850 2.30 | 20.85 0.92
2.900 1.00 | 8.900 2.07 | 14.900 2.30 | 20.90 0.92
2.950 1.00 | 8.950 2.07 | 14.950 2.30 | 20.95 0.92
3.000 1.00 | 9.000 2.07 | 15.000 2.30 | 21.00 0.92
3.050 1.00 | 9.050 2.46 | 15.050 2.30 | 21.05 0.92
3.100 1.00 | 9.100 2.46 | 15.100 2.30 | 21.10 0.92
3.150 1.00 | 9.150 2.46 | 15.150 2.30 | 21.15 0.92
3.200 1.00 | 9.200 2.46 | 15.200 2.30 | 21.20 0.92
3.250 1.00 | 9.250 2.46 | 15.250 2.30 | 21.25 0.92
3.300 1.00 | 9.300 2.46 | 15.300 2.30 | 21.30 0.92
3.350 1.00 | 9.350 2.46 | 15.350 2.30 | 21.35 0.92
3.400 1.00 | 9.400 2.46 | 15.400 2.30 | 21.40 0.92
3.450 1.00 | 9.450 2.46 | 15.450 2.30 | 21.45 0.92
3.500 1.00 | 9.500 2.46 | 15.500 2.30 | 21.50 0.92
3.550 1.00 | 9.550 2.76 | 15.550 2.30 | 21.55 0.92
3.600 1.00 | 9.600 2.76 | 15.600 2.30 | 21.60 0.92
3.650 1.00 | 9.650 2.76 | 15.650 2.30 | 21.65 0.92
3.700 1.00 | 9.700 2.76 | 15.700 2.30 | 21.70 0.92
3.750 1.00 | 9.750 2.76 | 15.750 2.30 | 21.75 0.92
3.800 1.00 | 9.800 2.76 | 15.800 2.30 | 21.80 0.92
3.850 1.00 | 9.850 2.76 | 15.850 2.30 | 21.85 0.92
3.900 1.00 | 9.900 2.76 | 15.900 2.30 | 21.90 0.92
3.950 1.00 | 9.950 2.76 | 15.950 2.30 | 21.95 0.92
4.000 1.00 | 10.000 2.77 | 16.000 2.30 | 22.00 0.92
4.050 1.23 | 10.050 3.53 | 16.050 1.38 | 22.05 0.92
4.100 1.23 | 10.100 3.53 | 16.100 1.38 | 22.10 0.92
4.150 1.23 | 10.150 3.53 | 16.150 1.38 | 22.15 0.92
4.200 1.23 | 10.200 3.53 | 16.200 1.38 | 22.20 0.92
4.250 1.23 | 10.250 3.53 | 16.250 1.38 | 22.25 0.92
4.300 1.23 | 10.300 3.53 | 16.300 1.38 | 22.30 0.92
4.350 1.23 | 10.350 3.53 | 16.350 1.38 | 22.35 0.92
4.400 1.23 | 10.400 3.53 | 16.400 1.38 | 22.40 0.92
4.450 1.23 | 10.450 3.53 | 16.450 1.38 | 22.45 0.92
4.500 1.23 | 10.500 3.53 | 16.500 1.38 | 22.50 0.92
4.550 1.23 | 10.550 4.76 | 16.550 1.38 | 22.55 0.92
4.600 1.23 | 10.600 4.76 | 16.600 1.38 | 22.60 0.92
4.650 1.23 | 10.650 4.76 | 16.650 1.38 | 22.65 0.92
4.700 1.23 | 10.700 4.76 | 16.700 1.38 | 22.70 0.92
4.750 1.23 | 10.750 4.76 | 16.750 1.38 | 22.75 0.92
4.800 1.23 | 10.800 4.76 | 16.800 1.38 | 22.80 0.92
4.850 1.23 | 10.850 4.76 | 16.850 1.38 | 22.85 0.92
4.900 1.23 | 10.900 4.76 | 16.900 1.38 | 22.90 0.92
4.950 1.23 | 10.950 4.76 | 16.950 1.38 | 22.95 0.92
5.000 1.23 | 11.000 4.76 | 17.000 1.38 | 23.00 0.92
5.050 1.23 | 11.050 7.37 | 17.050 1.38 | 23.05 0.92
5.100 1.23 | 11.100 7.37 | 17.100 1.38 | 23.10 0.92
5.150 1.23 | 11.150 7.37 | 17.150 1.38 | 23.15 0.92
5.200 1.23 | 11.200 7.37 | 17.200 1.38 | 23.20 0.92
5.250 1.23 | 11.250 7.37 | 17.250 1.38 | 23.25 0.92
5.300 1.23 | 11.300 7.37 | 17.300 1.38 | 23.30 0.92
5.350 1.23 | 11.350 7.37 | 17.350 1.38 | 23.35 0.92
5.400 1.23 | 11.400 7.37 | 17.400 1.38 | 23.40 0.92
5.450 1.23 | 11.450 7.37 | 17.450 1.38 | 23.45 0.92
5.500 1.23 | 11.500 7.39 | 17.500 1.38 | 23.50 0.92
5.550 1.23 | 11.550 31.95 | 17.550 1.38 | 23.55 0.92
5.600 1.23 | 11.600 31.95 | 17.600 1.38 | 23.60 0.92
5.650 1.23 | 11.650 31.95 | 17.650 1.38 | 23.65 0.92
5.700 1.23 | 11.700 31.95 | 17.700 1.38 | 23.70 0.92
5.750 1.23 | 11.750 31.98 | 17.750 1.38 | 23.75 0.92
5.800 1.23 | 11.800 84.79 | 17.800 1.38 | 23.80 0.92
5.850 1.23 | 11.850 84.79 | 17.850 1.38 | 23.85 0.92
5.900 1.23 | 11.900 84.79 | 17.900 1.38 | 23.90 0.92
5.950 1.23 | 11.950 84.79 | 17.950 1.38 | 23.95 0.92

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
6.000 1.23 |12.000 84.75 |18.000 1.38 | 24.00 0.92
Max.Eff.Inten.(mm/hr)= 84.79 42.25
over (min) 6.00 15.00
Storage Coeff. (min)= 4.64 (ii) 14.60 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08
TOTALS
PEAK FLOW (cms)= 1.11 0.88 1.840 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 75.30 32.57 44.54
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.42 0.58

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0011)|
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0010): 69.34 1.735 13.03 39.62
+ ID2= 2 (0234): 17.56 1.840 12.00 44.54

ID = 3 (0011): 86.90 2.218 12.00 40.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0015)| OVERFLOW IS OFF
| IN= 2--> OUT= 1 |
DT= 5.0 min
OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 | 9.4600 0.3520
0.4100 0.1040 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0011) 86.900 2.218 12.00 40.61
OUTFLOW: ID= 1 (0015) 86.900 2.097 12.10 40.61

PEAK FLOW REDUCTION [Qout/Qin](%)= 90.50
TIME SHIFT OF PEAK FLOW (min)= 6.00
MAXIMUM STORAGE USED (ha.m.)= 0.1482

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

| CALIB |
| STANDHYD (0235)|
ID= 1 DT= 2.0 min
Area (ha)= 4.28
Total Imp(%)= 30.00 Dir. Conn.(%)= 30.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.28 3.00
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 160.92 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr
0.003 0.77 | 6.033 1.54 | 12.033 11.06 | 18.03 1.38
0.067 0.77 | 6.067 1.54 | 12.067 11.06 | 18.07 1.38
0.100 0.77 | 6.100 1.54 | 12.100 11.06 | 18.10 1.38
0.133 0.77 | 6.133 1.54 | 12.133 11.06 | 18.13 1.38
0.167 0.77 | 6.167 1.54 | 12.167 11.06 | 18.17 1.38
0.200 0.77 | 6.200 1.54 | 12.200 11.06 | 18.20 1.38
0.233 0.77 | 6.233 1.54 | 12.233 11.06 | 18.23 1.38
0.267 0.77 | 6.267 1.54 | 12.267 11.06 | 18.27 1.38
0.300 0.77 | 6.300 1.54 | 12.300 11.06 | 18.30 1.38
0.333 0.77 | 6.333 1.54 | 12.333 11.06 | 18.33 1.38
0.367 0.77 | 6.367 1.54 | 12.367 11.06 | 18.37 1.38
0.400 0.77 | 6.400 1.54 | 12.400 11.06 | 18.40 1.38
0.433 0.77 | 6.433 1.54 | 12.433 11.06 | 18.43 1.38
0.467 0.77 | 6.467 1.54 | 12.467 11.06 | 18.47 1.38
0.500 0.77 | 6.500 1.54 | 12.500 11.05 | 18.50 1.38
0.533 0.77 | 6.533 1.54 | 12.533 5.68 | 18.53 1.38

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
0.567 0.77 | 6.567 1.54 | 12.567 5.68 | 18.57 1.38
0.600 0.77 | 6.600 1.54 | 12.600 5.68 | 18.60 1.38
0.633 0.77 | 6.633 1.54 | 12.633 5.68 | 18.63 1.38
0.667 0.77 | 6.667 1.54 | 12.667 5.68 | 18.67 1.38
0.700 0.77 | 6.700 1.54 | 12.700 5.68 | 18.70 1.38
0.733 0.77 | 6.733 1.54 | 12.733 5.68 | 18.73 1.38
0.767 0.77 | 6.767 1.54 | 12.767 5.68 | 18.77 1.38
0.800 0.77 | 6.800 1.54 | 12.800 5.68 | 18.80 1.38
0.833 0.77 | 6.833 1.54 | 12.833 5.68 | 18.83 1.38
0.867 0.77 | 6.867 1.54 | 12.867 5.68 | 18.87 1.38
0.900 0.77 | 6.900 1.54 | 12.900 5.68 | 18.90 1.38
0.933 0.77 | 6.933 1.54 | 12.933 5.68 | 18.93 1.38
0.967 0.77 | 6.967 1.54 | 12.967 5.68 | 18.97 1.38
1.000 0.77 | 7.000 1.54 | 13.000 5.67 | 19.00 1.38
1.033 0.77 | 7.033 1.54 | 13.033 1.08 | 19.03 1.38
1.067 0.77 | 7.067 1.54 | 13.067 1.08 | 19.07 1.38
1.100 0.77 | 7.100 1.54 | 13.100 1.08 | 19.10 1.38
1.133 0.77 | 7.133 1.54 | 13.133 1.08 | 19.13 1.38
1.167 0.77 | 7.167 1.54 | 13.167 1.08 | 19.17 1.38
1.200 0.77 | 7.200 1.54 | 13.200 1.08 | 19.20 1.38
1.233 0.77 | 7.233 1.54 | 13.233 1.08 | 19.23 1.38
1.267 0.77 | 7.267 1.54 | 13.267 1.08 | 19.27 1.38
1.300 0.77 | 7.300 1.54 | 13.300 1.08 | 19.30 1.38
1.333 0.77 | 7.333 1.54 | 13.333 1.08 | 19.33 1.38
1.367 0.77 | 7.367 1.54 | 13.367 1.08 | 19.37 1.38
1.400 0.77 | 7.400 1.54 | 13.400 1.08 | 19.40 1.38
1.433 0.77 | 7.433 1.54 | 13.433 1.08 | 19.43 1.38
1.467 0.77 | 7.467 1.54 | 13.467 1.08 | 19.47 1.38
1.500 0.77 | 7.500 1.54 | 13.500 1.09 | 19.50 1.38
1.533 0.77 | 7.533 1.54 | 13.533 6.30 | 19.53 1.38
1.567 0.77 | 7.567 1.54 | 13.567 6.30 | 19.57 1.38
1.600 0.77 | 7.600 1.54 | 13.600 6.30 | 19.60 1.38
1.633 0.77 | 7.633 1.54 | 13.633 6.30 | 19.63 1.38
1.667 0.77 | 7.667 1.54 | 13.667 6.30 | 19.67 1.38
1.700 0.77 | 7.700 1.54 | 13.700 6.30 | 19.70 1.38
1.733 0.77 | 7.733 1.54 | 13.733 6.30 | 19.73 1.38
1.767 1.08 | 7.767 1.54 | 13.767 6.30 | 19.77 1.38
1.800 1.38 | 7.800 1.54 | 13.800 6.30 | 19.80 1.38
1.833 1.38 | 7.833 1.54 | 13.833 6.30 | 19.83 1.38
1.867 1.38 | 7.867 1.54 | 13.867 6.30 | 19.87 1.38
1.900 1.38 | 7.900 1.54 | 13.900 6.30 | 19.90 1.38
1.933 1.38 | 7.933 1.54 | 13.933 6.30 | 19.93 1.38
1.967 1.38 | 7.967 1.54 | 13.967 6.30 | 19.97 1.38
2.000 1.38 | 8.000 1.54 | 14.000 6.29 | 20.00 1.38
2.033 1.00 | 8.033 2.07 | 14.033 2.30 | 20.03 0.92
2.067 1.00 | 8.067 2.07 | 14.067 2.30 | 20.07 0.92
2.100 1.00 | 8.100 2.07 | 14.100 2.30 | 20.10 0.92
2.133 1.00 | 8.133 2.07 | 14.133 2.30 | 20.13 0.92
2.167 1.00 | 8.167 2.07 | 14.167 2.30 | 20.17 0.92
2.200 1.00 | 8.200 2.07 | 14.200 2.30 | 20.20 0.92
2.233 1.00 | 8.233 2.07 | 14.233 2.30 | 20.23 0.92
2.267 1.00 | 8.267 2.07 | 14.267 2.30 | 20.27 0.92
2.300 1.00 | 8.300 2.07 | 14.300 2.30 | 20.30 0.92
2.333 1.00 | 8.333 2.07 | 14.333 2.30 | 20.33 0.92
2.367 1.00 | 8.367 2.07 | 14.367 2.30 | 20.37 0.92
2.400 1.00 | 8.400 2.07 | 14.400 2.30 | 20.40 0.92
2.433 1.00 | 8.433 2.07 | 14.433 2.30 | 20.43 0.92
2.467 1.00 | 8.467 2.07 | 14.467 2.30 | 20.47 0.92
2.500 1.00 | 8.500 2.07 | 14.500 2.30 | 20.50 0.92
2.533 1.00 | 8.533 2.07 | 14.533 2.30 | 20.53 0.92
2.567 1.00 | 8.567 2.07 | 14.567 2.30 | 20.57 0.92
2.600 1.00 | 8.600 2.07 | 14.600 2.30 | 20.60 0.92
2.633 1.00 | 8.633 2.07 | 14.633 2.30 | 20.63 0.92
2.667 1.00 | 8.667 2.07 | 14.667 2.30 | 20.67 0.92
2.700 1.00 | 8.700 2.07 | 14.700 2.30 | 20.70 0.92
2.733 1.00 | 8.733 2.07 | 14.733 2.30 | 20.73 0.92
2.767 1.00 | 8.767 2.07 | 14.767 2.30 | 20.77 0.92
2.800 1.00 | 8.800 2.07 | 14.800 2.30 | 20.80 0.92
2.833 1.00 | 8.833 2.07 | 14.833 2.30 | 20.83 0.92
2.867 1.00 | 8.867 2.07 | 14.867 2.30 | 20.87 0.92
2.900 1.00 | 8.900 2.07 | 14.900 2.30 | 20.90 0.92
2.933 1.00 | 8.933 2.07 | 14.933 2.30 | 20.93 0.92
2.967 1.00 | 8.967 2.07 | 14.967 2.30 | 20.97 0.92
3.000 1.00 | 9.000 2.07 | 15.000 2.30 | 21.00 0.92
3.033 1.00 | 9.033 2.46 | 15.033 2.30 | 21.03 0.92
3.067 1.00 | 9.067 2.46 | 15.067 2.30 | 21.07 0.92
3.100 1.00 | 9.100 2.46 | 15.100 2.30 | 21.10 0.92
3.133 1.00 | 9.133 2.46 | 15.133 2.30 | 21.13 0.92
3.167 1.00 | 9.167 2.46 | 15.167 2.30 | 21.17 0.92
3.200 1.00 | 9.200 2.46 | 15.200 2.30 | 21.20 0.92
3.233 1.00 | 9.233 2.46 | 15.233 2.30 | 21.23 0.92
3.267 1.00 | 9.267 2.46 | 15.267 2.30 | 21.27 0.92
3.300 1.00 | 9.300 2.46 | 15.300 2.30 | 21.30 0.92
3.333 1.00 | 9.333 2.46 | 15.333 2.30 | 21.33 0.92
3.367 1.00 | 9.367 2.46 | 15.367 2.30 | 21.37 0.92
3.400 1.00 | 9.400 2.46 | 15.400 2.30 | 21.40 0.92
3.433 1.00 | 9.433 2.46 | 15.433 2.30 | 21.43 0.92

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92		
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92		
3.533	1.00	9.533	2.76	15.533	2.30	21.53	0.92		
3.567	1.00	9.567	2.76	15.567	2.30	21.57	0.92		
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92		
3.633	1.00	9.633	2.76	15.633	2.30	21.63	0.92		
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92		
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92		
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92		
3.767	1.00	9.767	2.76	15.767	2.30	21.77	0.92		
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92		
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92		
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92		
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92		
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92		
3.967	1.00	9.967	2.76	15.967	2.30	21.97	0.92		
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92		
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92		
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92		
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92		
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92		
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92		
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92		
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92		
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92		
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92		
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92		
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92		
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92		
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92		
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92		
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92		
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92		
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92		
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92		
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92		
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92		
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92		
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92		
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92		
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92		
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92		
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92		
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92		
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92		
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92		
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92		
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92		
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92		
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92		
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92		
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92		
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92		
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92		
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92		
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92		
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92		
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92		
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92		
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92		
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92		
5.500	1.23	11.500	7.40	17.500	1.38	23.50	0.92		
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92		
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92		
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92		
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92		
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92		
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92		
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92		
5.767	1.23	11.767	58.44	17.767	1.38	23.77	0.92		
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92		
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92		
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92		
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92		
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92		
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92		
6.000	1.23	12.000	84.68	18.000	1.38	24.00	0.92		

Max.Eff.Inten.(mm/hr)= 84.79 43.14
over (min) 5.00 14.00
Storage Coeff. (min)= 3.04 (ii) 12.92 (ii)
Unit Hyd. Tpeak (min)= 4.00 14.00
Unit Hyd. peak (cms)= 0.33 0.09

TOTALS
PEAK FLOW (cms)= 0.30 0.22 0.484 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 75.30 32.57 45.39

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.42 0.59

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0012)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0015): 86.90 2.007 12.10 40.61
+ ID2= 2 (0235): 4.28 0.484 12.00 45.39
ID = 3 (0012): 91.18 2.363 12.07 40.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)
IN= 2--> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0000
1.00 100.67 0.0000
2.00 100.33 0.0000 / 0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 / 0.0000 Main Channel
6.00 100.67 0.0000
7.00 101.00 0.0000

TRAVEL TIME TABLE
DEPTH (m) ELEV (m) VOLUME (cu.m.) FLOW RATE (cms) VELOCITY (m/s) TRAV.TIME (min)
0.05 100.05 .590E+02 0.0 0.34 53.36
0.09 100.09 .133E+03 0.1 0.51 35.70
0.14 100.14 .221E+03 0.1 0.64 28.48
0.19 100.19 .324E+03 0.2 0.75 24.33
0.24 100.24 .442E+03 0.3 0.85 21.55
0.28 100.28 .575E+03 0.5 0.94 19.51
0.33 100.33 .723E+03 0.7 1.02 17.94
0.39 100.39 .916E+03 1.0 1.17 15.58
0.44 100.44 .113E+04 1.3 1.30 14.08
0.50 100.50 .136E+04 1.7 1.40 13.03
0.55 100.55 .162E+04 2.2 1.49 12.25
0.61 100.61 .189E+04 2.7 1.57 11.65
0.66 100.66 .218E+04 3.3 1.63 11.17
0.72 100.72 .250E+04 3.9 1.69 10.77
0.78 100.78 .283E+04 4.5 1.75 10.45
0.83 100.83 .319E+04 5.2 1.80 10.17
0.89 100.89 .357E+04 6.0 1.84 9.92
0.94 100.94 .396E+04 6.8 1.88 9.71
1.00 101.00 .438E+04 7.7 1.92 9.52

hydrograph
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm) MAX DEPTH (m) MAX VEL (m/s)
INFLOW : ID= 2 (0012) 91.18 2.36 12.07 40.83 0.57 1.51
OUTFLOW: ID= 1 (0040) 91.18 1.97 13.10 40.83 0.52 1.44

CALIB
STANDHYD (0121)
ID= 1 DT= 3.0 min
Area (ha)= 1.62
Total Imp(%)= 28.00
Dir. Conn.(%)= 28.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.45 1.17
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 103.92 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT								
4.350	1.23	110.350	3.53	16.350	1.38	22.35	0.92	
4.400	1.23	110.400	3.53	16.400	1.38	22.40	0.92	
4.450	1.23	110.450	3.53	16.450	1.38	22.45	0.92	
4.500	1.23	110.500	3.53	16.500	1.38	22.50	0.92	
4.550	1.23	110.550	4.76	16.550	1.38	22.55	0.92	
4.600	1.23	110.600	4.76	16.600	1.38	22.60	0.92	
4.650	1.23	110.650	4.76	16.650	1.38	22.65	0.92	
4.700	1.23	110.700	4.76	16.700	1.38	22.70	0.92	
4.750	1.23	110.750	4.76	16.750	1.38	22.75	0.92	
4.800	1.23	110.800	4.76	16.800	1.38	22.80	0.92	
4.850	1.23	110.850	4.76	16.850	1.38	22.85	0.92	
4.900	1.23	110.900	4.76	16.900	1.38	22.90	0.92	
4.950	1.23	110.950	4.76	16.950	1.38	22.95	0.92	
5.000	1.23	111.000	4.76	17.000	1.38	23.00	0.92	
5.050	1.23	111.050	7.37	17.050	1.38	23.05	0.92	
5.100	1.23	111.100	7.37	17.100	1.38	23.10	0.92	
5.150	1.23	111.150	7.37	17.150	1.38	23.15	0.92	
5.200	1.23	111.200	7.37	17.200	1.38	23.20	0.92	
5.250	1.23	111.250	7.37	17.250	1.38	23.25	0.92	
5.300	1.23	111.300	7.37	17.300	1.38	23.30	0.92	
5.350	1.23	111.350	7.37	17.350	1.38	23.35	0.92	
5.400	1.23	111.400	7.37	17.400	1.38	23.40	0.92	
5.450	1.23	111.450	7.37	17.450	1.38	23.45	0.92	
5.500	1.23	111.500	7.39	17.500	1.38	23.50	0.92	
5.550	1.23	111.550	31.95	17.550	1.38	23.55	0.92	
5.600	1.23	111.600	31.95	17.600	1.38	23.60	0.92	
5.650	1.23	111.650	31.95	17.650	1.38	23.65	0.92	
5.700	1.23	111.700	31.95	17.700	1.38	23.70	0.92	
5.750	1.23	111.750	31.98	17.750	1.38	23.75	0.92	
5.800	1.23	111.800	84.79	17.800	1.38	23.80	0.92	
5.850	1.23	111.850	84.79	17.850	1.38	23.85	0.92	
5.900	1.23	111.900	84.79	17.900	1.38	23.90	0.92	
5.950	1.23	111.950	84.79	17.950	1.38	23.95	0.92	
6.000	1.23	112.000	84.75	18.000	1.38	24.00	0.92	
				TOTALS				
Inten.(mm/hr)=		84.79		42.25		8.180	(iii)	
Aver (min)		6.00		15.00				
Coeff. (min)=		2.27	(ii)	12.23	(ii)			
Tpeak (min)=		6.00		15.00				
Slope peak (cms)=		0.30		0.89				
EAK (cms)=		0.11		0.89				
LTIME (hrs)=		12.00		12.10		12.00		
VOLUME (mm)=		75.30		32.57		44.53		
InFALL (mm)=		76.80		76.80		76.80		
EFFICIENT =		0.98		0.42		0.58		
STORAGE COEFF. IS SMALLER THAN TIME STEP!								
PROCEDURE SELECTED FOR PEROVIOUS LOSSES:								
* = 72.0	Ia = Dep.	Storage (Above)						
E STEP (DT) SHOULD BE SMALLER OR EQUAL TO THE STORAGE COEFFICIENT.								
K FLOW DOES NOT INCLUDE BASEFLOW IF ANY.								
0122	Area (ha)=	13.12						
Min	Total Imp(%)=	44.00	Dir. Conn.(%)=	44.00				
				IMPERVIOUS PERVIOUS (I)				
rea (ha)=	5.77		7.35					
rage (mm)=	1.50		1.50					
slope (%)=	2.00		2.00					
n (m)=	295.75		40.00					
	=	0.013	0.250					
RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.								
--- TRANSFORMED HYETOGRAPH ---								
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	
0.050</								

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 42.25
over (min) 6.00 15.00
Storage Coeff. (min)= 4.25 (ii) 12.55 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

PEAK FLOW (cms)= 1.32 0.55
TIME TO PEAK (hrs)= 12.00 12.10
RUNOFF VOLUME (mm)= 75.30 32.57
TOTAL RAINFALL (mm)= 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.42

TOTALS
1.773 (iii)

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019) |
1 + 2 = 3 |
ID1= 1 (0121): 1.62 0.100 12.00 44.53
+ ID2= 2 (0122): 13.12 1.773 12.00 51.37
ID = 3 (0019): 14.74 1.953 12.00 50.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020) |
1 + 2 = 3 |
ID1= 1 (0019): 14.74 1.953 12.00 50.62
+ ID2= 2 (0040): 91.18 1.965 13.10 40.83
ID = 3 (0020): 105.92 3.180 12.03 42.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voinput.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\HMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ebe84514-ace7-4599-9b0d-9f27e3338422\scenar

Summary filename: C:\Users\Abira\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ebe84514-ace7-4599-9b8d-9f27e3338422\scenar

DATE: 03/24/2023 TIME: 10:21:00

USER:

COMMENTS:

** SIMULATION : Run 03 **

MASS STORM File: C:\Users\Abira\AppData\Local\Temp\40229a5b-2c49-4605-a664-9259a6a78fe0\1913d010
Ptotal= 88.80 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' hrs	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60	
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60	
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60	
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60	
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60	
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60	
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60	
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60	
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07	
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07	
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07	
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07	
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07	
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07	
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07	
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07	
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07	
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07	
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07	
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07	
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07	
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07	
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07	
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07	

CALIB
NASHYD (1030) Area (ha)= 30.38 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' hrs	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60	
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60	
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60	
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60	
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60	
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60	
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60	
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60	
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60	
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60	
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60	
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60	
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60	
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60	
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60	
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60	
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60	
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60	
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60	
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60	
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60	

1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60	
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60	
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60	
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07	
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07	
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07	
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07	
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07	
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07	
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07	
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07	
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07	
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07	
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07	
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07	
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07	
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07	
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07	
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07	
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07	
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07	
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07	
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07	
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07	
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07	
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07	
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07	
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07	
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07	
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07	
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07	
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07	
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07	
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07	
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07	
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07	
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07	
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07	
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07	
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07	
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07	
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07	
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07	
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07	
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07	
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07	
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07	
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07	
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07	
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07	
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07	

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 1.766 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 43.979
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.495

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0021) |
IN= 2---> OUT= 1 | Routing time step (min)!= 4.00

Distance	Elevation	Manning
0.00	101.00	0.0000
1.00	100.67	0.0000
2.00	100.33	0.0000 / 0.0350
3.00	100.00	0.0350
4.00	100.00	0.0350
5.00	100.33	0.0350 / 0.0000
6.00	100.67	0.0000
7.00	101.00	0.0000

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.145E+02	0.0	0.34	13.16
0.09	100.09	.327E+02	0.1	0.51	8.80
0.14	100.14	.545E+02	0.1	0.64	7.02
0.19	100.19	.800E+02	0.2	0.75	6.00
0.24	100.24	.109E+03	0.3	0.85	5.31
0.28	100.28	.142E+03	0.5	0.94	4.81

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

0.33	100.33	.178E+03	0.7	1.02	4.42
0.39	100.39	.226E+03	1.0	1.17	3.84
0.44	100.44	.279E+03	1.3	1.30	3.47
0.50	100.50	.336E+03	1.7	1.40	3.21
0.55	100.55	.390E+03	2.2	1.49	3.02
0.61	100.61	.466E+03	2.7	1.57	2.87
0.66	100.66	.539E+03	3.3	1.63	2.75
0.72	100.72	.616E+03	3.9	1.69	2.66
0.78	100.78	.699E+03	4.5	1.75	2.58
0.83	100.83	.786E+03	5.2	1.80	2.51
0.89	100.89	.879E+03	6.0	1.84	2.45
0.94	100.94	.977E+03	6.8	1.88	2.39
1.00	101.00	.108E+04	7.7	1.92	2.35

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (1030)	30.38	1.77	12.42	43.98	0.50	1.40
OUTFLOW: ID= 1 (0021)	30.38	1.77	12.42	43.98	0.50	1.41

CALIB					
NASHYD (0230)	Area (ha)=	9.14	Curve Number (CN)=	82.0	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.42			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW (cms)=	0.793 (i)
TIME TO PEAK (hrs)=	12.250
RUNOFF VOLUME (mm)=	50.315
TOTAL RAINFALL (mm)=	88.800
RUNOFF COEFFICIENT	= 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID= 1 (0021):	30.38	1.771	12.42	43.98
+ ID2= 2 (0230):	9.14	0.793	12.25	50.31
ID = 3 (0003):	39.52	2.437	12.33	45.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)	OVERFLOW IS OFF			
ID= 2 ---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	2.7760	0.2010
	1.0040	0.0700	3.2380	0.2400
	1.8140	0.1110	3.7590	0.2830
	2.2340	0.1460	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0003)	39.520	2.437	12.33	45.44
OUTFLOW: ID= 1 (0030)	39.520	2.222	12.58	45.44
	PEAK FLOW REDUCTION [Qout/qin](%)=	91.20		
	TIME SHIFT OF PEAK FLOW (min)=	15.00		
	MAXIMUM STORAGE USED (ha.m.)=	0.1453		

CALIB					
STANDHYD (0231)	Area (ha)=	7.45			
ID= 1 DT= 2.0 min	Total Imp(%)=	24.00	Dir. Conn.(%)=	24.00	
	Surface Area (ha)=	1.79	IMPERVIOUS	PERVIOUS (i)	
	Dep. Storage (mm)=	1.50	1.50		
	Average Slope (%)=	2.00	1.10		
	Length (m)=	222.86	40.00		
	Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60

HRP6_1-PR-PR-EX_POND1-6_2-100 YEAR.OUT										
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60			
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60			
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60			
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60			
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60			
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60			
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60			
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60			
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60			
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60			
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60			
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60			
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60			
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60			
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60			
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60			
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60			
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60			
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60			
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60			
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60			
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60			
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60			
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60			
1.000	0.89	7.000	1.78	13.000	6.56	19.00	1.60			
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60			
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60			
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60			
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60			
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60			
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60			
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60			
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60			
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60			
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60			
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60			
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60			
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60			
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60			
1.500	0.89	7.500	1.78	13.500	1.26	19.50	1.60			
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60			
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60			
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60			
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60			
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60			
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60			
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60			
1.767	1.24	7.767	1.78	13.767	7.28	19.77	1.60			
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60			
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60			
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60			
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60			
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60			
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60			
2.000	1.60	8.000	1.78	14.000	7.27	20.00	1.60			
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07			
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07			
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07			
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07			
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07			
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07			
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07			
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07			
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07			
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07			
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07			
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07			
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07			
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07			
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07			
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07			
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07			
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07			
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07			
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07			
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07			
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07			
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07			
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07			
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07			
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07			
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07			
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07			
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07			
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07			
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07			
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07			

HRP6_1-PR-PR-EX_POND1-6_2-100 YEAR.OUT										
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07			
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07			
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07			
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07			
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07			
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07			
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07			
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07			
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07			
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07			
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07			
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07			
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07			
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07			
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07			
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07			
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07			
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07			
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07			
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07			
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07			
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07			
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07			
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07			
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07			
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07			
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07			
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07			
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07			
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07			
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07			
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07			
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07			
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07			
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07			
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07			
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07			
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07			
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07			
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07			
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07			
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07			
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07			
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07			
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07			
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07			
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07			
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07			
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07			
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07			
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07			
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07			
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07			
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07			
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07			
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07			
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07			
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07			
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07			
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07			
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07			
4.233	1.42	11.133	8.52	17.133	1.60	23.13	1.07			
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07			
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07			
5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07			
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07			
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07			
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07			
4.267	1.42	11.367	8.52	17.367	1.60	23.37	1.07			
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07			
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07			
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07			
5.500	1.42	11.500	8.56	17.500	1.60	23.50	1.07			
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07			
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07			
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07			
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07			
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07			
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07			
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07			
5.767	1.42	11.767	67.57	17.767	1.60	23.77	1.07			
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07			
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07			
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07			
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07			
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07			
5.967	1.42	11.967	98.04	17.967	1.60	23.97	1.07			

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
6.000 1.42 |12.000 97.92 |18.000 1.60 | 24.00 1.07
Max.Eff.Inten.(mm/hr)= 98.04 70.19
over (min) 5.00 14.00
Storage Coeff. (min)= 3.38 (ii) 13.11 (iii)
Unit Hyd. Tpeak (min)= 4.00 14.00
Unit Hyd. peak (cms)= 0.31 0.08
PEAK FLOW (cms)= 0.48 0.70 1.073 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 87.30 53.27 61.44
TOTAL RAINFALL (mm)= 88.00 88.00 88.00
RUNOFF COEFFICIENT = 0.98 0.00 0.69

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0211)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0231): 7.45 1.073 12.00 61.44
+ ID2= 2 (0090): 39.52 2.222 12.50 45.44
ID = 3 (0211): 46.97 2.524 12.50 47.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)
IN= 2---> OUT= 1
Routing time step (min)'= 2.00

DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0800
1.00 100.67 0.0800
2.00 100.33 0.0800 /0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 /0.0800 Main Channel
6.00 100.67 0.0800
7.00 101.00 0.0800

TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .485E+01 0.0 0.34 4.39
0.09 100.09 .109E+02 0.1 0.51 2.93
0.14 100.14 .182E+02 0.1 0.64 2.34
0.19 100.19 .267E+02 0.2 0.75 2.00
0.24 100.24 .364E+02 0.3 0.85 1.77
0.28 100.28 .473E+02 0.5 0.94 1.60
0.33 100.33 .594E+02 0.7 1.02 1.47
0.39 100.39 .753E+02 1.0 1.17 1.28
0.44 100.44 .928E+02 1.3 1.30 1.16
0.50 100.50 .112E+03 1.7 1.40 1.07
0.55 100.55 .133E+03 2.2 1.49 1.01
0.61 100.61 .155E+03 2.7 1.57 0.96
0.66 100.66 .180E+03 3.3 1.63 0.92
0.72 100.72 .205E+03 3.9 1.69 0.89
0.78 100.78 .233E+03 4.5 1.75 0.86
0.83 100.83 .262E+03 5.2 1.80 0.84
0.89 100.89 .293E+03 6.0 1.84 0.82
0.94 100.94 .326E+03 6.8 1.88 0.80
1.00 101.00 .360E+03 7.7 1.92 0.78

hydrograph ---> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0211) 46.97 2.52 12.50 47.98 0.59 1.54
OUTFLOW: ID= 1 (0005) 46.97 2.52 12.53 47.98 0.59 1.54

CALIB
STANDHYD (0232)
ID= 1 DT= 3.0 min
Area (ha)= 8.25
Total Imp(%)= 39.00 Dir. Conn.(%)= 39.00

IMPERVIOUS PERVIOUS (i)

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
Surface Area (ha)= 3.22 5.03
Dep. Storage (mm)= 15.00 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 234.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH --->
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.050 0.09 6.050 1.78 12.050 12.79 18.05 1.60
0.100 0.09 6.100 1.78 12.100 12.79 18.10 1.60
0.150 0.09 6.150 1.78 12.150 12.79 18.15 1.60
0.200 0.09 6.200 1.78 12.200 12.79 18.20 1.60
0.250 0.09 6.250 1.78 12.250 12.79 18.25 1.60
0.300 0.09 6.300 1.78 12.300 12.79 18.30 1.60
0.350 0.09 6.350 1.78 12.350 12.79 18.35 1.60
0.400 0.09 6.400 1.78 12.400 12.79 18.40 1.60
0.450 0.09 6.450 1.78 12.450 12.79 18.45 1.60
0.500 0.09 6.500 1.78 12.500 12.78 18.50 1.60
0.550 0.09 6.550 1.78 12.550 6.57 18.55 1.60
0.600 0.09 6.600 1.78 12.600 6.57 18.60 1.60
0.650 0.09 6.650 1.78 12.650 6.57 18.65 1.60
0.700 0.09 6.700 1.78 12.700 6.57 18.70 1.60
0.750 0.09 6.750 1.78 12.750 6.57 18.75 1.60
0.800 0.09 6.800 1.78 12.800 6.57 18.80 1.60
0.850 0.09 6.850 1.78 12.850 6.57 18.85 1.60
0.900 0.09 6.900 1.78 12.900 6.57 18.90 1.60
0.950 0.09 6.950 1.78 12.950 6.57 18.95 1.60
1.000 0.09 7.000 1.78 13.000 6.57 19.00 1.60
1.050 0.09 7.050 1.78 13.050 1.24 19.05 1.60
1.100 0.09 7.100 1.78 13.100 1.24 19.10 1.60
1.150 0.09 7.150 1.78 13.150 1.24 19.15 1.60
1.200 0.09 7.200 1.78 13.200 1.24 19.20 1.60
1.250 0.09 7.250 1.78 13.250 1.24 19.25 1.60
1.300 0.09 7.300 1.78 13.300 1.24 19.30 1.60
1.350 0.09 7.350 1.78 13.350 1.24 19.35 1.60
1.400 0.09 7.400 1.78 13.400 1.24 19.40 1.60
1.450 0.09 7.450 1.78 13.450 1.24 19.45 1.60
1.500 0.09 7.500 1.78 13.500 1.25 19.50 1.60
1.550 0.09 7.550 1.78 13.550 7.28 19.55 1.60
1.600 0.09 7.600 1.78 13.600 7.28 19.60 1.60
1.650 0.09 7.650 1.78 13.650 7.28 19.65 1.60
1.700 0.09 7.700 1.78 13.700 7.28 19.70 1.60
1.750 0.09 7.750 1.78 13.750 7.28 19.75 1.60
1.800 1.60 7.800 1.78 13.800 7.28 19.80 1.60
1.850 1.60 7.850 1.78 13.850 7.28 19.85 1.60
1.900 1.60 7.900 1.78 13.900 7.28 19.90 1.60
1.950 1.60 7.950 1.78 13.950 7.28 19.95 1.60
2.000 1.60 8.000 1.78 14.000 7.28 20.00 1.60
2.050 1.15 8.050 2.40 14.050 2.66 20.05 1.07
2.100 1.15 8.100 2.40 14.100 2.66 20.10 1.07
2.150 1.15 8.150 2.40 14.150 2.66 20.15 1.07
2.200 1.15 8.200 2.40 14.200 2.66 20.20 1.07
2.250 1.15 8.250 2.40 14.250 2.66 20.25 1.07
2.300 1.15 8.300 2.40 14.300 2.66 20.30 1.07
2.350 1.15 8.350 2.40 14.350 2.66 20.35 1.07
2.400 1.15 8.400 2.40 14.400 2.66 20.40 1.07
2.450 1.15 8.450 2.40 14.450 2.66 20.45 1.07
2.500 1.15 8.500 2.40 14.500 2.66 20.50 1.07
2.550 1.15 8.550 2.40 14.550 2.66 20.55 1.07
2.600 1.15 8.600 2.40 14.600 2.66 20.60 1.07
2.650 1.15 8.650 2.40 14.650 2.66 20.65 1.07
2.700 1.15 8.700 2.40 14.700 2.66 20.70 1.07
2.750 1.15 8.750 2.40 14.750 2.66 20.75 1.07
2.800 1.15 8.800 2.40 14.800 2.66 20.80 1.07
2.850 1.15 8.850 2.40 14.850 2.66 20.85 1.07
2.900 1.15 8.900 2.40 14.900 2.66 20.90 1.07
2.950 1.15 8.950 2.40 14.950 2.66 20.95 1.07
3.000 1.15 9.000 2.40 15.000 2.66 21.00 1.07
3.050 1.15 9.050 2.84 15.050 2.66 21.05 1.07
3.100 1.15 9.100 2.84 15.100 2.66 21.10 1.07
3.150 1.15 9.150 2.84 15.150 2.66 21.15 1.07
3.200 1.15 9.200 2.84 15.200 2.66 21.20 1.07
3.250 1.15 9.250 2.84 15.250 2.66 21.25 1.07
3.300 1.15 9.300 2.84 15.300 2.66 21.30 1.07
3.350 1.15 9.350 2.84 15.350 2.66 21.35 1.07
3.400 1.15 9.400 2.84 15.400 2.66 21.40 1.07
3.450 1.15 9.450 2.84 15.450 2.66 21.45 1.07
3.500 1.15 9.500 2.84 15.500 2.66 21.50 1.07
3.550 1.15 9.550 3.20 15.550 2.66 21.55 1.07
3.600 1.15 9.600 3.20 15.600 2.66 21.60 1.07
3.650 1.15 9.650 3.20 15.650 2.66 21.65 1.07
3.700 1.15 9.700 3.20 15.700 2.66 21.70 1.07
3.750 1.15 9.750 3.20 15.750 2.66 21.75 1.07

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
3.800	1.15		9.800	3.20		15.800	2.66		21.80
3.850	1.15		9.850	3.20		15.850	2.66		21.85
3.900	1.15		9.900	3.20		15.900	2.66		21.90
3.950	1.15		9.950	3.20		15.950	2.66		21.95
4.000	1.15		10.000	3.20		16.000	2.66		22.00
4.050	1.42		10.050	4.08		16.050	1.60		22.05
4.100	1.42		10.100	4.08		16.100	1.60		22.10
4.150	1.42		10.150	4.08		16.150	1.60		22.15
4.200	1.42		10.200	4.08		16.200	1.60		22.20
4.250	1.42		10.250	4.08		16.250	1.60		22.25
4.300	1.42		10.300	4.08		16.300	1.60		22.30
4.350	1.42		10.350	4.08		16.350	1.60		22.35
4.400	1.42		10.400	4.08		16.400	1.60		22.40
4.450	1.42		10.450	4.08		16.450	1.60		22.45
4.500	1.42		10.500	4.09		16.500	1.60		22.50
4.550	1.42		10.550	5.51		16.550	1.60		22.55
4.600	1.42		10.600	5.51		16.600	1.60		22.60
4.650	1.42		10.650	5.51		16.650	1.60		22.65
4.700	1.42		10.700	5.51		16.700	1.60		22.70
4.750	1.42		10.750	5.51		16.750	1.60		22.75
4.800	1.42		10.800	5.51		16.800	1.60		22.80
4.850	1.42		10.850	5.51		16.850	1.60		22.85
4.900	1.42		10.900	5.51		16.900	1.60		22.90
4.950	1.42		10.950	5.51		16.950	1.60		22.95
5.000	1.42		11.000	5.51		17.000	1.60		23.00
5.050	1.42		11.050	8.52		17.050	1.60		23.05
5.100	1.42		11.100	8.52		17.100	1.60		23.10
5.150	1.42		11.150	8.52		17.150	1.60		23.15
5.200	1.42		11.200	8.52		17.200	1.60		23.20
5.250	1.42		11.250	8.52		17.250	1.60		23.25
5.300	1.42		11.300	8.52		17.300	1.60		23.30
5.350	1.42		11.350	8.52		17.350	1.60		23.35
5.400	1.42		11.400	8.52		17.400	1.60		23.40
5.450	1.42		11.450	8.52		17.450	1.60		23.45
5.500	1.42		11.500	8.54		17.500	1.60		23.50
5.550	1.42		11.550	36.94		17.550	1.60		23.55
5.600	1.42		11.600	36.94		17.600	1.60		23.60
5.650	1.42		11.650	36.94		17.650	1.60		23.65
5.700	1.42		11.700	36.94		17.700	1.60		23.70
5.750	1.42		11.750	36.97		17.750	1.60		23.75
5.800	1.42		11.800	98.04		17.800	1.60		23.80
5.850	1.42		11.850	98.04		17.850	1.60		23.85
5.900	1.42		11.900	98.04		17.900	1.60		23.90
5.950	1.42		11.950	98.04		17.950	1.60		23.95
6.000	1.42		12.000	97.99		18.000	1.60		24.00

Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min) 6.00 12.00
Storage Coeff. (min)= 3.49 (ii) 12.00 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.09

TOTALS
PEAK FLOW (cms)= 0.86 0.50 1.316 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 73.80 40.96 53.76
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.83 0.46 0.61

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0232):	6.25	1.316	12.00	53.76
+ ID2= 2 (0005):	46.97	2.520	12.53	47.98
=====				
ID = 3 (0007):	55.22	3.066	12.03	48.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0022) |
| IN= 2--> OUT= 1 | Routing time step (min)= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0000	
1.00	100.67	0.0000	
2.00	100.33	0.0000 / 0.0350	Main Channel

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT			
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0000	Main Channel
6.00	100.67	0.0000	
7.00	101.00	0.0000	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

<---- hydrograph ---->					
AREA		QPEAK		<-pipe / channel->	
(ha)		(cms)		R.V.	MAX DEPTH
		(hrs)		(mm)	MAX VEL
				(m)	(m/s)
INFLOW : ID= 2 (0007)	55.22	3.07	12.03	48.84	0.65 1.61
OUTFLOW: ID= 1 (0022)	55.22	3.05	12.03	48.84	0.64 1.61

CALIB		Area (ha)= 6.79	
STANDHYD (0133)		Total Imp(%)= 47.00	Dir. Conn.(%)= 47.00
ID= 1 DT= 3.0 min			

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.19	3.60
Dep. Storage	(mm)=	15.00	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	212.76	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60

HRP6-1-PR-PR-EX_POND1-6-2-100 YEAR.OUT											
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60				
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60				
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60				
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60				
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60				
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60				
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60				
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60				
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60				
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07				
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07				
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07				
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07				
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07				
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07				
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07				
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07				
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07				
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07				
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07				
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07				
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07				
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07				
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07				
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07				
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07				
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07				
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07				
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07				
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07				
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07				
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07				
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07				
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07				
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07				
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07				
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07				
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07				
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07				
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07				
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07				
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07				
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07				
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07				
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07				
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07				
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07				
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07				
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07				
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07				
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07				
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07				
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07				
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07				
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07				
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07				
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07				
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07				
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07				
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07				
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07				
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07				
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07				
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07				
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07				
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07				
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07				
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07				
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07				
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07				
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07				
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07				
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07				
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07				
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07				
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07				
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07				
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07				
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07				
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07				
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07				
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07				
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07				
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07				
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07				
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07				
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07				

HRP6-1-PR-PR-EX_POND1-6-2-100 YEAR.OUT											
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07				
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07				
Max.Eff.Inten.(mm/hr)= 98.04 40.38											
over (min)= 6.00 12.00											
Storage Coeff. (min)= 3.29 (ii) 10.75 (iii)											
Unit Hyd. Tpeak (min)= 6.00 12.00											
Unit Hyd. peak (cms)= 0.26 0.10											
TOTALS											
PEAK FLOW (cms)= 0.86 0.28 1.112 (iii)											
TIME TO PEAK (hrs)= 12.00 12.10 12.00											
RUNOFF VOLUME (mm)= 73.80 31.37 51.31											
TOTAL RAINFALL (mm)= 88.80 88.80 88.80											
RUNOFF COEFFICIENT = 0.83 0.35 0.58											
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:											
CN* = 62.0 Ia = Dep. Storage (Above)											
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.											
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.											

ADD HYD (0091)					
1 + 2 = 3					

		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0133):		6.79	1.112	12.00	51.31
+ ID2= 2 (0022):		55.22	3.048	12.03	48.84
=====					
ID = 3 (0091):		62.01	4.064	12.03	49.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0222)		Area (ha)=	3.54	Curve Number (CN)=	75.0
ID= 1 DT= 5.0 min		Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
		U.H. Tp(hrs)=	0.15		

HRP6 1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
3.417	1.15	9.417	2.84	15.417	2.66	21.417	1.67		
3.500	1.15	9.500	2.84	15.500	2.66	21.500	1.67		
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07		
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07		
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.67		
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07		
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07		
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07		
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07		
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07		
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07		
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07		
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07		
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07		
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07		
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07		
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07		
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07		
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07		
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07		
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07		
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07		
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07		
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07		

Unit Hyd Opeak (cms)= 0.901

PEAK FLOW (cms)= 0.427 (1)

TIME TO PEAK (hrs)= 12.000

RUNOFF VOLUME (mm)= 41.444

TOTAL RAINFALL (mm)= 88.800

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0221)	Area (ha)=	3.79	
ID= 1 DT= 5.0 min	Total Imp(%)=	27.00	Dir. Conn.(%)= 27.00

		IMPERVIOUS	PERVIOUS (1)
Surface Area	(ha)=	1.02	2.77
Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	2.00	2.00
Length	(m)=	158.95	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
mm/hr	mm/hr	mm/hr	mm/hr	mm/hr	mm/hr	mm/hr	mm/hr
0.083	0.89	6.983	1.78	12.083	12.88	18.08	1.60
0.167	0.89	6.167	1.78	12.167	12.88	18.17	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.26	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.833	1.66	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.66	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.66	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.97

HRP6-1.1-PR-PR-EX_POND01-6-2.100 YEAR.OUT									
2.167	1.15	8.167	2.40	14.167	2.66	28.167	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	28.25	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	28.33	1.07		
2.417	1.15	8.417	2.40	14.417	2.66	28.42	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	28.50	1.07		
2.583	1.15	8.583	2.40	14.583	2.66	28.58	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	28.67	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	28.75	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	28.83	1.07		
2.917	1.15	8.917	2.40	14.917	2.66	28.92	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07		
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07		
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07		
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07		
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07		
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07		
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07		
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07		
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07		
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07		
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07		
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07		
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07		
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07		
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07		
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07		
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07		
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07		
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07		
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07		
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07		
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07		
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07		

Max. Eff. Inten. (mm/hr)=	98.04	59.68	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.76 (ii)	11.44 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.28	0.09	
			TOTALS
PEAK FLOW (cms)=	0.28	0.30	0.545 (iii)
TIME TO PEAK (hrs)=	12.00	12.00	12.00
RUNOFF VOLUME (mm)=	87.30	42.68	55.68
TOTAL RAINFALL (mm)=	88.80	88.80	88.80
RUNOFF COEFFICIENT=	0.98	0.50	0.63

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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
```

(1) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 77.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.

(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0221):	3.79	0.545	12.00	55.68
+ ID2= 2 (0222):	3.79	0.427	12.00	41.44
ID = 3 (0009)	7.53	0.971	12.00	48.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0009)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
-----	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0009):	7.33	0.971	12.00	48.80

HRP6_1-PR-PR-EX_POND1-6_2-100 YEAR.OUT
+ ID2= 2 (0091): 62.01 4.064 12.03 49.11
=====

ID = 1 (0009): 69.34 4.994 12.00 49.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)
IN= 2--> OUT= 1
DT= 4.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	3.2510	1.2472
0.6750	0.7720	3.7840	1.3920
1.6680	0.9849	4.5560	1.5300
2.4150	1.1000	0.0000	0.0000

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
69.340	4.994	12.00	49.08
69.340	2.446	12.93	49.08

PEAK FLOW REDUCTION [Qout/Qin](%)= 48.99
TIME SHIFT OF PEAK FLOW (min)= 56.00
MAXIMUM STORAGE USED (ha.m.)= 1.1114

CALIB
STANDHYD (0234)
ID= 1 DT= 3.0 min

Area (ha)= 17.56
Total Imp(%)= 28.00 Dir. Conn.(%)= 28.00

	IMPERVIOUS (ha)=	PERVIOUS (i) 12.64
Surface Area	4.92	
Dep. Storage	1.50	1.50
Average Slope	2.00	2.00
Length	342.15	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07

HRP6_1-PR-PR-EX_POND1-6_2-100 YEAR.OUT

2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 53.17
or 6.00 15.00
Storage Coeff.(min)= 4.38 (ii) 13.46 (iii)
Unit Hyd. Tpeak(min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

PEAK FLOW (cms)= 1.30 1.15 2.256 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 87.30 40.96 53.93

TOTALS

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.61

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

[ADD HYD (0011)]
[1 + 2 = 3]

ID1= 1 (0010): 69.34 2.446 12.93 49.08
+ ID2= 2 (0234): 17.56 2.256 12.00 53.93
=====

ID = 3 (0011): 86.90 2.764 12.83 50.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

[RESERVOIR(0015)]
[IN= 2----> OUT= 1]
[DT= 5.0 min]

OVERFLOW IS OFF

OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 9.4690 0.3520
0.4100 0.1040 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0011) 86.900 2.764 12.83 50.06
OUTFLOW: ID= 1 (0015) 86.900 2.756 12.90 50.06

PEAK FLOW REDUCTION [Qout/Qin](%)= 99.68
TIME SHIFT OF PEAK FLOW (min)= 4.00
MAXIMUM STORAGE USED (ha.m.)= 0.1682

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

[CALIB
STANDHYD (0235)]
[ID= 1 DT= 2.0 min]

Area (ha)= 4.28
Total Imp(%)= 30.00 Dir. Conn.(%)= 30.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.28 3.00
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 168.92 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.033 0.89 | 6.033 1.78 | 12.033 12.79 | 18.03 1.60
0.067 0.89 | 6.067 1.78 | 12.067 12.79 | 18.07 1.60
0.100 0.89 | 6.100 1.78 | 12.100 12.79 | 18.10 1.60
0.133 0.89 | 6.133 1.78 | 12.133 12.79 | 18.13 1.60
0.167 0.89 | 6.167 1.78 | 12.167 12.79 | 18.17 1.60
0.200 0.89 | 6.200 1.78 | 12.200 12.79 | 18.20 1.60
0.233 0.89 | 6.233 1.78 | 12.233 12.79 | 18.23 1.60
0.267 0.89 | 6.267 1.78 | 12.267 12.79 | 18.27 1.60
0.300 0.89 | 6.300 1.78 | 12.300 12.79 | 18.30 1.60
0.333 0.89 | 6.333 1.78 | 12.333 12.79 | 18.33 1.60
0.367 0.89 | 6.367 1.78 | 12.367 12.79 | 18.37 1.60
0.400 0.89 | 6.400 1.78 | 12.400 12.79 | 18.40 1.60
0.433 0.89 | 6.433 1.78 | 12.433 12.79 | 18.43 1.60
0.467 0.89 | 6.467 1.78 | 12.467 12.79 | 18.47 1.60
0.500 0.89 | 6.500 1.78 | 12.500 12.78 | 18.50 1.60
0.533 0.89 | 6.533 1.78 | 12.533 6.57 | 18.53 1.60
0.567 0.89 | 6.567 1.78 | 12.567 6.57 | 18.57 1.60
0.600 0.89 | 6.600 1.78 | 12.600 6.57 | 18.60 1.60
0.633 0.89 | 6.633 1.78 | 12.633 6.57 | 18.63 1.60
0.667 0.89 | 6.667 1.78 | 12.667 6.57 | 18.67 1.60
0.700 0.89 | 6.700 1.78 | 12.700 6.57 | 18.70 1.60
0.733 0.89 | 6.733 1.78 | 12.733 6.57 | 18.73 1.60
0.767 0.89 | 6.767 1.78 | 12.767 6.57 | 18.77 1.60
0.800 0.89 | 6.800 1.78 | 12.800 6.57 | 18.80 1.60
0.833 0.89 | 6.833 1.78 | 12.833 6.57 | 18.83 1.60
0.867 0.89 | 6.867 1.78 | 12.867 6.57 | 18.87 1.60
0.900 0.89 | 6.900 1.78 | 12.900 6.57 | 18.90 1.60

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
0.933 0.89 | 6.933 1.78 | 12.933 6.57 | 18.93 1.60
0.967 0.89 | 6.967 1.78 | 12.967 6.57 | 18.97 1.60
1.000 0.89 | 7.000 1.78 | 13.000 6.56 | 19.00 1.60
1.033 0.89 | 7.033 1.78 | 13.033 1.24 | 19.03 1.60
1.067 0.89 | 7.067 1.78 | 13.067 1.24 | 19.07 1.60
1.100 0.89 | 7.100 1.78 | 13.100 1.24 | 19.10 1.60
1.133 0.89 | 7.133 1.78 | 13.133 1.24 | 19.13 1.60
1.167 0.89 | 7.167 1.78 | 13.167 1.24 | 19.17 1.60
1.200 0.89 | 7.200 1.78 | 13.200 1.24 | 19.20 1.60
1.233 0.89 | 7.233 1.78 | 13.233 1.24 | 19.23 1.60
1.267 0.89 | 7.267 1.78 | 13.267 1.24 | 19.27 1.60
1.300 0.89 | 7.300 1.78 | 13.300 1.24 | 19.30 1.60
1.333 0.89 | 7.333 1.78 | 13.333 1.24 | 19.33 1.60
1.367 0.89 | 7.367 1.78 | 13.367 1.24 | 19.37 1.60
1.400 0.89 | 7.400 1.78 | 13.400 1.24 | 19.40 1.60
1.433 0.89 | 7.433 1.78 | 13.433 1.24 | 19.43 1.60
1.467 0.89 | 7.467 1.78 | 13.467 1.24 | 19.47 1.60
1.500 0.89 | 7.500 1.78 | 13.500 1.26 | 19.50 1.60
1.533 0.89 | 7.533 1.78 | 13.533 7.28 | 19.53 1.60
1.567 0.89 | 7.567 1.78 | 13.567 7.28 | 19.57 1.60
1.600 0.89 | 7.600 1.78 | 13.600 7.28 | 19.60 1.60
1.633 0.89 | 7.633 1.78 | 13.633 7.28 | 19.63 1.60
1.667 0.89 | 7.667 1.78 | 13.667 7.28 | 19.67 1.60
1.700 0.89 | 7.700 1.78 | 13.700 7.28 | 19.70 1.60
1.733 0.89 | 7.733 1.78 | 13.733 7.28 | 19.73 1.60
1.767 1.24 | 7.767 1.78 | 13.767 7.28 | 19.77 1.60
1.800 1.60 | 7.800 1.78 | 13.800 7.28 | 19.80 1.60
1.833 1.60 | 7.833 1.78 | 13.833 7.28 | 19.83 1.60
1.867 1.60 | 7.867 1.78 | 13.867 7.28 | 19.87 1.60
1.900 1.60 | 7.900 1.78 | 13.900 7.28 | 19.90 1.60
1.933 1.60 | 7.933 1.78 | 13.933 7.28 | 19.93 1.60
1.967 1.60 | 7.967 1.78 | 13.967 7.28 | 19.97 1.60
2.000 1.60 | 8.000 1.78 | 14.000 7.27 | 20.00 1.60
2.033 1.15 | 8.033 2.40 | 14.033 2.66 | 20.03 1.07
2.067 1.15 | 8.067 2.40 | 14.067 2.66 | 20.07 1.07
2.100 1.15 | 8.100 2.40 | 14.100 2.66 | 20.10 1.07
2.133 1.15 | 8.133 2.40 | 14.133 2.66 | 20.13 1.07
2.167 1.15 | 8.167 2.40 | 14.167 2.66 | 20.17 1.07
2.200 1.15 | 8.200 2.40 | 14.200 2.66 | 20.20 1.07
2.233 1.15 | 8.233 2.40 | 14.233 2.66 | 20.23 1.07
2.267 1.15 | 8.267 2.40 | 14.267 2.66 | 20.27 1.07
2.300 1.15 | 8.300 2.40 | 14.300 2.66 | 20.30 1.07
2.333 1.15 | 8.333 2.40 | 14.333 2.66 | 20.33 1.07
2.367 1.15 | 8.367 2.40 | 14.367 2.66 | 20.37 1.07
2.400 1.15 | 8.400 2.40 | 14.400 2.66 | 20.40 1.07
2.433 1.15 | 8.433 2.40 | 14.433 2.66 | 20.43 1.07
2.467 1.15 | 8.467 2.40 | 14.467 2.66 | 20.47 1.07
2.500 1.15 | 8.500 2.40 | 14.500 2.66 | 20.50 1.07
2.533 1.15 | 8.533 2.40 | 14.533 2.66 | 20.53 1.07
2.567 1.15 | 8.567 2.40 | 14.567 2.66 | 20.57 1.07
2.600 1.15 | 8.600 2.40 | 14.600 2.66 | 20.60 1.07
2.633 1.15 | 8.633 2.40 | 14.633 2.66 | 20.63 1.07
2.667 1.15 | 8.667 2.40 | 14.667 2.66 | 20.67 1.07
2.700 1.15 | 8.700 2.40 | 14.700 2.66 | 20.70 1.07
2.733 1.15 | 8.733 2.40 | 14.733 2.66 | 20.73 1.07
2.767 1.15 | 8.767 2.40 | 14.767 2.66 | 20.77 1.07
2.800 1.15 | 8.800 2.40 | 14.800 2.66 | 20.80 1.07
2.833 1.15 | 8.833 2.40 | 14.833 2.66 | 20.83 1.07
2.867 1.15 | 8.867 2.40 | 14.867 2.66 | 20.87 1.07
2.900 1.15 | 8.900 2.40 | 14.900 2.66 | 20.90 1.07
2.933 1.15 | 8.933 2.40 | 14.933 2.66 | 20.93 1.07
2.967 1.15 | 8.967 2.40 | 14.967 2.66 | 20.97 1.07
3.000 1.15 | 9.000 2.40 | 15.000 2.66 | 21.00 1.07
3.033 1.15 | 9.033 2.84 | 15.033 2.66 | 21.03 1.07
3.067 1.15 | 9.067 2.84 | 15.067 2.66 | 21.07 1.07
3.100 1.15 | 9.100 2.84 | 15.100 2.66 | 21.10 1.07
3.133 1.15 | 9.133 2.84 | 15.133 2.66 | 21.13 1.07
3.167 1.15 | 9.167 2.84 | 15.167 2.66 | 21.17 1.07
3.200 1.15 | 9.200 2.84 | 15.200 2.66 | 21.20 1.07
3.233 1.15 | 9.233 2.84 | 15.233 2.66 | 21.23 1.07
3.267 1.15 | 9.267 2.84 | 15.267 2.66 | 21.27 1.07
3.300 1.15 | 9.300 2.84 | 15.300 2.66 | 21.30 1.07
3.333 1.15 | 9.333 2.84 | 15.333 2.66 | 21.33 1.07
3.367 1.15 | 9.367 2.84 | 15.367 2.66 | 21.37 1.07
3.400 1.15 | 9.400 2.84 | 15.400 2.66 | 21.40 1.07
3.433 1.15 | 9.433 2.84 | 15.433 2.66 | 21.43 1.07
3.467 1.15 | 9.467 2.84 | 15.467 2.66 | 21.47 1.07
3.500 1.15 | 9.500 2.84 | 15.500 2.66 | 21.50 1.07
3.533 1.15 | 9.533 3.20 | 15.533 2.66 | 21.53 1.07
3.567 1.15 | 9.567 3.20 | 15.567 2.66 | 21.57 1.07
3.600 1.15 | 9.600 3.20 | 15.600 2.66 | 21.60 1.07
3.633 1.15 | 9.633 3.20 | 15.633 2.66 | 21.63 1.07
3.667 1.15 | 9.667 3.20 | 15.667 2.66 | 21.67 1.07
3.700 1.15 | 9.700 3.20 | 15.700 2.66 | 21.70 1.07
3.733 1.15 | 9.733 3.20 | 15.733 2.66 | 21.73 1.07
3.767 1.15 | 9.767 3.20 | 15.767 2.66 | 21.77 1.07
3.800 1.15 | 9.800 3.20 | 15.800 2.66 | 21.80 1.07

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07		
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07		
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07		
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07		
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07		
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07		
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07		
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07		
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07		
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07		
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07		
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07		
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07		
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07		
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07		
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07		
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07		
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07		
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07		
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07		
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07		
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07		
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07		
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07		
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07		
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07		
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07		
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07		
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07		
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07		
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07		
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07		
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07		
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07		
5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07		
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07		
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07		
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07		
5.367	1.42	11.367	8.52	17.367	1.60	23.37	1.07		
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07		
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07		
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07		
5.500	1.42	11.500	8.56	17.500	1.60	23.50	1.07		
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07		
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07		
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07		
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07		
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07		
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07		
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07		
5.767	1.42	11.767	67.57	17.767	1.60	23.77	1.07		
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07		
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07		
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07		
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07		
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07		
5.967	1.42	11.967	98.04	17.967	1.60	23.97	1.07		
6.000	1.42	12.000	97.92	18.000	1.60	24.00	1.07		

Max.Eff.Inten.(mm/hr)= 98.04 54.21
over (min) 5.00 12.00
Storage Coeff. (min)= 2.86 (ii) 11.88 (iii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.34 0.09

TOTALS
PEAK FLOW (cms)= 0.35 0.30 0.611 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 87.30 40.95 54.86
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.62

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT					

ADD HYD (0012)					
1 + 2 = 3					

	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0015):	86.90	2.756	12.90	50.06	
+ ID2= 2 (0235):	4.28	0.611	12.00	54.86	
=====					
ID = 3 (0012):	91.18	2.983	12.03	50.28	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)			
IN= 2--> OUT= 1			

Routing time step (min)'= 2.00			

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.590E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.910E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.136E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m) (m/s)
INFLOW : ID= 2 (0012)	91.18	2.98	12.03	50.28	0.64 1.60
OUTFLOW: ID= 1 (0040)	91.18	2.79	13.03	50.28	0.62 1.58

CALIB					
STANDHYD (0121)					
ID= 1 DT= 3.0 min					

Area (ha)= 1.62					
Total Imp(%)= 28.00					
Dir. Conn.(%)= 28.00					

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	0.45	1.17		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	103.92	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT											
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60				
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60				
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60				
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60				
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60				
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60				
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60				
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60				
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60				
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60				
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60				
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60				
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60				
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60				
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60				
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60				
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60				
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60				
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60				
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60				
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60				
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60				
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60				
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60				
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60				
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60				
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60				
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60				
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60				
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60				
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07				
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07				
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07				
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07				
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07				
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07				
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07				
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07				
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07				
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07				
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07				
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07				
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07				
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07				
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07				
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07				
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07				
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07				
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07				
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07				
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07				
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07				
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07				
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07				
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07				
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07				
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07				
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07				
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07				
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07				
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07				
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07				
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07				
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07				
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07				
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07				
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07				
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07				
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07				
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07				
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07				
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07				
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07				
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07				
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07				
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07				
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07				
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07				
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07				
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07				
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07				
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07				
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07				
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07				
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07				
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07				
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07				

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT											
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07				
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07				
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07				
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07				
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07				
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07				
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07				
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07				
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07				
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07				
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07				
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07				
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07				
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07				
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07				
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07				
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07				
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07				
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07				
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07				
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07				
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07				
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07				
Max.Eff.Inten.(mm/hr)= 98.04 53.17											
over (min) 6.00 12.00											
Storage Coeff. (min)= 2.14 (ii) 11.23 (ii)											
Unit Hyd. Tpeak (min)= 6.00 12.00											
Unit Hyd. peak (cms)= 0.31 0.18											
TOTALS											
PEAK FLOW (cms)= 0.12 0.12 0.232 (iii)											
TIME TO PEAK (hrs)= 12.00 12.05 12.00											
RUNOFF VOLUME (mm)= 87.30 40.96 53.93											
TOTAL RAINFALL (mm)= 88.80 88.80 88.80											
RUNOFF COEFFICIENT = 0.98 0.46 0.61											
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!											
(i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:											
CN* = 72.0 (i) Dep. Storage (Above)											
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL											
THAN THE STORAGE COEFFICIENT.											
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.											

CALIB											
STANDHYD (0122)											
ID= 1 DT= 3.0 min											

IMPERVIOUS PVIOUS (i)											
Surface Area (ha)= 5.77 7.35											
Dep. Storage (mm)= 1.50 1.50											
Average Slope (%)= 2.90 2.90											
Length (m)= 295.75 40.00											
Mannings n = 0.013 0.250											
NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.											
----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN				
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr			
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60				
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60				
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60				
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60				
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60				
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60				
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60				
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60				
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60				
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60				
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60				
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60				
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60				
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60				
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60				
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60				
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60				
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60				
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60				
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60				
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60				
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60				
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60				
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60				

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.800	0.89	7.800	1.78	13.800	7.28	19.80	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min) 6.00 12.00
Storage Coeff. (min)= 4.01 (ii) 11.04 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.24 0.09

PEAK FLOW (cms)= 1.53 0.73 2.199 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 87.30 40.96 61.35
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.69

TOTALS

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0019) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0121): 1.62 0.232 12.00 53.93
+ ID2= 2 (0122): 13.12 2.199 12.00 61.35
===== ID = 3 (0019): 14.74 2.431 12.00 60.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0020) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0019): 14.74 2.431 12.00 60.53
+ ID2= 2 (0040): 91.18 2.792 13.03 50.28
===== ID = 3 (0020): 105.92 4.159 12.03 51.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH
=====

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y Y M M O O
000 T T H H Y Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voindat
Output filename: C:\Users\Abira\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\c781da48-fc0c-4136-8c83-1d66c57e2e90\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\c781da48-fc0c-4136-8c83-1d66c57e2e90\scenar

DATE: 03/24/2023 TIME: 10:20:58

USER:

HRP6.1-PR-PR-EX_POND1-6_2-100 YEAR.OUT

COMMENTS: _____

** SIMULATION : Run 04 **

MASS STORM | Filename: C:\Users\AbirA\AppData
| ata\Local\Temp\
| 40229a5b-zc49-4605-a664-9259a6a78fe6\cdfb3d47
| Ptotal=103.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.03	6.25	2.06	12.25	14.86
0.50	1.03	6.50	2.06	12.50	14.86
0.75	1.03	6.75	2.06	12.75	14.86
1.00	1.03	7.00	2.06	13.00	14.86
1.25	1.03	7.25	2.06	13.25	14.86
1.50	1.03	7.50	2.06	13.50	14.86
1.75	1.03	7.75	2.06	13.75	14.86
2.00	1.03	8.00	2.06	14.00	14.86
2.25	1.34	8.25	2.79	14.25	18.25
2.50	1.34	8.50	2.79	14.50	18.25
2.75	1.34	8.75	2.79	14.75	18.25
3.00	1.34	9.00	2.79	15.00	18.25
3.25	1.34	9.25	3.30	15.25	21.25
3.50	1.34	9.50	3.30	15.50	21.25
3.75	1.34	9.75	3.72	15.75	21.75
4.00	1.34	10.00	3.72	16.00	22.00
4.25	1.65	10.25	4.75	16.25	22.25
4.50	1.65	10.50	4.75	16.50	22.25
4.75	1.65	10.75	6.40	16.75	22.75
5.00	1.65	11.00	6.40	17.00	23.00
5.25	1.65	11.25	9.91	17.25	23.25
5.50	1.65	11.50	9.91	17.50	23.50
5.75	1.65	11.75	42.93	17.75	23.75
6.00	1.65	12.00	113.93	18.00	24.00

CALIB |
NASHYD (1030) | Area (ha)= 30.38 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.03	6.083	2.06	12.083	14.87
0.167	1.03	6.167	2.06	12.167	14.86
0.250	1.03	6.250	2.06	12.250	14.86
0.333	1.03	6.333	2.06	12.333	14.86
0.417	1.03	6.417	2.06	12.417	14.86
0.500	1.03	6.500	2.06	12.500	14.86
0.583	1.03	6.583	2.06	12.583	14.86
0.667	1.03	6.667	2.06	12.667	14.86
0.750	1.03	6.750	2.06	12.750	14.86
0.833	1.03	6.833	2.06	12.833	14.86
0.917	1.03	6.917	2.06	12.917	14.86
1.000	1.03	7.000	2.06	13.000	14.86
1.083	1.03	7.083	2.06	13.083	14.86
1.167	1.03	7.167	2.06	13.167	14.86
1.250	1.03	7.250	2.06	13.250	14.86
1.333	1.03	7.333	2.06	13.333	14.86
1.417	1.03	7.417	2.06	13.417	14.86
1.500	1.03	7.500	2.06	13.500	14.86
1.583	1.03	7.583	2.06	13.583	14.86
1.667	1.03	7.667	2.06	13.667	14.86
1.750	1.03	7.750	2.06	13.750	14.86
1.833	1.03	7.833	2.06	13.833	14.86
1.917	1.03	7.917	2.06	13.917	14.86
2.000	1.03	8.000	2.06	14.000	14.86
2.083	1.34	8.083	2.79	14.083	18.25
2.167	1.34	8.167	2.79	14.167	18.25
2.250	1.34	8.250	2.79	14.250	18.25
2.333	1.34	8.333	2.79	14.333	18.25

HRP6.1-PR-PR-EX_POND1-6_2-100 YEAR.OUT

2.417	1.34	8.417	2.79	14.417	18.25
2.500	1.34	8.500	2.79	14.500	18.25
2.583	1.34	8.583	2.79	14.583	18.25
2.667	1.34	8.667	2.79	14.667	18.25
2.750	1.34	8.750	2.79	14.750	18.25
2.833	1.34	8.833	2.79	14.833	18.25
2.917	1.34	8.917	2.79	14.917	18.25
3.000	1.34	9.000	2.79	15.000	18.25
3.083	1.34	9.083	3.30	15.083	21.25
3.167	1.34	9.167	3.30	15.167	21.25
3.250	1.34	9.250	3.30	15.250	21.25
3.333	1.34	9.333	3.30	15.333	21.25
3.417	1.34	9.417	3.30	15.417	21.25
3.500	1.34	9.500	3.30	15.500	21.25
3.583	1.34	9.583	3.72	15.583	21.50
3.667	1.34	9.667	3.72	15.667	21.50
3.750	1.34	9.750	3.72	15.750	21.50
3.833	1.34	9.833	3.72	15.833	21.50
3.917	1.34	9.917	3.72	15.917	21.50
4.000	1.34	10.000	3.72	16.000	21.50
4.083	1.65	10.083	4.75	16.083	22.00
4.167	1.65	10.167	4.75	16.167	22.00
4.250	1.65	10.250	4.75	16.250	22.00
4.333	1.65	10.333	4.75	16.333	22.00
4.417	1.65	10.417	4.75	16.417	22.00
4.500	1.65	10.500	4.75	16.500	22.00
4.583	1.65	10.583	6.40	16.583	22.50
4.667	1.65	10.667	6.40	16.667	22.50
4.750	1.65	10.750	6.40	16.750	22.50
4.833	1.65	10.833	6.40	16.833	22.50
4.917	1.65	10.917	6.40	16.917	22.50
5.000	1.65	11.000	6.40	17.000	23.00
5.083	1.65	11.083	9.91	17.083	23.00
5.167	1.65	11.167	9.91	17.167	23.00
5.250	1.65	11.250	9.91	17.250	23.00
5.333	1.65	11.333	9.91	17.333	23.00
5.417	1.65	11.417	9.91	17.417	23.00
5.500	1.65	11.500	9.91	17.500	23.00
5.583	1.65	11.583	42.93	17.583	23.50
5.667	1.65	11.667	42.93	17.667	23.50
5.750	1.65	11.750	42.93	17.750	23.50
5.833	1.65	11.833	113.93	17.833	23.80
5.917	1.65	11.917	113.93	17.917	23.80
6.000	1.65	12.000	113.93	18.000	24.00

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 2.237 (1)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 55.396
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.537

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0021) |
IN= 2----> OUT= 1 | Routing time step (min)'= 4.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0000 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0000	Main Channel	
6.00	100.67	0.0000		
7.00	101.00	0.0000		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.145E+02	0.0	0.34	13.16
0.09	100.09	.327E+02	0.1	0.51	8.80
0.14	100.14	.545E+02	0.1	0.64	7.02
0.19	100.19	.800E+02	0.2	0.75	6.00
0.24	100.24	.109E+03	0.3	0.85	5.31
0.28	100.28	.142E+03	0.5	0.94	4.81
0.33	100.33	.178E+03	0.7	1.02	4.42
0.39	100.39	.226E+03	1.0	1.17	3.84
0.44	100.44	.279E+03	1.3	1.30	3.47
0.50	100.50	.336E+03	1.7	1.40	3.21
0.55	100.55	.399E+03	2.2	1.49	3.02
0.61	100.61	.466E+03	2.7	1.57	2.87
0.66	100.66	.539E+03	3.3	1.63	2.75

0.72 100.72 .616E+03 3.9 1.69 2.66
0.78 100.78 .699E+03 4.5 1.75 2.58
0.83 100.83 .786E+03 5.2 1.80 2.51
0.89 100.89 .879E+03 6.0 1.84 2.45
0.94 100.94 .977E+03 6.8 1.88 2.39
1.00 101.00 .108E+04 7.7 1.92 2.35

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (1030) 30.38 2.24 12.33 55.40 0.56 1.50
OUTFLOW: ID= 1 (0021) 30.38 2.24 12.42 55.40 0.56 1.50

| CALIB |
| NASHYD (0230) | Area (ha)= 9.14 Curve Number (CN)= 82.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.42

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.083 1.03 | 6.083 2.06 | 12.083 14.87 | 18.08 1.86
0.167 1.03 | 6.167 2.06 | 12.167 14.86 | 18.17 1.86
0.250 1.03 | 6.250 2.06 | 12.250 14.86 | 18.25 1.86
0.333 1.03 | 6.333 2.06 | 12.333 14.86 | 18.33 1.86
0.417 1.03 | 6.417 2.06 | 12.417 14.86 | 18.42 1.86
0.500 1.03 | 6.500 2.06 | 12.500 14.86 | 18.50 1.86
0.583 1.03 | 6.583 2.06 | 12.583 7.64 | 18.58 1.86
0.667 1.03 | 6.667 2.06 | 12.667 7.64 | 18.67 1.86
0.750 1.03 | 6.750 2.06 | 12.750 7.64 | 18.75 1.86
0.833 1.03 | 6.833 2.06 | 12.833 7.64 | 18.83 1.86
0.917 1.03 | 6.917 2.06 | 12.917 7.64 | 18.92 1.86
1.000 1.03 | 7.000 2.06 | 13.000 7.64 | 19.00 1.86
1.083 1.03 | 7.083 2.06 | 13.083 1.45 | 19.08 1.86
1.167 1.03 | 7.167 2.06 | 13.167 1.44 | 19.17 1.86
1.250 1.03 | 7.250 2.06 | 13.250 1.44 | 19.25 1.86
1.333 1.03 | 7.333 2.06 | 13.333 1.44 | 19.33 1.86
1.417 1.03 | 7.417 2.06 | 13.417 1.44 | 19.42 1.86
1.500 1.03 | 7.500 2.06 | 13.500 1.44 | 19.50 1.86
1.583 1.03 | 7.583 2.06 | 13.583 8.46 | 19.58 1.86
1.667 1.03 | 7.667 2.06 | 13.667 8.46 | 19.67 1.86
1.750 1.03 | 7.750 2.06 | 13.750 8.46 | 19.75 1.86
1.833 1.06 | 7.833 2.06 | 13.833 8.46 | 19.83 1.86
1.917 1.06 | 7.917 2.06 | 13.917 8.46 | 19.92 1.86
2.000 1.06 | 8.000 2.06 | 14.000 8.46 | 20.00 1.86
2.083 1.34 | 8.083 2.79 | 14.083 3.10 | 20.08 1.24
2.167 1.34 | 8.167 2.79 | 14.167 3.10 | 20.17 1.24
2.250 1.34 | 8.250 2.79 | 14.250 3.10 | 20.25 1.24
2.333 1.34 | 8.333 2.79 | 14.333 3.10 | 20.33 1.24
2.417 1.34 | 8.417 2.79 | 14.417 3.10 | 20.42 1.24
2.500 1.34 | 8.500 2.79 | 14.500 3.10 | 20.50 1.24
2.583 1.34 | 8.583 2.79 | 14.583 3.10 | 20.58 1.24
2.667 1.34 | 8.667 2.79 | 14.667 3.10 | 20.67 1.24
2.750 1.34 | 8.750 2.79 | 14.750 3.10 | 20.75 1.24
2.833 1.34 | 8.833 2.79 | 14.833 3.10 | 20.83 1.24
2.917 1.34 | 8.917 2.79 | 14.917 3.10 | 20.92 1.24
3.000 1.34 | 9.000 2.79 | 15.000 3.10 | 21.00 1.24
3.083 1.34 | 9.083 3.30 | 15.083 3.10 | 21.08 1.24
3.167 1.34 | 9.167 3.30 | 15.167 3.10 | 21.17 1.24
3.250 1.34 | 9.250 3.30 | 15.250 3.10 | 21.25 1.24
3.333 1.34 | 9.333 3.30 | 15.333 3.10 | 21.33 1.24
3.417 1.34 | 9.417 3.30 | 15.417 3.10 | 21.42 1.24
3.500 1.34 | 9.500 3.30 | 15.500 3.10 | 21.50 1.24
3.583 1.34 | 9.583 3.72 | 15.583 3.10 | 21.58 1.24
3.667 1.34 | 9.667 3.72 | 15.667 3.10 | 21.67 1.24
3.750 1.34 | 9.750 3.72 | 15.750 3.10 | 21.75 1.24
3.833 1.34 | 9.833 3.72 | 15.833 3.10 | 21.83 1.24
3.917 1.34 | 9.917 3.72 | 15.917 3.10 | 21.92 1.24
4.000 1.34 | 10.000 3.72 | 16.000 3.10 | 22.00 1.24
4.083 1.65 | 10.083 4.75 | 16.083 1.86 | 22.08 1.24
4.167 1.65 | 10.167 4.75 | 16.167 1.86 | 22.17 1.24
4.250 1.65 | 10.250 4.75 | 16.250 1.86 | 22.25 1.24
4.333 1.65 | 10.333 4.75 | 16.333 1.86 | 22.33 1.24
4.417 1.65 | 10.417 4.75 | 16.417 1.86 | 22.42 1.24
4.500 1.65 | 10.500 4.75 | 16.500 1.86 | 22.50 1.24
4.583 1.65 | 10.583 6.40 | 16.583 1.86 | 22.58 1.24
4.667 1.65 | 10.667 6.40 | 16.667 1.86 | 22.67 1.24
4.750 1.65 | 10.750 6.40 | 16.750 1.86 | 22.75 1.24
4.833 1.65 | 10.833 6.40 | 16.833 1.86 | 22.83 1.24
4.917 1.65 | 10.917 6.40 | 16.917 1.86 | 22.92 1.24

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
5.000 1.65 | 11.000 6.40 | 17.000 1.86 | 23.00 1.24
5.083 1.65 | 11.083 9.91 | 17.083 1.86 | 23.08 1.24
5.167 1.65 | 11.167 9.91 | 17.167 1.86 | 23.17 1.24
5.250 1.65 | 11.250 9.91 | 17.250 1.86 | 23.25 1.24
5.333 1.65 | 11.333 9.91 | 17.333 1.86 | 23.33 1.24
5.417 1.65 | 11.417 9.91 | 17.417 1.86 | 23.42 1.24
5.500 1.65 | 11.500 9.91 | 17.500 1.86 | 23.50 1.24
5.583 1.65 | 11.583 42.93 | 17.583 1.86 | 23.58 1.24
5.667 1.65 | 11.667 42.93 | 17.667 1.86 | 23.67 1.24
5.750 1.65 | 11.750 42.93 | 17.750 1.86 | 23.75 1.24
5.833 1.65 | 11.833 113.93 | 17.833 1.86 | 23.83 1.24
5.917 1.65 | 11.917 113.93 | 17.917 1.86 | 23.92 1.24
6.000 1.65 | 12.000 113.93 | 18.000 1.86 | 24.00 1.24

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW (cms)= 0.878 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 62.630
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.607

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0003) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0021): 30.38 2.242 12.42 55.40
+ ID2= 2 (0230): 9.14 0.878 12.25 62.63
===== ID = 3 (0003): 39.52 3.076 12.33 57.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0030) | OVERFLOW IS OFF
| IN= 2--> OUT= 1 |
DT= 5.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 2.7760 0.2010
1.0940 0.0700 | 3.2380 0.2400
1.8140 0.1110 | 3.7590 0.2830
2.2340 0.1460 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0003) 39.520 3.076 12.33 57.07
OUTFLOW: ID= 1 (0030) 39.520 2.723 12.58 57.07

PEAK FLOW REDUCTION [Qout/Qin](%)= 88.52
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.1970

| CALIB |
| STANDHYD (0231) | Area (ha)= 7.45
| ID= 1 DT= 2.0 min | Total Imp(%)= 24.00 Dir. Conn.(%)= 24.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.79 5.66
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 1.10
Length (m)= 222.86 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.033 1.03 | 6.033 2.06 | 12.033 14.86 | 18.03 1.86
0.067 1.03 | 6.067 2.06 | 12.067 14.86 | 18.07 1.86
0.100 1.03 | 6.100 2.06 | 12.100 14.86 | 18.10 1.86
0.133 1.03 | 6.133 2.06 | 12.133 14.86 | 18.13 1.86
0.167 1.03 | 6.167 2.06 | 12.167 14.86 | 18.17 1.86
0.200 1.03 | 6.200 2.06 | 12.200 14.86 | 18.20 1.86
0.233 1.03 | 6.233 2.06 | 12.233 14.86 | 18.23 1.86
0.267 1.03 | 6.267 2.06 | 12.267 14.86 | 18.27 1.86
0.300 1.03 | 6.300 2.06 | 12.300 14.86 | 18.30 1.86
0.333 1.03 | 6.333 2.06 | 12.333 14.86 | 18.33 1.86
0.367 1.03 | 6.367 2.06 | 12.367 14.86 | 18.37 1.86
0.400 1.03 | 6.400 2.06 | 12.400 14.86 | 18.40 1.86

HRP6_1-PR-PR-EX_POND1-6_2-100 YEAR.OUT

0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86
0.500	1.03	6.500	2.06	12.500	14.85	18.50	1.86
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24

HRP6_1-PR-PR-EX_POND1-6_2-100 YEAR.OUT

3.367	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.333	1.34	9.367	3.30	15.367	3.10	21.37	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24
5.500	1.65	11.500	9.95	17.500	1.86	23.50	1.24
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24

HRP6.1-PR-PR-EX_POND1-6_2-100 YEAR.OUT
TOTALS
PEAK FLOW (cms)= 0.56 0.89 1.321 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 101.70 65.68 74.33
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.64 0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0211)|
1 + 2 = 3
ID1= 1 (0231): 7.45 1.321 12.00 74.33
+ ID2= 2 (0030): 39.52 2.723 12.50 57.07
=====

ID = 3 (0211): 46.97 3.059 12.50 59.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0005)|
IN= 2--> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.485E+01	0.0	0.34	4.39
0.09	100.09	.109E+02	0.1	0.51	2.93
0.14	100.14	.182E+02	0.1	0.64	2.34
0.19	100.19	.267E+02	0.2	0.75	2.00
0.24	100.24	.364E+02	0.3	0.85	1.77
0.28	100.28	.473E+02	0.5	0.94	1.60
0.33	100.33	.594E+02	0.7	1.02	1.47
0.39	100.39	.753E+02	1.0	1.17	1.28
0.44	100.44	.928E+02	1.3	1.30	1.10
0.50	100.50	.112E+03	1.7	1.40	1.07
0.55	100.55	.133E+03	2.2	1.49	1.01
0.61	100.61	.155E+03	2.7	1.57	0.96
0.66	100.66	.180E+03	3.3	1.63	0.92
0.72	100.72	.205E+03	3.9	1.69	0.89
0.78	100.78	.233E+03	4.5	1.75	0.86
0.83	100.83	.262E+03	5.2	1.80	0.84
0.89	100.89	.293E+03	6.0	1.84	0.82
0.94	100.94	.326E+03	6.8	1.88	0.80
1.00	101.00	.360E+03	7.7	1.92	0.78

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH MAX VEL (m) (m/s)
INFLOW : ID= 2 (0211)	46.97	3.06	12.50	59.81	0.64 1.61
OUTFLOW: ID= 1 (0005)	46.97	3.06	12.53	59.81	0.64 1.61

| CALIB
| STANDHYD (0232)|
ID= 1 DT= 3.0 min
Area (ha)= 8.25
Total Imp(%)= 39.00 Dir. Conn.(%)= 39.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.22	5.03
Dep. Storage (mm)=	15.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	234.52	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP6.1-PR-PR-EX_POND1-6_2-100 YEAR.OUT

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.03	6.050	2.06	12.050	14.86
0.100	1.03	6.100	2.06	12.100	14.86
0.150	1.03	6.150	2.06	12.150	14.86
0.200	1.03	6.200	2.06	12.200	14.86
0.250	1.03	6.250	2.06	12.250	14.86
0.300	1.03	6.300	2.06	12.300	14.86
0.350	1.03	6.350	2.06	12.350	14.86
0.400	1.03	6.400	2.06	12.400	14.86
0.450	1.03	6.450	2.06	12.450	14.86
0.500	1.03	6.500	2.06	12.500	14.86
0.550	1.03	6.550	2.06	12.550	7.64
0.600	1.03	6.600	2.06	12.600	7.64
0.650	1.03	6.650	2.06	12.650	7.64
0.700	1.03	6.700	2.06	12.700	7.64
0.750	1.03	6.750	2.06	12.750	7.64
0.800	1.03	6.800	2.06	12.800	7.64
0.850	1.03	6.850	2.06	12.850	7.64
0.900	1.03	6.900	2.06	12.900	7.64
0.950	1.03	6.950	2.06	12.950	7.64
1.000	1.03	7.000	2.06	13.000	7.63
1.050	1.03	7.050	2.06	13.050	1.44
1.100	1.03	7.100	2.06	13.100	1.44
1.150	1.03	7.150	2.06	13.150	1.44
1.200	1.03	7.200	2.06	13.200	1.44
1.250	1.03	7.250	2.06	13.250	1.44
1.300	1.03	7.300	2.06	13.300	1.44
1.350	1.03	7.350	2.06	13.350	1.44
1.400	1.03	7.400	2.06	13.400	1.44
1.450	1.03	7.450	2.06	13.450	1.44
1.500	1.03	7.500	2.06	13.500	1.45
1.550	1.03	7.550	2.06	13.550	8.46
1.600	1.03	7.600	2.06	13.600	8.46
1.650	1.03	7.650	2.06	13.650	8.46
1.700	1.03	7.700	2.06	13.700	8.46
1.750	1.03	7.750	2.06	13.750	8.46
1.800	1.06	7.800	2.06	13.800	8.46
1.850	1.06	7.850	2.06	13.850	8.46
1.900	1.06	7.900	2.06	13.900	8.46
1.950	1.06	7.950	2.06	13.950	8.46
2.000	1.06	8.000	2.06	14.000	8.46
2.050	1.34	8.050	2.79	14.050	3.10
2.100	1.34	8.100	2.79	14.100	3.10
2.150	1.34	8.150	2.79	14.150	3.10
2.200	1.34	8.200	2.79	14.200	3.10
2.250	1.34	8.250	2.79	14.250	3.10
2.300	1.34	8.300	2.79	14.300	3.10
2.350	1.34	8.350	2.79	14.350	3.10
2.400	1.34	8.400	2.79	14.400	3.10
2.450	1.34	8.450	2.79	14.450	3.10
2.500	1.34	8.500	2.79	14.500	3.10
2.550	1.34	8.550	2.79	14.550	3.10
2.600	1.34	8.600	2.79	14.600	3.10
2.650	1.34	8.650	2.79	14.650	3.10
2.700	1.34	8.700	2.79	14.700	3.10
2.750	1.34	8.750	2.79	14.750	3.10
2.800	1.34	8.800	2.79	14.800	3.10
2.850	1.34	8.850	2.79	14.850	3.10
2.900	1.34	8.900	2.79	14.900	3.10
2.950	1.34	8.950	2.79	14.950	3.10
3.000	1.34	9.000	2.79	15.000	3.10
3.050	1.34	9.050	3.30	15.050	3.10
3.100	1.34	9.100	3.30	15.100	3.10
3.150	1.34	9.150	3.30	15.150	3.10
3.200	1.34	9.200	3.30	15.200	3.10
3.250	1.34	9.250	3.30	15.250	3.10
3.300	1.34	9.300	3.30	15.300	3.10
3.350	1.34	9.350	3.30	15.350	3.10
3.400	1.34	9.400	3.30	15.400	3.10
3.450	1.34	9.450	3.30	15.450	3.10
3.500	1.34	9.500	3.30	15.500	3.10
3.550	1.34	9.550	3.72	15.550	3.10
3.600	1.34	9.600	3.72	15.600	3.10
3.650	1.34	9.650	3.72	15.650	3.10
3.700	1.34	9.700	3.72	15.700	3.10
3.750	1.34	9.750	3.72	15.750	3.10
3.800	1.34	9.800	3.72	15.800	3.10
3.850	1.34	9.850	3.72	15.850	3.10
3.900	1.34	9.900	3.72	15.900	3.10
3.950	1.34	9.950	3.72	15.950	3.10
4.000	1.34	10.000	3.72	16.000	3.09
4.050	1.65	10.050	4.75	16.050	1.86
4.100	1.65	10.100	4.75	16.100	1.86

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT											
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24				
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24				
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24				
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24				
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24				
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24				
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24				
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24				
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24				
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24				
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24				
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24				
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24				
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24				
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24				
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24				
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24				
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24				
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24				
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24				
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24				
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24				
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24				
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24				
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24				
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24				
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24				
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24				
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24				
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24				
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24				
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24				
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24				
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24				
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24				
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24				
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24				
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24				

Max.Eff.Inten.(mm/hr)= 113.93 66.98
over (min) 6.00 12.00
Storage Coeff. (min)= 3.28 (ii) 11.30 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.26 0.10

TOTALS
PEAK FLOW (cms)= 1.01 0.64 1.597 (iii)
TIME TO PEAK (hrs)= 12.00 12.05
RUNOFF VOLUME (mm)= 88.20 51.59 65.87
TOTAL RAINFALL (mm)= 183.20 183.20 183.20
RUNOFF COEFFICIENT = 0.85 0.50 0.64

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0232):	8.25	1.597	12.00	65.87
+ ID2= 2 (0005):	46.97	3.058	12.53	59.81
=====				
ID = 3 (0007):	55.22	3.817	12.03	60.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2--> OUT= 1 | Routing time step (min)!= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

<----- TRAVEL TIME TABLE ----->

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

<---- hydrograph ---->					<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0007)	55.22	3.82	12.03	60.71	0.72	1.69
OUTFLOW: ID= 1 (0022)	55.22	3.79	12.03	60.71	0.71	1.69

CALIB	Area (ha)=	6.79
STANDHYD (0133)	Total Imp(%)=	47.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	47.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.19	3.60
Dep. Storage (mm)=	15.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	212.76	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		
Max.Eff.Inten.(mm/hr)= 113.93 51.85									
over (min) 6.00 12.00									
Storage Coeff. (min)= 3.10 (ii) 10.13 (ii)									
Unit Hyd. Tpeak (min)= 6.00 12.00									

Unit Hyd. peak (cms)=

0.27

0.10

TOTALS

PEAK FLOW (cms)=

1.00

0.37

1.337 (iii)

TIME TO PEAK (hrs)=

12.00

12.05

12.00

RUNOFF VOLUME (mm)=

88.20

40.18

62.75

TOTAL RAINFALL (mm)=

183.20

183.20

183.20

RUNOFF COEFFICIENT =

0.85

0.39

0.61

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 62.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0091)|

1 + 2 = 3 |

AREA (ha)

QPEAK (cms)

TPEAK (hrs)

R.V. (mm)

ID= 1 (0133):

6.79

1.337

12.00

62.75

+ ID2= 2 (0022):

55.22

3.791

12.03

60.71

=====

ID = 3 (0091):

62.01

5.013

12.03

60.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

NASHYD (0222)|

Area (ha)= 3.54

Curve Number (CN)= 75.0

ID= 1 DT= 5.0 min

Ua (mm)= 5.00

of Linear Res.(N)= 3.00

I.H. Tp(hrs)= 0.15

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN

hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr

0.083 1.03 6.083 2.06 12.083 14.87 18.08 1.86

0.167 1.03 6.167 2.06 12.167 14.86 18.17 1.86

0.250 1.03 6.250 2.06 12.250 14.86 18.25 1.86

0.333 1.03 6.333 2.06 12.333 14.86 18.33 1.86

0.417 1.03 6.417 2.06 12.417 14.86 18.42 1.86

0.500 1.03 6.500 2.06 12.500 14.86 18.50 1.86

0.583 1.03 6.583 2.06 12.583 7.64 18.58 1.86

0.667 1.03 6.667 2.06 12.667 7.64 18.67 1.86

0.750 1.03 6.750 2.06 12.750 7.64 18.75 1.86

0.833 1.03 6.833 2.06 12.833 7.64 18.83 1.86

0.917 1.03 6.917 2.06 12.917 7.64 18.92 1.86

1.000 1.03 7.000 2.06 13.000 7.64 19.00 1.86

1.083 1.03 7.083 2.06 13.083 1.45 19.08 1.86

1.167 1.03 7.167 2.06 13.167 1.44 19.17 1.86

1.250 1.03 7.250 2.06 13.250 1.44 19.25 1.86

1.333 1.03 7.333 2.06 13.333 1.44 19.33 1.86

1.417 1.03 7.417 2.06 13.417 1.44 19.42 1.86

1.500 1.03 7.500 2.06 13.500 1.44 19.50 1.86

1.583 1.03 7.583 2.06 13.583 8.46 19.58 1.86

1.667 1.03 7.667 2.06 13.667 8.46 19.67 1.86

1.750 1.03 7.750 2.06 13.750 8.46 19.75 1.86

1.833 1.06 7.833 2.06 13.833 3.10 20.02 1.86

1.917 1.86 7.917 2.06 13.917 8.46 19.92 1.86

2.000 1.86 8.000 2.06 14.000 8.46 20.00 1.86

2.083 1.34 8.083 2.79 14.083 3.10 20.08 1.24

2.167 1.34 8.167 2.79 14.167 3.10 20.17 1.24

2.250 1.34 8.250 2.79 14.250 3.10 20.25 1.24

2.333 1.34 8.333 2.79 14.333 3.10 20.33 1.24

2.417 1.34 8.417 2.79 14.417 3.10 20.42 1.24

2.500 1.34 8.500 2.79 14.500 3.10 20.50 1.24

2.583 1.34 8.583 2.79 14.583 3.10 20.58 1.24

2.667 1.34 8.667 2.79 14.667 3.10 20.67 1.24

2.750 1.34 8.750 2.79 14.750 3.10 20.75 1.24

2.833 1.34 8.833 2.79 14.833 3.10 20.83 1.24

2.917 1.34 8.917 2.79 14.917 3.10 20.92 1.24

3.000 1.34 9.000 2.79 15.000 3.10 21.00 1.24

3.083 1.34 9.083 3.30 15.083 3.10 21.08 1.24

3.167 1.34 9.167 3.30 15.167 3.10 21.17 1.24

3.250 1.34 9.250 3.30 15.250 3.10 21.25 1.24

3.333 1.34 9.333 3.30 15.333 3.10 21.33 1.24

3.417 1.34 9.417 3.30 15.417 3.10 21.42 1.24

3.500 1.34 9.500 3.30 15.500 3.10 21.50 1.24

3.583 1.34 9.583 3.72 15.583 3.10 21.58 1.24

3.667 1.34 9.667 3.72 15.667 3.10 21.67 1.24

3.750 1.34 9.750 3.72 15.750 3.10 21.75 1.24

3.833 1.34 9.833 3.72 15.833 3.10 21.83 1.24

3.917 1.34 9.917 3.72 15.917 3.10 21.92 1.24

HRP6.1-PR-PR-EX_POND1-6_2-100 YEAR.OUT

2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	16.917	1.86	22.90	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Max.Eff.Inten.(mm/hr)=	113.93	74.80
over (min)	5.00	15.00
Storage Coeff. (min)=	2.60 (ii)	10.53 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.29	0.09

PEAK FLOW	(cms)=	0.32	0.39	0.674 (iii)
TIME TO PEAK	(hrs)=	12.00	12.08	12.00
RUNOFF VOLUME	(mm)=	101.70	55.40	67.90
TOTAL RAINFALL	(mm)=	103.20	103.20	103.20
RUNOFF COEFFICIENT	=	0.99	0.54	0.66

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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
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- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0000)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0221):	3.79	0.674	12.00	67.90
+ ID2= 2 (0222):	3.54	0.542	12.00	52.43
ID = 3 (0009):	7.33	1.216	12.00	60.43

ADD HYD (0009)	AREA	QPEAK	TPEAK	R. V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0009):	7.33	1.216	12.00	60.43
+ ID2= 2 (0091):	62.01	5.013	12.03	60.93
ID = 1 (0009):	69.34	6.167	12.00	60.88

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HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
RESERVOIR(0010)		OVERFLOW IS OFF							
IN= 2---> OUT= 1									
DT= 4.0 min									
		OUTFLOW	STORAGE	OUTFLOW	STORAGE				
		(cms)	(ha.m.)	(cms)	(ha.m.)				
		0.0000	0.0000	3.2510	1.2472				
		0.6750	0.7720	3.7840	1.3920				
		1.6680	0.9849	4.5560	1.5300				
		2.4150	1.1060	0.0000	0.0000				
		AREA	QPEAK	TPEAK	R.V.				
		(ha)	(cms)	(hrs)	(mm)				
INFLOW : ID= 2 (0009)		69.340	6.167	12.00	60.88				
OUTFLOW: ID= 1 (0010)		69.340	3.211	12.83	60.88				

PEAK	FLOW	REDUCTION	[Qout/Qin](%)= 52.07
TIME SHIFT OF PEAK FLOW			(min)= 50.00
MAXIMUM STORAGE	USED		(ha.m.)= 1.2406

CALIB			
STANDHYD (0234)	Area (ha)= 17.56		
ID= 1 DT= 3.0 min	Total Imp(%)= 28.00	Dir. Conn.(%)= 28.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.92	12.64
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	342.15	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)					
1 + 2 = 3					

	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0010):	69.34	3.211	12.83	60.88	
+ ID2= 2 (0234):	17.56	2.784	12.00	65.62	
=====					
ID = 3 (0011):	86.90	3.683	12.57	61.83	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)					
IN= 2----> OUT= 1					
DT= 5.0 min					

	OUTFLOW	STORAGE	OUTFLOW	STORAGE	
	(cms)	(ha.m.)	(cms)	(ha.m.)	
	0.0000	0.0000	0.4600	0.3520	
	0.4100	0.1040	0.0000	0.0000	

	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0011)	86.900	3.683	12.57	61.83	
OUTFLOW: ID= 1 (0015)	86.900	3.664	12.67	61.83	

PEAK FLOW REDUCTION [Qout/Qin](%)= 99.50

TIME SHIFT OF PEAK FLOW (min)= 6.00

MAXIMUM STORAGE USED (ha.m.)= 0.1931

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB			
STANDBYD (0235)			
ID= 1 DT= 2.0 min			

	Area (ha)=	4.28	
	Total Imp(%)=	30.00	
	Dir. Conn.(%)=	30.00	

	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	1.28	
Dep. Storage	(mm)=	1.50	
Average Slope	(%)=	2.00	
Length	(m)=	168.92	
Mannings n	=	0.013	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH									

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86		
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.500	1.03	6.500	2.06	12.500	14.85	18.50	1.86		
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86		
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86		
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86		

HRP6.1-PR-PR-EX_POND01-6-2.100 YEAR.OUT									
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86		
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86		
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86		
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86		
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86		
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86		
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86		
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86		
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86		
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86		
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86		
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24		
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24		
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24		
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24		
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24		
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24		
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24		
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24		
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24		
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24		
5.500	1.65	11.500	9.95	17.500	1.86	23.50	1.24		
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24		
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24		
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24		
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24		
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)= 113.93 68.19
over (min) 5.00 12.00
Storage Coeff. (min)= 2.70 (ii) 10.92 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.35 0.10

TOTALS
PEAK FLOW (cms)= 0.40 0.39 0.752 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 101.70 51.59 66.62
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.50 0.65

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0012)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0015):	86.90	3.664	12.67	61.83
+ ID2= 2 (0235):	4.28	0.752	12.00	66.62

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT				
=====				
ID = 3 (0012):	91.18	3.787	12.60	62.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)				
IN= 2--> OUT= 1				
Routing time step (min)'= 2.00				
<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.590E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.136E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

<---- hydrograph ---->				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0012)	91.18	3.79	12.60	62.06
OUTFLOW: ID= 1 (0040)	91.18	3.75	12.73	62.06
			0.71	1.68

CALIB		Area (ha)= 1.62	
STANDHYD (0121)		Total Imp(h)= 28.00	
ID= 1 DT= 3.0 min		Dir. Conn.(%)= 28.00	

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	0.45	1.17		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	103.92	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.950	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		
Max.Eff.Inten.(mm/hr)=			113.93	66.98					
over (min)			6.00	12.00					
Storage Coeff. (min)=			2.02 (ii)	10.30 (ii)					
Unit Hyd. Tpeak (min)=			6.00	12.00					
Unit Hyd. peak (cms)=			0.32	0.10					
					TOTALS				
PEAK FLOW (cms)=			0.14	0.15	0.286 (iii)				
TIME TO PEAK (hrs)=			12.00	12.05	12.00				
RUNOFF VOLUME (mm)=			101.70	51.59	65.62				
TOTAL RAINFALL (mm)=			103.20	103.20	103.20				
RUNOFF COEFFICIENT =			0.99	0.50	0.64				
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!									
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

CALIB									
STANDHYD (0122) Area (ha)= 13.12									
ID= 1 DT= 3.0 min Total Imp(%)= 44.00 Dir. Conn.(%)= 44.00									

IMPERVIOUS PERVIOUS (i)									
Surface Area (ha)=	5.77			7.35					
Dep. Storage (mm)=	1.50			1.50					
Average Slope (%)=	2.00			2.00					
Length (m)=	295.75			40.00					
Mannings n	0.013			0.250					
NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.									

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		
Max.Eff.Inten.(mm/hr)=		113.93		66.98					
Storage Coeff. (min)=		3.78	(ii)	11.15	(iii)				
Unit Hyd. Tpeak (min)=		6.00		12.00					
Unit Hyd. peak (cms)=		0.24		0.10					
PEAK FLOW (cms)=		1.79		0.94		2.658	(iii)		
TIME TO PEAK (hrs)=		12.00		12.05		12.00			
RUNOFF VOLUME (mm)=		101.70		51.59		73.64			
TOTAL RAINFALL (mm)=		103.20		103.20		103.20			
RUNOFF COEFFICIENT =		0.99		0.50		0.71			

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0121):	1.62	0.286	12.00	65.62	
+ ID2= 2 (0122):	13.12	2.658	12.00	73.64	
=====					
ID = 3 (0019):	14.74	2.944	12.00	72.76	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0019):	14.74	2.944	12.00	72.76	
+ ID2= 2 (0040):	91.18	3.750	12.73	62.06	
=====					
ID = 3 (0020):	105.92	5.247	12.03	63.54	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb48ca06caf\d2f26719-dcad-480a-8839-dd926236ee8f\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb48ca06caf\d2f26719-dcad-480a-8839-dd926236ee8f\scenar

DATE: 03/24/2023 TIME: 10:20:59

USER:

COMMENTS: _____

** SIMULATION : Run 05 **

MASS STORM
Ptotal=115.20 mm

Filename: C:\Users\Abira\AppData
ata\Local\Temp\
40229a5b-2c49-4605-a664-9259a6a78fe6\95accb52
Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07	
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07	
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07	
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07	
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07	
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07	
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07	
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07	
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38	
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38	
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38	
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38	
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38	
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38	
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38	
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38	
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38	
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38	
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38	
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38	
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38	
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38	
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38	
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38	

CALIB
NASHYD (1030)
ID= 1 DT= 5.0 min

Area (ha)= 30.38
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.50

Curve Number (CN)= 77.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07	
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07	
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07	
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07	
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07	
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07	
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07	
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07	
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07	
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07	
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07	
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07	
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07	
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07	
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07	
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07	
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07	
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07	
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07	
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07	
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07	
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07	
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07	
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07	
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38	
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38	
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38	
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38	
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38	
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38	
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38	
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38	
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38	
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38	
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38	
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38	
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38	
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38	
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38	

3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38	
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38	
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38	
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38	
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38	
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38	
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38	
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38	
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38	
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38	
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38	
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38	
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38	
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38	
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38	
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38	
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38	
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38	
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38	
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38	
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38	
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38	
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38	
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38	
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38	
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38	
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38	
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38	
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38	
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38	
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38	
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38	
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38	

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 2.645 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 65.263
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0021)		ROUTING time step (min) '= 4.00			
IN= 2--> OUT= 1					
<----- DATA FOR SECTION (1.1) ----->					
Distance	Elevation	Manning			
0.00	101.00	0.0800			
1.00	100.67	0.0800			
2.00	100.33	0.0800 / 0.0350	Main Channel		
3.00	100.00	0.0350	Main Channel		
4.00	100.00	0.0350	Main Channel		
5.00	100.33	0.0350 / 0.0800	Main Channel		
6.00	100.67	0.0800			
7.00	101.00	0.0800			
<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.145E+02	0.0	0.34	13.16
0.09	100.09	.327E+02	0.1	0.51	8.80
0.14	100.14	.545E+02	0.1	0.64	7.02
0.19	100.19	.800E+02	0.2	0.75	6.00
0.24	100.24	.109E+03	0.3	0.85	5.31
0.28	100.28	.142E+03	0.5	0.94	4.81
0.33	100.33	.178E+03	0.7	1.02	4.42
0.39	100.39	.226E+03	1.0	1.17	3.84
0.44	100.44	.270E+03	1.3	1.30	3.47
0.50	100.50	.336E+03	1.7	1.40	3.21
0.55	100.55	.399E+03	2.2	1.49	3.02
0.61	100.61	.466E+03	2.7	1.57	2.87
0.66	100.66	.539E+03	3.3	1.63	2.75
0.72	100.72	.616E+03	3.9	1.69	2.66
0.78	100.78	.699E+03	4.5	1.75	2.58
0.83	100.83	.786E+03	5.2	1.80	2.51
0.89	100.89	.879E+03	6.0	1.84	2.45
0.94	100.94	.977E+03	6.8	1.88	2.39
1.00	101.00	.108E+04	7.7	1.92	2.35

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (1030) 30.38 2.65 12.33 65.26 0.60 1.56

OUTFLOW: ID= 1 (0021) 30.38 2.65 12.42 65.26 0.60 1.56

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

CALIB
NASHYD (0230) | Area (ha)= 9.14 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.42

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
5.917 1.84 |11.917 127.18 |17.917 2.07 | 23.92 1.38
6.000 1.84 |12.000 127.18 |18.000 2.07 | 24.00 1.38

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW (cms)= 1.028 (1)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 73.169
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.635

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0021):	30.38	2.649	12.42	65.26
+ ID2= 2 (0230):	9.14	1.028	12.25	73.17
=====				
ID = 3 (0003):	39.52	3.626	12.33	67.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)	OVERFLOW IS OFF			
IN= 2---> OUT= 1	OUTFLOW	STORAGE	OUTFLOW	STORAGE
DT= 5.0 min	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	2.7760	0.2010
	1.0940	0.0700	3.2380	0.2400
	1.8140	0.1110	3.7590	0.2830
	2.2340	0.1460	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0003)	39.520	3.626	12.33	67.09
OUTFLOW: ID= 1 (0030)	39.520	3.220	12.58	67.09

PEAK FLOW REDUCTION [Qout/Qin](%)= 88.81
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.2398

CALIB
STANDHYD (0231) | Area (ha)= 7.45
ID= 1 DT= 2.0 min | Total Imp(%)= 24.00 Dir. Conn.(%)= 24.00

	IMPERVIOUS	PERVIOUS (1)
Surface Area (ha)=	1.79	5.66
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	1.10
Length (m)=	222.86	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07		
1.000	1.15	7.000	2.30	13.000	8.51	19.00	2.07		
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07		
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07		
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07		
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07		
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.767	1.15	7.767	2.30	13.767	9.45	19.77	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38		
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38		
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38		
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38		
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38		
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38		
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38		
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38		
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38		
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38		
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38		
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38		
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38		
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38		
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38		
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38		
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38		
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38		
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38		
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38		
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38		
5.767	1.84	11.767	87.66	17.767	2.07	23.77	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38		
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38		
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38		
6.000	1.84	12.000	127.03	18.000	2.07	24.00	1.38		
Max.Eff.Inten. (mm/hr)= 127.18 99.50									

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0211)					
1 + 2 = 3					

	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0231):	7.45	1.602	12.00	85.27	
+ ID2= 2 (0030):	39.52	3.220	12.58	67.09	
=====					
ID = 3 (0211):	46.97	3.570	12.53	69.97	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)					
IN= 2--> OUT= 1					

ROUTE CHN(0005)					
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IN= 2--> OUT= 1					

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 78.96
over (min)= 6.00 12.00
Storage Coeff. (min)= 3.14 (ii) 10.81 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.10

TOTALS
PEAK FLOW (cms)= 1.12 0.77 1.840 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 100.20 60.84 76.19
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.87 0.53 0.66

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0232):	8.25	1.840	12.00	76.19
+ ID2= 2 (0005):	46.97	3.573	12.53	69.97
=====				
ID = 3 (0007):	55.22	4.533	12.03	70.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0022) |
| IN= 2--> OUT= 1 | Routing time step (min)= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0000 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0000	Main Channel	
6.00	100.67	0.0000		
7.00	101.00	0.0000		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT				
0.50	100.50	.141E+03	1.7	1.40
0.55	100.55	.167E+03	2.2	1.49
0.61	100.61	.195E+03	2.7	1.57
0.66	100.66	.225E+03	3.3	1.63
0.72	100.72	.250E+03	3.9	1.69
0.78	100.78	.292E+03	4.5	1.75
0.83	100.83	.329E+03	5.2	1.80
0.89	100.89	.368E+03	6.0	1.84
0.94	100.94	.409E+03	6.8	1.88
1.00	101.00	.452E+03	7.7	1.92

<---- hydrograph ---->				
<-pipe / channel->				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0007)	55.22	4.53	12.03	70.90
OUTFLOW: ID= 1 (0022)	55.22	4.51	12.03	70.90

| CALB
| STANDHYD (0133) | Area (ha)= 6.79
| ID= 1 DT= 3.0 min | Total Imp(%)= 47.00 Dir. Conn.(%)= 47.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	3.19	3.60		
Dep. Storage	(mm)=	15.00	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	212.76	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38		
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38		
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38		
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38		

Max.Eff.Inten.(mm/hr)= 127.18 62.00
over (min) 6.00 12.00
Storage Coeff. (min)= 2.96 (ii) 9.69 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.11

TOTALS
PEAK FLOW (cms)= 1.12 0.45 1.530 (iii)
TIME TO PEAK (hrs)= 12.00 12.00
RUNOFF VOLUME (mm)= 100.20 47.99 72.53
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.87 0.42 0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0091)				
1	2	3		
AREA QPEAK TPEAK R.V.				
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0133):	6.79	1.530	12.00	72.53
+ ID2= 2 (0022):	55.22	4.505	12.03	70.90
ID = 3 (0091):	62.01	5.904	12.03	71.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0222)				
ID= 1 DT= 5.0 min	Area	(ha)=	Curve Number (CN)= 75.0	
	mm/hr		# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)=	0.15		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07		
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07		
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07		
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07		
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07		
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38		
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38		
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38		
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38		
4.083	1.84	10.083	5.30	16.083	2.97	22.08	1.38		
4.167	1.84	10.167	5.30	16.167	2.97	22.17	1.38		
4.250	1.84	10.250	5.30	16.250	2.97	22.25	1.38		
4.333	1.84	10.333	5.30	16.333	2.97	22.33	1.38		
4.417	1.84	10.417	5.30	16.417	2.97	22.42	1.38		
4.500	1.84	10.500	5.30	16.500	2.97	22.50	1.38		
4.583	1.84	10.583	7.14	16.583	2.97	22.58	1.38		
4.667	1.84	10.667	7.14	16.667	2.97	22.67	1.38		
4.750	1.84	10.750	7.14	16.750	2.97	22.75	1.38		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT											
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38				
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38				
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38				
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38				
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38				
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38				
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38				
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38				
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38				
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38				
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38				
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38				
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38				
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38				
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38				

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.641 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 61.960
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.538

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		Area (ha)= 3.79		Total Imp(%)= 27.00		Dir. Conn.(%)= 27.00	
STANDHYD (0221)							
ID= 1 DT= 5.0 min							
		IMPERVIOUS		PERVIOUS (i)			
Surface Area	(ha)=	1.02	2.77				
Dep. Storage	(mm)=	1.50	5.00				
Average Slope	(%)=	2.00	2.00				
Length	(m)=	158.95	40.00				
Mannings n	=	0.013	0.250				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	'	hrs	mm/hr	'	hrs
0.083	1.15	6.083	2.30	12.083	16.00	18.08	2.07				
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07				
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07				
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07				
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07				
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07				
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07				
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07				
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07				
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07				
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07				
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07				
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07				
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07				
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07				
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07				
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07				
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07				
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07				
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07				
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07				
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07				
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07				
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07				
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38				
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38				
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38				
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38				
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38				
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38				
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38				
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38				
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38				
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38				
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38				
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38				
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38				
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38				
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38				
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38				
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38				
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38				

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT											
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38				
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38				
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38				
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38				
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38				
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38				
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38				
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38				
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38				
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38				
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38				
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38				
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38				
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38				
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38				
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38				
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38				
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38				
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38				
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38				
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38				
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38				
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38				
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38				
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38				
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38				
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38				
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38				
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38				
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38				

Max.Eff.Inten.(mm/hr)=	127.18	87.74	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.49 (ii)	9.93 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.29	0.11	
PEAK FLOW (cms)=	0.36	0.50	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.00	0.858 (iii)
RUNOFF VOLUME (mm)=	113.70	65.27	78.34
TOTAL RAINFALL (mm)=	115.20	115.20	115.20
RUNOFF COEFFICIENT =	0.99	0.57	0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)		AREA		QPEAK		TPEAK		R.V.	
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)				
ID1= 1 (0221):		3.79	0.858	12.00	78.34				
+ ID2= 2 (0222):		3.54	0.641	12.00	61.96				
ID = 3 (0009):		7.33	1.499	12.00	70.43				

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0009)		AREA		QPEAK		TPEAK		R.V.	
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)				
ID1= 3 (0009):		7.33	1.499	12.00	70.43				
+ ID2= 2 (0091):		62.01	5.904	12.03	71.07				
ID = 1 (0009):		69.34	7.331	12.00	71.01				

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)		OVERFLOW IS OFF			
IN= 2--> OUT= 1		OUTFLOW		STORAGE	
DT= 4.0 min		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	3.2510	1.2472
		0.6750	0.7720	3.7840	

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0009) 69.340 7.331 12.00 71.01
OUTFLOW: ID= 1 (0010) 69.340 3.705 12.87 71.01

PEAK FLOW REDUCTION [Qout/Qin](%)= 50.54
TIME SHIFT OF PEAK FLOW (min)= 52.00
MAXIMUM STORAGE USED (ha.m.)= 1.3709

CALIB
STANDHYD (0234)
ID= 1 DT= 3.0 min
Area (ha)= 17.56
Total Imp(%)= 28.00
Dir. Conn.(%)= 28.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.92 12.64
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 342.15 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.050 1.15 | 6.050 2.30 | 12.050 16.59 | 18.05 2.07
0.100 1.15 | 6.100 2.30 | 12.100 16.59 | 18.10 2.07
0.150 1.15 | 6.150 2.30 | 12.150 16.59 | 18.15 2.07
0.200 1.15 | 6.200 2.30 | 12.200 16.59 | 18.20 2.07
0.250 1.15 | 6.250 2.30 | 12.250 16.59 | 18.25 2.07
0.300 1.15 | 6.300 2.30 | 12.300 16.59 | 18.30 2.07
0.350 1.15 | 6.350 2.30 | 12.350 16.59 | 18.35 2.07
0.400 1.15 | 6.400 2.30 | 12.400 16.59 | 18.40 2.07
0.450 1.15 | 6.450 2.30 | 12.450 16.59 | 18.45 2.07
0.500 1.15 | 6.500 2.30 | 12.500 16.58 | 18.50 2.07
0.550 1.15 | 6.550 2.30 | 12.550 8.52 | 18.55 2.07
0.600 1.15 | 6.600 2.30 | 12.600 8.52 | 18.60 2.07
0.650 1.15 | 6.650 2.30 | 12.650 8.52 | 18.65 2.07
0.700 1.15 | 6.700 2.30 | 12.700 8.52 | 18.70 2.07
0.750 1.15 | 6.750 2.30 | 12.750 8.52 | 18.75 2.07
0.800 1.15 | 6.800 2.30 | 12.800 8.52 | 18.80 2.07
0.850 1.15 | 6.850 2.30 | 12.850 8.52 | 18.85 2.07
0.900 1.15 | 6.900 2.30 | 12.900 8.52 | 18.90 2.07
0.950 1.15 | 6.950 2.30 | 12.950 8.52 | 18.95 2.07
1.000 1.15 | 7.000 2.30 | 13.000 8.52 | 19.00 2.07
1.050 1.15 | 7.050 2.30 | 13.050 1.61 | 19.05 2.07
1.100 1.15 | 7.100 2.30 | 13.100 1.61 | 19.10 2.07
1.150 1.15 | 7.150 2.30 | 13.150 1.61 | 19.15 2.07
1.200 1.15 | 7.200 2.30 | 13.200 1.61 | 19.20 2.07
1.250 1.15 | 7.250 2.30 | 13.250 1.61 | 19.25 2.07
1.300 1.15 | 7.300 2.30 | 13.300 1.61 | 19.30 2.07
1.350 1.15 | 7.350 2.30 | 13.350 1.61 | 19.35 2.07
1.400 1.15 | 7.400 2.30 | 13.400 1.61 | 19.40 2.07
1.450 1.15 | 7.450 2.30 | 13.450 1.61 | 19.45 2.07
1.500 1.15 | 7.500 2.30 | 13.500 1.62 | 19.50 2.07
1.550 1.15 | 7.550 2.30 | 13.550 9.45 | 19.55 2.07
1.600 1.15 | 7.600 2.30 | 13.600 9.45 | 19.60 2.07
1.650 1.15 | 7.650 2.30 | 13.650 9.45 | 19.65 2.07
1.700 1.15 | 7.700 2.30 | 13.700 9.45 | 19.70 2.07
1.750 1.15 | 7.750 2.30 | 13.750 9.45 | 19.75 2.07
1.800 2.07 | 7.800 2.30 | 13.800 9.45 | 19.80 2.07
1.850 2.07 | 7.850 2.30 | 13.850 9.45 | 19.85 2.07
1.900 2.07 | 7.900 2.30 | 13.900 9.45 | 19.90 2.07
1.950 2.07 | 7.950 2.30 | 13.950 9.45 | 19.95 2.07
2.000 2.07 | 8.000 2.30 | 14.000 9.44 | 20.00 2.07
2.050 1.50 | 8.050 3.11 | 14.050 3.46 | 20.05 1.38
2.100 1.50 | 8.100 3.11 | 14.100 3.46 | 20.10 1.38
2.150 1.50 | 8.150 3.11 | 14.150 3.46 | 20.15 1.38
2.200 1.50 | 8.200 3.11 | 14.200 3.46 | 20.20 1.38
2.250 1.50 | 8.250 3.11 | 14.250 3.46 | 20.25 1.38
2.300 1.50 | 8.300 3.11 | 14.300 3.46 | 20.30 1.38
2.350 1.50 | 8.350 3.11 | 14.350 3.46 | 20.35 1.38
2.400 1.50 | 8.400 3.11 | 14.400 3.46 | 20.40 1.38
2.450 1.50 | 8.450 3.11 | 14.450 3.46 | 20.45 1.38
2.500 1.50 | 8.500 3.11 | 14.500 3.46 | 20.50 1.38
2.550 1.50 | 8.550 3.11 | 14.550 3.46 | 20.55 1.38
2.600 1.50 | 8.600 3.11 | 14.600 3.46 | 20.60 1.38
2.650 1.50 | 8.650 3.11 | 14.650 3.46 | 20.65 1.38
2.700 1.50 | 8.700 3.11 | 14.700 3.46 | 20.70 1.38
2.750 1.50 | 8.750 3.11 | 14.750 3.46 | 20.75 1.38
2.800 1.50 | 8.800 3.11 | 14.800 3.46 | 20.80 1.38
2.850 1.50 | 8.850 3.11 | 14.850 3.46 | 20.85 1.38
2.900 1.50 | 8.900 3.11 | 14.900 3.46 | 20.90 1.38
2.950 1.50 | 8.950 3.11 | 14.950 3.46 | 20.95 1.38
3.000 1.50 | 9.000 3.11 | 15.000 3.46 | 21.00 1.38

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
3.050 1.50 | 9.050 3.69 | 15.050 3.46 | 21.05 1.38
3.100 1.50 | 9.100 3.69 | 15.100 3.46 | 21.10 1.38
3.150 1.50 | 9.150 3.69 | 15.150 3.46 | 21.15 1.38
3.200 1.50 | 9.200 3.69 | 15.200 3.46 | 21.20 1.38
3.250 1.50 | 9.250 3.69 | 15.250 3.46 | 21.25 1.38
3.300 1.50 | 9.300 3.69 | 15.300 3.46 | 21.30 1.38
3.350 1.50 | 9.350 3.69 | 15.350 3.46 | 21.35 1.38
3.400 1.50 | 9.400 3.69 | 15.400 3.46 | 21.40 1.38
3.450 1.50 | 9.450 3.69 | 15.450 3.46 | 21.45 1.38
3.500 1.50 | 9.500 3.69 | 15.500 3.46 | 21.50 1.38
3.550 1.50 | 9.550 4.15 | 15.550 3.46 | 21.55 1.38
3.600 1.50 | 9.600 4.15 | 15.600 3.46 | 21.60 1.38
3.650 1.50 | 9.650 4.15 | 15.650 3.46 | 21.65 1.38
3.700 1.50 | 9.700 4.15 | 15.700 3.46 | 21.70 1.38
3.750 1.50 | 9.750 4.15 | 15.750 3.46 | 21.75 1.38
3.800 1.50 | 9.800 4.15 | 15.800 3.46 | 21.80 1.38
3.850 1.50 | 9.850 4.15 | 15.850 3.46 | 21.85 1.38
3.900 1.50 | 9.900 4.15 | 15.900 3.46 | 21.90 1.38
3.950 1.50 | 9.950 4.15 | 15.950 3.46 | 21.95 1.38
4.000 1.50 | 10.000 4.15 | 16.000 3.45 | 22.00 1.38
4.050 1.84 | 10.050 5.30 | 16.050 2.07 | 22.05 1.38
4.100 1.84 | 10.100 5.30 | 16.100 2.07 | 22.10 1.38
4.150 1.84 | 10.150 5.30 | 16.150 2.07 | 22.15 1.38
4.200 1.84 | 10.200 5.30 | 16.200 2.07 | 22.20 1.38
4.250 1.84 | 10.250 5.30 | 16.250 2.07 | 22.25 1.38
4.300 1.84 | 10.300 5.30 | 16.300 2.07 | 22.30 1.38
4.350 1.84 | 10.350 5.30 | 16.350 2.07 | 22.35 1.38
4.400 1.84 | 10.400 5.30 | 16.400 2.07 | 22.40 1.38
4.450 1.84 | 10.450 5.30 | 16.450 2.07 | 22.45 1.38
4.500 1.84 | 10.500 5.30 | 16.500 2.07 | 22.50 1.38
4.550 1.84 | 10.550 7.14 | 16.550 2.07 | 22.55 1.38
4.600 1.84 | 10.600 7.14 | 16.600 2.07 | 22.60 1.38
4.650 1.84 | 10.650 7.14 | 16.650 2.07 | 22.65 1.38
4.700 1.84 | 10.700 7.14 | 16.700 2.07 | 22.70 1.38
4.750 1.84 | 10.750 7.14 | 16.750 2.07 | 22.75 1.38
4.800 1.84 | 10.800 7.14 | 16.800 2.07 | 22.80 1.38
4.850 1.84 | 10.850 7.14 | 16.850 2.07 | 22.85 1.38
4.900 1.84 | 10.900 7.14 | 16.900 2.07 | 22.90 1.38
4.950 1.84 | 10.950 7.14 | 16.950 2.07 | 22.95 1.38
5.000 1.84 | 11.000 7.14 | 17.000 2.07 | 23.00 1.38
5.050 1.84 | 11.050 11.06 | 17.050 2.07 | 23.05 1.38
5.100 1.84 | 11.100 11.06 | 17.100 2.07 | 23.10 1.38
5.150 1.84 | 11.150 11.06 | 17.150 2.07 | 23.15 1.38
5.200 1.84 | 11.200 11.06 | 17.200 2.07 | 23.20 1.38
5.250 1.84 | 11.250 11.06 | 17.250 2.07 | 23.25 1.38
5.300 1.84 | 11.300 11.06 | 17.300 2.07 | 23.30 1.38
5.350 1.84 | 11.350 11.06 | 17.350 2.07 | 23.35 1.38
5.400 1.84 | 11.400 11.06 | 17.400 2.07 | 23.40 1.38
5.450 1.84 | 11.450 11.06 | 17.450 2.07 | 23.45 1.38
5.500 1.84 | 11.500 11.08 | 17.500 2.07 | 23.50 1.38
5.550 1.84 | 11.550 47.92 | 17.550 2.07 | 23.55 1.38
5.600 1.84 | 11.600 47.92 | 17.600 2.07 | 23.60 1.38
5.650 1.84 | 11.650 47.92 | 17.650 2.07 | 23.65 1.38
5.700 1.84 | 11.700 47.92 | 17.700 2.07 | 23.70 1.38
5.750 1.84 | 11.750 47.97 | 17.750 2.07 | 23.75 1.38
5.800 1.84 | 11.800 127.18 | 17.800 2.07 | 23.80 1.38
5.850 1.84 | 11.850 127.18 | 17.850 2.07 | 23.85 1.38
5.900 1.84 | 11.900 127.18 | 17.900 2.07 | 23.90 1.38
5.950 1.84 | 11.950 127.18 | 17.950 2.07 | 23.95 1.38
6.000 1.84 | 12.000 127.12 | 18.000 2.07 | 24.00 1.38

Max.Eff.Inten.(mm/hr)= 127.18 78.96
over (min) 6.00 12.00
Storage Coeff. (min)= 3.94 (ii) 11.70 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.24 0.10

TOTALS
PEAK FLOW (cms)= 1.70 1.88 3.431 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 113.70 60.84 75.64
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53 0.66

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0011)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
----- (ha) (cms) (hrs) (mm)
ID1= 1 (0010): 69.34 3.705 12.87 71.01

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
+ ID2= 2 (0234): 17.56 3.431 12.00 75.64
=====

ID = 3 (0011): 86.90 4.720 12.07 71.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015) |
IN= 2--> OUT= 1 |
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 9.4690 0.3520
0.4100 0.1040 | 0.0000 0.0000
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0011) 86.900 4.720 12.07 71.94
OUTFLOW: ID= 1 (0015) 86.900 4.505 12.20 71.94

PEAK FLOW REDUCTION [Qout/Qin](%)= 95.46
TIME SHIFT OF PEAK FLOW (min)= 8.00
MAXIMUM STORAGE USED (ha.m.)= 0.2164

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB
STANDHYD (0235) |
ID= 1 DT= 2.0 min
Area (ha)= 4.28
Total Imp(%)= 30.00 Dir. Conn.(%)= 30.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.28 3.00
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 168.92 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.033 1.15 | 6.033 2.30 | 12.033 16.59 | 18.03 2.07
0.067 1.15 | 6.067 2.30 | 12.067 16.59 | 18.07 2.07
0.100 1.15 | 6.100 2.30 | 12.100 16.59 | 18.10 2.07
0.133 1.15 | 6.133 2.30 | 12.133 16.59 | 18.13 2.07
0.167 1.15 | 6.167 2.30 | 12.167 16.59 | 18.17 2.07
0.200 1.15 | 6.200 2.30 | 12.200 16.59 | 18.20 2.07
0.233 1.15 | 6.233 2.30 | 12.233 16.59 | 18.23 2.07
0.267 1.15 | 6.267 2.30 | 12.267 16.59 | 18.27 2.07
0.300 1.15 | 6.300 2.30 | 12.300 16.59 | 18.30 2.07
0.333 1.15 | 6.333 2.30 | 12.333 16.59 | 18.33 2.07
0.367 1.15 | 6.367 2.30 | 12.367 16.59 | 18.37 2.07
0.400 1.15 | 6.400 2.30 | 12.400 16.59 | 18.40 2.07
0.433 1.15 | 6.433 2.30 | 12.433 16.59 | 18.43 2.07
0.467 1.15 | 6.467 2.30 | 12.467 16.59 | 18.47 2.07
0.500 1.15 | 6.500 2.30 | 12.500 16.58 | 18.50 2.07
0.533 1.15 | 6.533 2.30 | 12.533 8.52 | 18.53 2.07
0.567 1.15 | 6.567 2.30 | 12.567 8.52 | 18.57 2.07
0.600 1.15 | 6.600 2.30 | 12.600 8.52 | 18.60 2.07
0.633 1.15 | 6.633 2.30 | 12.633 8.52 | 18.63 2.07
0.667 1.15 | 6.667 2.30 | 12.667 8.52 | 18.67 2.07
0.700 1.15 | 6.700 2.30 | 12.700 8.52 | 18.70 2.07
0.733 1.15 | 6.733 2.30 | 12.733 8.52 | 18.73 2.07
0.767 1.15 | 6.767 2.30 | 12.767 8.52 | 18.77 2.07
0.800 1.15 | 6.800 2.30 | 12.800 8.52 | 18.80 2.07
0.833 1.15 | 6.833 2.30 | 12.833 8.52 | 18.83 2.07
0.867 1.15 | 6.867 2.30 | 12.867 8.52 | 18.87 2.07
0.900 1.15 | 6.900 2.30 | 12.900 8.52 | 18.90 2.07
0.933 1.15 | 6.933 2.30 | 12.933 8.52 | 18.93 2.07
0.967 1.15 | 6.967 2.30 | 12.967 8.52 | 18.97 2.07
1.000 1.15 | 7.000 2.30 | 13.000 8.51 | 19.00 2.07
1.033 1.15 | 7.033 2.30 | 13.033 1.61 | 19.03 2.07
1.067 1.15 | 7.067 2.30 | 13.067 1.61 | 19.07 2.07
1.100 1.15 | 7.100 2.30 | 13.100 1.61 | 19.10 2.07
1.133 1.15 | 7.133 2.30 | 13.133 1.61 | 19.13 2.07
1.167 1.15 | 7.167 2.30 | 13.167 1.61 | 19.17 2.07
1.200 1.15 | 7.200 2.30 | 13.200 1.61 | 19.20 2.07
1.233 1.15 | 7.233 2.30 | 13.233 1.61 | 19.23 2.07
1.267 1.15 | 7.267 2.30 | 13.267 1.61 | 19.27 2.07
1.300 1.15 | 7.300 2.30 | 13.300 1.61 | 19.30 2.07
1.333 1.15 | 7.333 2.30 | 13.333 1.61 | 19.33 2.07
1.367 1.15 | 7.367 2.30 | 13.367 1.61 | 19.37 2.07
1.400 1.15 | 7.400 2.30 | 13.400 1.61 | 19.40 2.07
1.433 1.15 | 7.433 2.30 | 13.433 1.61 | 19.43 2.07
1.467 1.15 | 7.467 2.30 | 13.467 1.61 | 19.47 2.07

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
1.500 1.15 | 7.500 2.30 | 13.500 1.63 | 19.50 2.07
1.533 1.15 | 7.533 2.30 | 13.533 9.45 | 19.53 2.07
1.567 1.15 | 7.567 2.30 | 13.567 9.45 | 19.57 2.07
1.600 1.15 | 7.600 2.30 | 13.600 9.45 | 19.60 2.07
1.633 1.15 | 7.633 2.30 | 13.633 9.45 | 19.63 2.07
1.667 1.15 | 7.667 2.30 | 13.667 9.45 | 19.67 2.07
1.700 1.15 | 7.700 2.30 | 13.700 9.45 | 19.70 2.07
1.733 1.15 | 7.733 2.30 | 13.733 9.45 | 19.73 2.07
1.767 1.61 | 7.767 2.30 | 13.767 9.45 | 19.77 2.07
1.800 2.07 | 7.800 2.30 | 13.800 9.45 | 19.80 2.07
1.833 2.07 | 7.833 2.30 | 13.833 9.45 | 19.83 2.07
1.867 2.07 | 7.867 2.30 | 13.867 9.45 | 19.87 2.07
1.900 2.07 | 7.900 2.30 | 13.900 9.45 | 19.90 2.07
1.933 2.07 | 7.933 2.30 | 13.933 9.45 | 19.93 2.07
1.967 2.07 | 7.967 2.30 | 13.967 9.45 | 19.97 2.07
2.000 2.07 | 8.000 2.30 | 14.000 9.43 | 20.00 2.07
2.033 1.50 | 8.033 3.11 | 14.033 3.46 | 20.03 1.38
2.067 1.50 | 8.067 3.11 | 14.067 3.46 | 20.07 1.38
2.100 1.50 | 8.100 3.11 | 14.100 3.46 | 20.10 1.38
2.133 1.50 | 8.133 3.11 | 14.133 3.46 | 20.13 1.38
2.167 1.50 | 8.167 3.11 | 14.167 3.46 | 20.17 1.38
2.200 1.50 | 8.200 3.11 | 14.200 3.46 | 20.20 1.38
2.233 1.50 | 8.233 3.11 | 14.233 3.46 | 20.23 1.38
2.267 1.50 | 8.267 3.11 | 14.267 3.46 | 20.27 1.38
2.300 1.50 | 8.300 3.11 | 14.300 3.46 | 20.30 1.38
2.333 1.50 | 8.333 3.11 | 14.333 3.46 | 20.33 1.38
2.367 1.50 | 8.367 3.11 | 14.367 3.46 | 20.37 1.38
2.400 1.50 | 8.400 3.11 | 14.400 3.46 | 20.40 1.38
2.433 1.50 | 8.433 3.11 | 14.433 3.46 | 20.43 1.38
2.467 1.50 | 8.467 3.11 | 14.467 3.46 | 20.47 1.38
2.500 1.50 | 8.500 3.11 | 14.500 3.46 | 20.50 1.38
2.533 1.50 | 8.533 3.11 | 14.533 3.46 | 20.53 1.38
2.567 1.50 | 8.567 3.11 | 14.567 3.46 | 20.57 1.38
2.600 1.50 | 8.600 3.11 | 14.600 3.46 | 20.60 1.38
2.633 1.50 | 8.633 3.11 | 14.633 3.46 | 20.63 1.38
2.667 1.50 | 8.667 3.11 | 14.667 3.46 | 20.67 1.38
2.700 1.50 | 8.700 3.11 | 14.700 3.46 | 20.70 1.38
2.733 1.50 | 8.733 3.11 | 14.733 3.46 | 20.73 1.38
2.767 1.50 | 8.767 3.11 | 14.767 3.46 | 20.77 1.38
2.800 1.50 | 8.800 3.11 | 14.800 3.46 | 20.80 1.38
2.833 1.50 | 8.833 3.11 | 14.833 3.46 | 20.83 1.38
2.867 1.50 | 8.867 3.11 | 14.867 3.46 | 20.87 1.38
2.900 1.50 | 8.900 3.11 | 14.900 3.46 | 20.90 1.38
2.933 1.50 | 8.933 3.11 | 14.933 3.46 | 20.93 1.38
2.967 1.50 | 8.967 3.11 | 14.967 3.46 | 20.97 1.38
3.000 1.50 | 9.000 3.11 | 15.000 3.46 | 21.00 1.38
3.033 1.50 | 9.033 3.69 | 15.033 3.46 | 21.03 1.38
3.067 1.50 | 9.067 3.69 | 15.067 3.46 | 21.07 1.38
3.100 1.50 | 9.100 3.69 | 15.100 3.46 | 21.10 1.38
3.133 1.50 | 9.133 3.69 | 15.133 3.46 | 21.13 1.38
3.167 1.50 | 9.167 3.69 | 15.167 3.46 | 21.17 1.38
3.200 1.50 | 9.200 3.69 | 15.200 3.46 | 21.20 1.38
3.233 1.50 | 9.233 3.69 | 15.233 3.46 | 21.23 1.38
3.267 1.50 | 9.267 3.69 | 15.267 3.46 | 21.27 1.38
3.300 1.50 | 9.300 3.69 | 15.300 3.46 | 21.30 1.38
3.333 1.50 | 9.333 3.69 | 15.333 3.46 | 21.33 1.38
3.367 1.50 | 9.367 3.69 | 15.367 3.46 | 21.37 1.38
3.400 1.50 | 9.400 3.69 | 15.400 3.46 | 21.40 1.38
3.433 1.50 | 9.433 3.69 | 15.433 3.46 | 21.43 1.38
3.467 1.50 | 9.467 3.69 | 15.467 3.46 | 21.47 1.38
3.500 1.50 | 9.500 3.69 | 15.500 3.46 | 21.50 1.38
3.533 1.50 | 9.533 4.15 | 15.533 3.46 | 21.53 1.38
3.567 1.50 | 9.567 4.15 | 15.567 3.46 | 21.57 1.38
3.600 1.50 | 9.600 4.15 | 15.600 3.46 | 21.60 1.38
3.633 1.50 | 9.633 4.15 | 15.633 3.46 | 21.63 1.38
3.667 1.50 | 9.667 4.15 | 15.667 3.46 | 21.67 1.38
3.700 1.50 | 9.700 4.15 | 15.700 3.46 | 21.70 1.38
3.733 1.50 | 9.733 4.15 | 15.733 3.46 | 21.73 1.38
3.767 1.50 | 9.767 4.15 | 15.767 3.46 | 21.77 1.38
3.800 1.50 | 9.800 4.15 | 15.800 3.46 | 21.80 1.38
3.833 1.50 | 9.833 4.15 | 15.833 3.46 | 21.83 1.38
3.867 1.50 | 9.867 4.15 | 15.867 3.46 | 21.87 1.38
3.900 1.50 | 9.900 4.15 | 15.900 3.46 | 21.90 1.38
3.933 1.50 | 9.933 4.15 | 15.933 3.46 | 21.93 1.38
3.967 1.50 | 9.967 4.15 | 15.967 3.46 | 21.97 1.38
4.000 1.50 | 10.000 4.15 | 16.000 3.45 | 22.00 1.38
4.033 1.84 | 10.033 5.30 | 16.033 2.07 | 22.03 1.38
4.067 1.84 | 10.067 5.30 | 16.067 2.07 | 22.07 1.38
4.100 1.84 | 10.100 5.30 | 16.100 2.07 | 22.10 1.38
4.133 1.84 | 10.133 5.30 | 16.133 2.07 | 22.13 1.38
4.167 1.84 | 10.167 5.30 | 16.167 2.07 | 22.17 1.38
4.200 1.84 | 10.200 5.30 | 16.200 2.07 | 22.20 1.38
4.233 1.84 | 10.233 5.30 | 16.233 2.07 | 22.23 1.38
4.267 1.84 | 10.267 5.30 | 16.267 2.07 | 22.27 1.38
4.300 1.84 | 10.300 5.30 | 16.300 2.07 | 22.30 1.38
4.333 1.84 | 10.333 5.30 | 16.333 2.07 | 22.33 1.38
4.367 1.84 | 10.367 5.30 | 16.367 2.07 | 22.37 1.38

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38		
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38		
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38		
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38		
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38		
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38		
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38		
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38		
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38		
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38		
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38		
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38		
5.500	1.84	11.500	11.10	17.500	2.07	23.50	1.38		
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38		
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38		
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38		
5.767	1.84	11.767	87.66	17.767	2.07	23.77	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38		
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38		
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38		
6.000	1.84	12.000	127.03	18.000	2.07	24.00	1.38		

Max.Eff.Inten.(mm/hr)= 127.18 80.29
over (min) 5.00 12.00
Storage Coeff. (min)= 2.58 (ii) 10.29 (iii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.36 0.10

TOTALS

PEAK FLOW (cms)= 0.45 0.47 0.074 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 113.70 60.84 76.70
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53 0.67

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0012)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0015):	86.90	4.505	12.20	71.94
+ ID2= 2 (0235):	4.28	0.874	12.00	76.70
=====				
ID = 3 (0012):	91.18	4.982	12.13	72.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0040) |
| IN= 2--> OUT= 1 |

<----- DATA FOR SECTION (1.1) ----->

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.590E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.136E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

<---- hydrograph ---->					
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)
INFLOW : ID= 2 (0012)	91.18	4.98	12.13	72.16	0.81
OUTFLOW: ID= 1 (0040)	91.18	4.58	12.40	72.16	0.78

CALIB				
STANDHYD (0121)				
ID= 1 DT= 3.0 min				

		IMPERVIOUS		PERVIOUS (i)
Surface Area	(ha)=	0.45		1.17
Dep. Storage	(mm)=	1.50		1.50
Average Slope	(%)=	2.00		2.00
Length	(m)=	103.92		40.00
Mannings n	=	0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38		
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38		
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38		
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38		
Max.Eff.Inten.(mm/hr)=			127.18	78.96					
over (min)			6.00	12.00					
Storage Coeff. (min)=			1.93 (ii)	9.69 (ii)					
UNIT Hyd. Tpeak (min)=			6.00	12.00					
UNIT Hyd. peak (cms)=			0.32	0.11					
					TOTALS				
PEAK FLOW (cms)=			0.16	0.19	0.334 (iii)				
TIME TO PEAK (hrs)=			12.00	12.05	12.00				
RUNOFF VOLUME (mm)=			113.70	60.84	75.64				
TOTAL RAINFALL (mm)=			115.20	115.20	115.20				
RUNOFF COEFFICIENT =			0.99	0.53	0.66				
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!									
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL									
THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

CALIB									
STANDHYD (0122)		Area	(ha)=	13.12					
ID= 1 DT= 3.0 min		Total Imp(%)=	44.00	Dir. Conn.(%)=	44.00				

		IMPERVIOUS		PERVIOUS (i)					
Surface Area		(ha)=	5.77	7.35					
Dep. Storage		(mm)=	1.50	1.50					
Average Slope		(%)=	2.00	2.00					
Length		(m)=	295.75	40.00					
Mannings n		=	0.013	0.250					
NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.									
----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT											
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38				
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38				
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38				
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38				
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38				
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38				
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38				
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38				
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38				
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38				
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38				
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38				
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38				
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38				
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38				
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38				
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38				
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38				
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38				
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38				
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38				
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38				
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38				
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38				
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38				
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38				
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38				
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38				
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38				
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38				
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38				
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38				
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38				
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38				
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38				
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38				
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38				
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38				
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38				
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38				
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38				
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38				
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38				
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38				
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38				
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38				
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38				
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38				
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38				
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38				
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38				
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38				
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38				
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38				
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38				
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38				
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38				
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38				
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38				
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38				
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38				
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38				
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38				
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38				
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38				
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38				
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38				
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38				
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38				
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38				
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38				
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38				
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38				
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38				
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38				
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38				
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38				
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38				
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38				

Max.Eff.Inten.(mm/hr)= 127.18 78.96
over (min) 6.00 12.00
Storage Coeff. (min)= 3.61 (ii) 10.67 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.10

PEAK FLOW (cms)= 2.00 1.13
TOTALS 3.053 (iii)

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 113.70 60.84 84.10
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53 0.73

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0121): 1.62 0.334 12.00 75.64
+ ID2= 2 (0122): 13.12 3.053 12.00 84.10
ID = 3 (0019): 14.74 3.386 12.00 83.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0019): 14.74 3.386 12.00 83.17
+ ID2= 2 (0040): 91.18 4.580 12.40 72.16
ID = 3 (0020): 105.92 6.305 12.03 73.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\vo.in.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\163a92f8-bd83-4efb-a2d1-4dcbf0aff781\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\163a92f8-bd83-4efb-a2d1-4dcbf0aff781\scenar

DATE: 03/24/2023 TIME: 10:20:58

USER:

COMMENTS:

** SIMULATION : Run 06 **

MASS STORM Filename: C:\Users\AbirA\AppData\Local\Temp\40229a5b-2c49-4605-a664-9259a6a78fe6\2985551a
Ptotal=127.20 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT												
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29					
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29					
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29					
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29					
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29					
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29					
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29					
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29					
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53					
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53					
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53					
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53					
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53					
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53					
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53					
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53					
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53					
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53					
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53					
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53					
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53					
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53					
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53					
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53					

CALIB
NASHYD (1030)
ID= 1 DT= 5.0 min
Area (ha)= 30.38
Curve Number (CN)= 77.0
Ia (mm)= 5.00
of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT												
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53					
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53					
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53					
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53					
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53					
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53					
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53					
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53					
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53					
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53					
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53					
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53					
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53					
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53					
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53					
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53					
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53					
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53					
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53					
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53					
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53					
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53					
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53					

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 3.064 (1)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 75.388
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.593

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0021)												
IN= 2-- OUT= 1 Routing time step (min)'= 4.00												
<----- DATA FOR SECTION (1.1) ----->												
Distance			Elevation			Manning						
0.00			101.00			0.0000						
1.00			100.67			0.0000						
2.00			100.33			0.0000 / 0.0350			Main Channel			
3.00			100.00			0.0350			Main Channel			
4.00			100.00			0.0350			Main Channel			
5.00			100.33			0.0350 / 0.0000			Main Channel			
6.00			100.67			0.0000						
7.00			101.00			0.0000						
<----- TRAVEL TIME TABLE ----->												
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME							
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)							
0.05	100.05	.145E+02	0.0	0.34	13.16							
0.09	100.09	.327E+02	0.1	0.51	8.80							
0.14	100.14	.545E+02	0.1	0.64	7.92							
0.19	100.19	.800E+02	0.2	0.75	6.00							
0.24	100.24	.109E+03	0.3	0.85	5.31							
0.28	100.28	.142E+03	0.5	0.94	4.81							
0.33	100.33	.178E+03	0.7	1.02	4.42							
0.39	100.39	.226E+03	1.0	1.17	3.84							
0.44	100.44	.270E+03	1.3	1.30	3.47							
0.50	100.50	.336E+03	1.7	1.40	3.21							
0.55	100.55	.399E+03	2.2	1.49	3.02							
0.61	100.61	.466E+03	2.7	1.57	2.87							
0.66	100.66	.539E+03	3.3	1.63	2.75							
0.72	100.72	.616E+03	3.9	1.69	2.66							
0.78	100.78	.699E+03	4.5	1.75	2.58							
0.83	100.83	.786E+03	5.2	1.80	2.51							
0.89	100.89	.879E+03	6.0	1.84	2.45							
0.94	100.94	.977E+03	6.8	1.88	2.39							
1.00	101.00	.108E+04	7.7	1.92	2.35							
<----- hydrograph ----->												
		AREA	QPEAK	TPEAK	R.V.	<- DEPT						
		(ha)	(cms)	(mm)		MAX DEPTH						
		(m)										
INFLOW : ID= 2	(1030)	30.38	3.86	12.33	75.39	0.65						
OUTFLOW : ID= 1	(0021)	30.38	3.97	12.42	75.39	0.65						

HRP6.1-PR-PR-EX_POND1-6_2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW (cms)= 1.179 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 83.905
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.660

HRP6.1-PR-PR-EX_POND1-6_2-100 YEAR.OUT

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)							
1	2	3					

ID1= 1 (0021):	30.38	3.066	12.42	75.39			
+ ID2= 2 (0230):	9.14	1.179	12.25	83.90			
=====							
ID = 3 (0003):	39.52	4.190	12.33	77.36			
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.							

RESERVOIR(0030)							
IN= 2----> OUT= 1							
DT= 5.0 min							

OVERFLOW IS OFF							
OUTFLOW	STORAGE	OUTFLOW	STORAGE				
(cms)	(ha.m.)	(cms)	(ha.m.)				
0.0000	0.0000	2.7760	0.2010				
1.0940	0.0700	3.2380	0.2400				
1.8140	0.1110	3.7590	0.2830				
2.2340	0.1460	0.0000	0.0000				

INFLOW : ID= 2 (0003)	39.520	4.190	12.33	77.36			
OUTFLOW: ID= 1 (0030)	39.520	3.727	12.58	77.36			

PEAK FLOW REDUCTION [Qout/Qin](%)= 88.96							
TIME SHIFT OF PEAK FLOW (min)= 15.00							
MAXIMUM STORAGE USED (ha.m.)= 0.2816							

CALIB							
STANDHYD (0231)							
ID= 1 DT= 2.0 min	Area (ha)= 7.45						

	Total Imp(%)= 24.00	Dir. Conn.(%)= 24.00					

Surface Area (ha)= 1.79	IMPERVIOUS	PERVIOUS (i)					
Dep. Storage (mm)= 1.50	1.50	1.50					
Average Slope (%)= 2.00	1.10						
Length (m)= 222.86	40.00						
Mannings n = 0.013	0.250						
NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.							
----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29
0.500	1.27	6.500	2.54	12.500	18.30	18.50	2.29
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.767	1.27	7.767	2.54	13.767	10.43	19.77	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53

HRP6.1-PR-PR-EX_POND1-6_2-100 YEAR.OUT							
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29

1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29

1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29

1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.550	1.27	7.550	2.54	13.550	1.78	19.55	2.29
1.600	1.27	7.600	2.54	13.600	1.43	19.60	2.29
1.650	1.27	7.650	2.54	13.650	1.43	19.65	2.29
1.700	1.27	7.700	2.54	13.700	1.43	19.70	2.29
1.750	1.27	7.750	2.54	13.750	1.43	19.75	2.29
1.800	2.29	7.800	2.54	13.800	1.43	19.80	2.29

1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29

1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53

3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53

3.450	1.65	9.950	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53

3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53

4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53

4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 91.28
over (min) 6.00 12.00
Storage Coeffr. (min)= 3.02 (ii) 10.39 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.10

TOTALS

PEAK FLOW (cms)= 1.24 0.91 2.088 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 112.20 70.39 86.69
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.88 0.55 0.68

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0232):	8.25	2.088	12.00	86.69
+ ID2= 2 (0005):	46.97	4.117	12.53	80.37
ID = 3 (0007):	55.22	5.226	12.03	81.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2--> OUT= 1

Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.748E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.20
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

<---- hydrograph ---->					
<-pipe / channel->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0007)	55.22	5.23	12.03	81.31	0.83
OUTFLOW: ID= 1 (0022)	55.22	5.20	12.03	81.31	0.83

CALIB	Area	(ha)=	6.79
STANDHYD (0133)	Total Imp(%)=	47.00	Dir. Conn.(%)= 47.00
ID= 1 DT= 3.0 min			

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	3.19	3.60
Dep. Storage	(mm)=	15.00	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	212.76	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.27	6.950	2.54	12.050	18.32	18.05	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		

HRP6-1-PR-PR-EX_POND1-6-2-100 YEAR.OUT

3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 72.61
over (min) 6.00 12.00
Storage Coeff. (min)= 2.85 (ii) 9.31 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.28 0.11

TOTALS
PEAK FLOW (cms)= 1.24 0.53 1.729 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 112.20 56.15 82.49
TOTAL RAINFALL (mm)= 127.20 127.20
RUNOFF COEFFICIENT = 0.88 0.44 0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0091)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.

HRP6-1-PR-PR-EX_POND1-6-2-100 YEAR.OUT

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0133):	6.79	1.729	12.00	82.49
+ ID2= 2 (0022):	55.22	5.196	12.03	81.31
ID = 3 (0091):	62.01	6.776	12.03	81.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0222)	Area	(ha)=	3.54	Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.15		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53		
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53		
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53		
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53		

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.743 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 71.770
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.564

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (0221)	Area (ha)=	3.79		
ID= 1 DT= 5.0 min	Total Imp(%)=	27.00	Dir. Conn.(%)=	27.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.02	2.77
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	158.95	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53		
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53		
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53		
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53		
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53		
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53		
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53		
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53		

Max.Eff.Inten.(mm/hr)=	140.43	100.91
over (min)	5.00	10.00
Storage Coeff. (min)=	2.39 (ii)	9.42 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.30	0.12

PEAK FLOW (cms)=	0.40	0.59	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.00	0.985 (iii)
RUNOFF VOLUME (mm)=	125.70	75.39	
TOTAL RAINFALL (mm)=	127.20	127.20	
RUNOFF COEFFICIENT =	0.99	0.59	0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0221):	3.79	0.985	12.00	88.97
+ ID2= 2 (0222):	3.54	0.743	12.00	71.77
=====				
ID = 3 (0009):	7.33	1.728	12.00	80.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0009)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0009):	7.33	1.728	12.00	80.66
+ ID2= 2 (0091):	62.01	6.776	12.03	81.44
=====				
ID = 1 (0009):	69.34	8.417	12.00	81.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)				
IN= 2--> OUT= 1	OVERFLOW IS OFF			
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	1.3250	1.2472
	0.6750	0.7720	3.7840	1.3920
	1.6680	0.9849	4.5560	1.5300
	2.4150	1.1060	0.0000	0.0000
=====				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0009)	69.340	8.417	12.00	81.36
OUTFLOW: ID= 1 (0010)	69.340	4.403	12.00	81.35
=====				
	PEAK FLOW	REDUCTION [Qout/Qin](%)=	52.31	
	TIME SHIFT OF PEAK FLOW	(min)=	48.00	
	MAXIMUM STORAGE USED	(ha.m.)=	1.5027	

CALIB
STANDHYD (0234)
ID= 1 DT= 3.0 min

Area (ha)= 17.56
Total Imp(%)= 28.00
Dir. Conn.(%)= 28.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.92 12.64
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 342.15 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53		
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53		
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53		
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53		
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53		
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53		
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53		
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53		
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53		
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53		
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53		
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53		
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53		

Max.Eff.Inten.(mm/hr)= 140.43 91.28
over (min) 6.00 15.00
Storage Coeff. (min)= 3.79 (ii) 12.78 (iii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

PEAK FLOW (cms)= 1.88 2.05 3.609 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 125.70 70.39 85.07
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.55 0.68

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0010): 69.34 4.403 12.00 81.35
+ ID2= 2 (0234): 17.56 3.609 12.00 85.07
ID = 3 (0011): 86.90 5.762 12.07 82.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015) OVERFLOW IS OFF
IN= 2----> OUT= 1
DT= 5.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT					
	(cms)	(ha.m.)		(cms)	(ha.m.)
	0.0000	0.0000		9.4690	0.3520
	0.4100	0.1040		0.0000	0.0000
	AREA (ha)	OPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
INFLOW : ID= 2 (0011)	86.900	5.762	12.07	82.27	
OUTFLOW: ID= 1 (0015)	86.900	5.561	12.20	82.27	
PEAK FLOW REDUCTION [Qout/Qin](%)=	96.51				
TIME SHIFT OF PEAK FLOW (min)=	8.00				
MAXIMUM STORAGE USED (ha.m.)=	0.2454				

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB	Area (ha)=	4.28
STANDHYD (0235)	Total Imp(%)=	30.00
ID= 1 DT= 2.0 min	Dir. Conn.(%)=	30.00

Surface Area	(ha)=	3.00
Dep. Storage	(mm)=	1.50
Average Slope	(%)=	2.00
Length	(m)=	168.92
Mannings n	=	0.013
		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29		
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29		
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29		
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29		
0.500	1.27	6.500	2.54	12.500	18.30	18.50	2.29		
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29		
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29		
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29		
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29		
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29		
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29		
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29		
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29		
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29		
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29		
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29		
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29		
1.767	1.78	7.767	2.54	13.767	10.43	19.77	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT									
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29		
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29		
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29		
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53		
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53		
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53		
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53		
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53		
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53		
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53		
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53		
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53		
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53		
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53		
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53		
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53		
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53		
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53		
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53		
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 92.72
over (min) 5.00 10.00
Storage Coeff. (min)= 2.48 (ii) 9.76 (ii)
Unit Hyd. Tpeak (min)= 4.00 10.00
Unit Hyd. peak (cms)= 0.37 0.11

TOTALS
PEAK FLOW (cms)= 0.50 0.56
TIME TO PEAK (hrs)= 12.00 12.07
RUNOFF VOLUME (mm)= 125.70 70.38
TOTAL RAINFALL (mm)= 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.55

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0012)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0015):	86.90	5.561	12.20	82.27
+ ID2= 2 (0235):	4.28	1.034	12.00	86.98
=====				
ID = 3 (0012):	91.18	6.006	12.17	82.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)
IN= 2--> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

HRP6.1-PR-PR-EX_POND1-6.2-100 YEAR.OUT

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.590E+02	0.0	0.34	53.30
0.09	100.09	.130E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.130E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.390E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0012) 91.18 6.01 12.17 82.49 0.89 1.84
OUTFLOW: ID= 1 (0040) 91.18 5.52 12.37 82.49 0.85 1.81

CALIB
STANDHYD (0121)
ID= 1 DT= 3.0 min
Area (ha)= 1.62
Total Imp(%)= 28.00
Dir. Conn.(%)= 28.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.45 1.17
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 103.92 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29

HRP6.1-PR-PR-EX_POND1-6_2-100 YEAR.OUT											
2.600	1.65		8.600	3.43		14.600	3.82		20.60	1.53	
2.650	1.65		8.650	3.43		14.650	3.82		20.65	1.53	
2.700	1.65		8.700	3.43		14.700	3.82		20.70	1.53	
2.750	1.65		8.750	3.43		14.750	3.82		20.75	1.53	
2.800	1.65		8.800	3.43		14.800	3.82		20.80	1.53	
2.850	1.65		8.850	3.43		14.850	3.82		20.85	1.53	
2.900	1.65		8.900	3.43		14.900	3.82		20.90	1.53	
2.950	1.65		8.950	3.43		14.950	3.82		20.95	1.53	
3.000	1.65		9.000	3.43		15.000	3.82		21.00	1.53	
3.050	1.65		9.050	4.07		15.050	3.82		21.05	1.53	
3.100	1.65		9.100	4.07		15.100	3.82		21.10	1.53	
3.150	1.65		9.150	4.07		15.150	3.82		21.15	1.53	
3.200	1.65		9.200	4.07		15.200	3.82		21.20	1.53	
3.250	1.65		9.250	4.07		15.250	3.82		21.25	1.53	
3.300	1.65		9.300	4.07		15.300	3.82		21.30	1.53	
3.350	1.65		9.350	4.07		15.350	3.82		21.35	1.53	
3.400	1.65		9.400	4.07		15.400	3.82		21.40	1.53	
3.450	1.65		9.450	4.07		15.450	3.82		21.45	1.53	
3.500	1.65		9.500	4.07		15.500	3.82		21.50	1.53	
3.550	1.65		9.550	4.58		15.550	3.82		21.55	1.53	
3.600	1.65		9.600	4.58		15.600	3.82		21.60	1.53	
3.650	1.65		9.650	4.58		15.650	3.82		21.65	1.53	
3.700	1.65		9.700	4.58		15.700	3.82		21.70	1.53	
3.750	1.65		9.750	4.58		15.750	3.82		21.75	1.53	
3.800	1.65		9.800	4.58		15.800	3.82		21.80	1.53	
3.850	1.65		9.850	4.58		15.850	3.82		21.85	1.53	
3.900	1.65		9.900	4.58		15.900	3.82		21.90	1.53	
3.950	1.65		9.950	4.58		15.950	3.82		21.95	1.53	
4.000	1.65		10.000	4.58		16.000	3.81		22.00	1.53	
4.050	2.04		10.050	5.85		16.050	2.29		22.05	1.53	
4.100	2.04		10.100	5.85		16.100	2.29		22.10	1.53	
4.150	2.04		10.150	5.85		16.150	2.29		22.15	1.53	
4.200	2.04		10.200	5.85		16.200	2.29		22.20	1.53	
4.250	2.04		10.250	5.85		16.250	2.29		22.25	1.53	
4.300	2.04		10.300	5.85		16.300	2.29		22.30	1.53	
4.350	2.04		10.350	5.85		16.350	2.29		22.35	1.53	
4.400	2.04		10.400	5.85		16.400	2.29		22.40	1.53	
4.450	2.04		10.450	5.85		16.450	2.29		22.45	1.53	
4.500	2.04		10.500	5.85		16.500	2.29		22.50	1.53	
4.550	2.04		10.550	7.89		16.550	2.29		22.55	1.53	
4.600	2.04		10.600	7.89		16.600	2.29		22.60	1.53	
4.650	2.04		10.650	7.89		16.650	2.29		22.65	1.53	
4.700	2.04		10.700	7.89		16.700	2.29		22.70	1.53	
4.750	2.04		10.750	7.89		16.750	2.29		22.75	1.53	
4.800	2.04		10.800	7.89		16.800	2.29		22.80	1.53	
4.850	2.04		10.850	7.89		16.850	2.29		22.85	1.53	
4.900	2.04		10.900	7.89		16.900	2.29		22.90	1.53	
4.950	2.04		10.950	7.89		16.950	2.29		22.95	1.53	
5.000	2.04		11.000	7.89		17.000	2.29		23.00	1.53	
5.050	2.04		11.050	12.21		17.050	2.29		23.05	1.53	
5.100	2.04		11.100	12.21		17.100	2.29		23.10	1.53	
5.150	2.04		11.150	12.21		17.150	2.29		23.15	1.53	
5.200	2.04		11.200	12.21		17.200	2.29		23.20	1.53	
5.250	2.04		11.250	12.21		17.250	2.29		23.25	1.53	
5.300	2.04		11.300	12.21		17.300	2.29		23.30	1.53	
5.350	2.04		11.350	12.21		17.350	2.29		23.35	1.53	
5.400	2.04		11.400	12.21		17.400	2.29		23.40	1.53	
5.450	2.04		11.450	12.21		17.450	2.29		23.45	1.53	
5.500	2.04		11.500	12.23		17.500	2.29		23.50	1.53	
5.550	2.04		11.550	52.92		17.550	2.29		23.55	1.53	
5.600	2.04		11.600	52.92		17.600	2.29		23.60	1.53	
5.650	2.04		11.650	52.92		17.650	2.29		23.65	1.53	
5.700	2.04		11.700	52.92		17.700	2.29		23.70	1.53	
5.750	2.04		11.750	52.96		17.750	2.29		23.75	1.53	
5.800	2.04		11.800	140.43		17.800	2.29		23.80	1.53	
5.850	2.04		11.850	140.43		17.850	2.29		23.85	1.53	
5.900	2.04		11.900	140.43		17.900	2.29		23.90	1.53	
5.950	2.04		11.950	140.43		17.950	2.29		23.95	1.53	
6.000	2.04		12.000	140.36		18.000	2.29		24.00	1.53	

Max.Eff.Inten.(mm/hr)= 140.43 91.28
over (min) 6.00 12.00
Storage Coeff. (min)= 3.47 (ii) 10.26 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.10

TOTALS
PEAK FLOW (cms)= 2.22 1.33 3.457 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 125.70 70.39 94.72
TOTAL RAINFALL (mm)= 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.55 0.74

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

HRP6.1-PR-PR-EX_POND1-6_2-100 YEAR.OUT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```

-----
| ADD HYD ( 0019)|
| 1 + 2 = 3 |
-----
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 ( 0121): 1.62 0.369 12.00 85.87
+ ID2= 2 ( 0122): 13.12 3.457 12.00 94.72
=====
ID = 3 ( 0019): 14.74 3.826 12.00 93.75

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0020)|
| 1 + 2 = 3 |
-----
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 ( 0019): 14.74 3.826 12.00 93.75
+ ID2= 2 ( 0040): 91.18 5.521 12.37 82.49
=====
ID = 3 ( 0020): 105.92 7.176 12.03 84.05

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP7-PR_2-100 YEAR.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
V V I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y M M O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voioin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\5c04f0a0-2243-4403-ba58-70ff6ca9f2ea\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\5c04f0a0-2243-4403-ba58-70ff6ca9f2ea\scenar

DATE: 03/24/2023 TIME: 10:46:28

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\e81b71e9-a066-4486-ac1c-480ed0ba9ce9\571fbdef
Ptotal= 57.60 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69	
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69	
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69	
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69	
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69	
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69	
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69	
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69	
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69	
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69	
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69	
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69	
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69	
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69	
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69	
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69	
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69	
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69	
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69	
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69	
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69	
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69	
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69	
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69	
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69	
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69	
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69	
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69	
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69	
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69	
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69	
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69	
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69	
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69	
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69	
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69	
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69	
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69	

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 0.346 (1)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 20.152
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.350

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

HRP7-PR_2-100 YEAR.OUT
STANDHYD (0240)| Area (ha)= 20.08
ID= 1 DT= 3.0 min | Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

IMPERVIOUS PERVIOUS (I)
Surface Area (ha)= 11.65
Dep. Storage (mm)= 1.50
Average Slope (%)= 2.00
Length (m)= 365.88
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69		

HRP7-PR_2-100 YEAR.OUT									
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69		
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69		
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69		
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69		

Max.Eff.Inten.(mm/hr)= 63.59 21.95
over (min) 6.00 30.00
Storage Coeff. (min)= 5.42 (ii) 27.85 (ii)
Unit Hyd. Tpeak (min)= 6.00 30.00
Unit Hyd. peak (cms)= 0.20 0.64

TOTALS
PEAK FLOW (cms)= 1.40 0.40 1.600 (iii)
TIME TO PEAK (hrs)= 12.00 12.35 12.00
RUNOFF VOLUME (mm)= 56.10 23.85 37.39
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.41 0.65

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0038)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (1040): 10.35 0.346 12.25 20.15
+ ID2= 2 (0240): 20.08 1.600 12.00 37.39
=====

ID = 3 (0038): 30.43 1.841 12.00 31.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0029)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

HRP7-PR_2-100 YEAR.OUT

Distance	Elevation	Manning
0.00	101.00	0.0500
1.00	100.67	0.0500
2.00	100.33	0.0500 / 0.0300
3.00	100.00	0.0300
4.00	100.00	0.0300
5.00	100.33	0.0300 / 0.0500
6.00	100.67	0.0500
7.00	101.00	0.0500

Main Channel

Main Channel

Main Channel

----- TRAVEL TIME TABLE -----

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.321E+02	0.0	0.28	35.15
0.09	100.09	.721E+02	0.1	0.42	23.51
0.14	100.14	.120E+03	0.1	0.53	18.76
0.19	100.19	.176E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.490E+03	0.8	0.97	10.26
0.44	100.44	.614E+03	1.1	1.07	9.26
0.50	100.50	.741E+03	1.4	1.16	8.55
0.55	100.55	.879E+03	1.8	1.24	8.01
0.61	100.61	.103E+04	2.3	1.31	7.60
0.66	100.66	.119E+04	2.7	1.37	7.26
0.72	100.72	.136E+04	3.2	1.42	6.98
0.78	100.78	.154E+04	3.8	1.47	6.74
0.83	100.83	.173E+04	4.4	1.52	6.53
0.89	100.89	.194E+04	5.1	1.56	6.35
0.94	100.94	.215E+04	5.8	1.60	6.19
1.00	101.00	.238E+04	6.6	1.64	6.05

<--- hydrograph ---> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0038)	30.43	1.84	12.00	31.53	0.56	1.24
OUTFLOW: ID= 1 (0029)	30.43	1.54	12.07	31.52	0.51	1.18

HRP7-PR_2-100 YEAR.OUT

2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW	(cms)=	0.497 (i)
TIME TO PEAK	(hrs)=	12.083
RUNOFF VOLUME	(mm)=	21.522
TOTAL RAINFALL	(mm)=	57.600
RUNOFF COEFFICIENT	=	0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.003	0.58	6.083	1.15	12.083	8.30	18.08	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69

ADD HYD (0018)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0041):	11.30	0.497	12.08	21.52
+ ID2= 2 (0029):	30.43	1.537	12.07	31.52
ID = 3 (0018):	41.73	2.026	12.07	28.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

STANDHYD (0241)	Area	(ha)=	12.29
ID= 1 DT= 2.0 min	Total Imp(%)=	73.00	Dir. Conn.(%)= 73.00

IMPERVIOUS PERVIOUS (i)

Surface Area	(ha)=	8.97	3.32
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	286.24	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04

HRP7-PR_2-100 YEAR.OUT									
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04		
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04		
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04		
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04		
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04		
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04		
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04		
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04		
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04		
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04		
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04		
1.767	0.81	7.767	1.15	13.767	4.72	19.77	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04		
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04		
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69		
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69		
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69		
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69		
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69		
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69		
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		

HRP7-PR_2-100 YEAR.OUT									
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69		
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69		
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69		
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69		
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69		

HRP7-PR_2-100 YEAR.OUT

Max.Eff.Inten.(mm/hr)= 63.59 33.86
over (min) 5.00 12.00
Storage Coeff. (min)= 4.67 (ii) 10.36 (iii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.25 0.10

TOTALS
PEAK FLOW (cms)= 1.53 0.21 1.722 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 56.10 25.46 47.83
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.44 0.83

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0018):	41.73	2.026	12.07	28.81
+ ID2= 2 (0241):	12.29	1.722	12.00	47.83
=====				
ID = 3 (0021):	54.02	2.068	12.07	30.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0142)
ID= 1 DT= 3.0 min

Area (ha)=	10.92
Total Imp(%)=	53.00
Dir. Conn.(%)=	53.00

	IMPERVIOUS (ha)=	PERVIOUS (i) 5.13
Surface Area	5.79	
Dep. Storage	1.50	1.50
Average Slope	2.00	2.00
Length	269.81	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04

Max.Eff.Inten.(mm/hr)= 63.59 18.99
over (min) 6.00 15.00

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1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

HRP7-PR_2-100 YEAR.OUT

Storage Coeff. (min)=	4.51 (ii)	12.57 (ii)	
Unit Hyd. Tpeak (min)=	6.00	15.00	
Unit Hyd. peak (cms)=	0.22	0.08	
			TOTALS
PEAK FLOW (cms)=	0.99	0.17	1.123 (iii)
TIME TO PEAK (hrs)=	12.00	12.10	12.00
RUNOFF VOLUME (mm)=	56.10	14.86	36.72
TOTAL RAINFALL (mm)=	57.60	57.60	57.60
RUNOFF COEFFICIENT =	0.97	0.26	0.64

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):	10.92	1.123	12.00	36.72
+ ID2= 2 (0021):	54.02	2.068	12.07	30.42
=====				
ID = 3 (0023):	64.94	3.043	12.03	31.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 3.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0030	0.5000
	0.0370	0.1125	1.9000	0.7700
	0.0530	0.2275	6.4000	1.1000
	0.0650	0.3450	9.2000	1.2500
	0.0750	0.4630	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0023)	64.940	3.043	12.03	31.48
OUTFLOW: ID= 1 (0024)	64.940	1.893	12.28	30.43

PEAK FLOW REDUCTION [Qout/Qin](%)= 62.19
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.7692

CALIB			
STANDHYD (0143)	Area (ha)=	0.84	
ID= 1 DT= 1.0 min	Total Imp(%)=	55.00	Dir. Conn.(%)= 55.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.46	0.38
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	74.83	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.017	0.58	6.017	1.15	12.017	8.33	18.02	1.04		
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04		
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04		
0.083	0.58	6.083	1.15	12.083	8.29	18.08	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.117	0.58	6.117	1.15	12.117	8.29	18.12	1.04		
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.183	0.58	6.183	1.15	12.183	8.29	18.18	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.217	0.58	6.217	1.15	12.217	8.29	18.22	1.04		
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.283	0.58	6.283	1.15	12.283	8.29	18.28	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		

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0.317	0.58	6.317	1.15	12.317	8.29	18.32	1.04
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04
0.383	0.58	6.383	1.15	12.383	8.29	18.38	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04
0.483	0.58	6.483	1.15	12.483	8.29	18.48	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.517	0.58	6.517	1.15	12.517	4.72	18.52	1.04
0.533	0.58	6.533	1.15	12.533	4.72	18.53	1.04
0.550	0.58	6.550	1.15	12.550	4.72	18.55	1.04
0.567	0.58	6.567	1.15	12.567	4.72	18.57	1.04
0.583	0.58	6.583	1.15	12.583	4.72	18.58	1.04
0.600	0.58	6.600	1.15	12.600	4.72	18.60	1.04
0.617	0.58	6.617	1.15	12.617	4.72	18.62	1.04
0.633	0.58	6.633	1.15	12.633	4.72	18.63	1.04
0.650	0.58	6.650	1.15	12.650	4.72	18.65	1.04
0.667	0.58	6.667	1.15	12.667	4.72	18.67	1.04
0.683	0.58	6.683	1.15	12.683	4.72	18.68	1.04
0.700	0.58	6.700	1.15	12.700	4.72	18.70	1.04
0.717	0.58	6.717	1.15	12.717	4.72	18.72	1.04
0.733	0.58	6.733	1.15	12.733	4.72	18.73	1.04
0.750	0.58	6.750	1.15	12.750	4.72	18.75	1.04
0.767	0.58	6.767	1.15	12.767	4.72	18.77	1.04
0.783	0.58	6.783	1.15	12.783	4.72	18.78	1.04
0.800	0.58	6.800	1.15	12.800	4.72	18.80	1.04
0.817	0.58	6.817	1.15	12.817	4.72	18.82	1.04
0.833	0.58	6.833	1.15	12.833	4.72	18.83	1.04
0.850	0.58	6.850	1.15	12.850	4.72	18.85	1.04
0.867	0.58	6.867	1.15	12.867	4.72	18.87	1.04
0.883	0.58	6.883	1.15	12.883	4.72	18.88	1.04
0.900	0.58	6.900	1.15	12.900	4.72	18.90	1.04
0.917	0.58	6.917	1.15	12.917	4.72	18.92	1.04
0.933	0.58	6.933	1.15	12.933	4.72	18.93	1.04
0.950	0.58	6.950	1.15	12.950	4.72	18.95	1.04
0.967	0.58	6.967	1.15	12.967	4.72	18.97	1.04
0.983	0.58	6.983	1.15	12.983	4.72	18.98	1.04
1.000	0.58	7.000	1.15	13.000	4.72	19.00	1.04
1.017	0.58	7.017	1.15	13.017	0.81	19.02	1.04
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.117	0.58	7.117	1.15	13.117	0.81	19.12	1.04
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.183	0.58	7.183	1.15	13.183	0.81	19.18	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.217	0.58	7.217	1.15	13.217	0.81	19.22	1.04
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04
1.283	0.58	7.283	1.15	13.283	0.81	19.28	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.317	0.58	7.317	1.15	13.317	0.81	19.32	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04
1.383	0.58	7.383	1.15	13.383	0.81	19.38	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04
1.483	0.58	7.483	1.15	13.483	0.81	19.48	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.517	0.58	7.517	1.15	13.517	4.72	19.52	1.04
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.617	0.58	7.617	1.15	13.617	4.72	19.62	1.04
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.683	0.58	7.683	1.15	13.683	4.72	19.68	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.717	0.58	7.717	1.15	13.717	4.72	19.72	1.04
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04

HRP7-PR_2-100 YEAR.OUT									
1.767	1.04	7.767	1.15	13.767	4.72	19.77	1.04		
1.783	1.04	7.783	1.15	13.783	4.72	19.78	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.817	1.04	7.817	1.15	13.817	4.72	19.82	1.04		
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04		
1.883	1.04	7.883	1.15	13.883	4.72	19.88	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04		
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04		
1.983	1.04	7.983	1.15	13.983	4.72	19.98	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.017	0.75	8.017	1.56	14.017	1.74	20.02	0.69		
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69		
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.117	0.75	8.117	1.56	14.117	1.73	20.12	0.69		
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.183	0.75	8.183	1.56	14.183	1.73	20.18	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.217	0.75	8.217	1.56	14.217	1.73	20.22	0.69		
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69		
2.283	0.75	8.283	1.56	14.283	1.73	20.28	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.317	0.75	8.317	1.56	14.317	1.73	20.32	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69		
2.383	0.75	8.383	1.56	14.383	1.73	20.38	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69		
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69		
2.483	0.75	8.483	1.56	14.483	1.73	20.48	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.517	0.75	8.517	1.56	14.517	1.73	20.52	0.69		
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69		
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.617	0.75	8.617	1.56	14.617	1.73	20.62	0.69		
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.683	0.75	8.683	1.56	14.683	1.73	20.68	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.717	0.75	8.717	1.56	14.717	1.73	20.72	0.69		
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69		
2.783	0.75	8.783	1.56	14.783	1.73	20.78	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.817	0.75	8.817	1.56	14.817	1.73	20.82	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69		
2.883	0.75	8.883	1.56	14.883	1.73	20.88	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69		
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69		
2.983	0.75	8.983	1.56	14.983	1.73	20.98	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.017	0.75	9.017	1.84	15.017	1.73	21.02	0.69		
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69		
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69		
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69		
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.117	0.75	9.117	1.84	15.117	1.73	21.12	0.69		
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.183	0.75	9.183	1.84	15.183	1.73	21.18	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		

HRP7-PR_2-100 YEAR.OUT									
3.217	0.75	9.217	1.84	15.217	1.73	21.22	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.283	0.75	9.283	1.84	15.283	1.73	21.28	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.317	0.75	9.317	1.84	15.317	1.73	21.32	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.383	0.75	9.383	1.84	15.383	1.73	21.38	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.483	0.75	9.483	1.84	15.483	1.73	21.48	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.517	0.75	9.517	2.07	15.517	1.73	21.52	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.617	0.75	9.617	2.07	15.617	1.73	21.62	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.683	0.75	9.683	2.07	15.683	1.73	21.68	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.717	0.75	9.717	2.07	15.717	1.73	21.72	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.783	0.75	9.783	2.07	15.783	1.73	21.78	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.817	0.75	9.817	2.07	15.817	1.73	21.82	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.883	0.75	9.883	2.07	15.883	1.73	21.88	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
3.983	0.75	9.983	2.07	15.983	1.73	21.98	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.017	0.92	10.017	2.65	16.017	1.04	22.02	0.69		
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69		
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69		
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69		
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.117	0.92	10.117	2.65	16.117	1.04	22.12	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.183	0.92	10.183	2.65	16.183	1.04	22.18	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.217	0.92	10.217	2.65	16.217	1.04	22.20	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.283	0.92	10.283	2.65	16.283	1.04	22.28	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.317	0.92	10.317	2.65	16.317	1.04	22.32	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.383	0.92	10.383	2.65	16.383	1.04	22.38	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.483	0.92	10.483	2.65	16.483	1.04	22.48	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.517	0.92	10.517	3.57	16.517	1.04	22.52	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.617	0.92	10.617	3.57	16.617	1.04	22.62	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		

HRP7-PR_2-100 YEAR.OUT									
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.683	0.92	10.683	3.57	16.683	1.04	22.68	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.717	0.92	10.717	3.57	16.717	1.04	22.72	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		
4.783	0.92	10.783	3.57	16.783	1.04	22.78	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.817	0.92	10.817	3.57	16.817	1.04	22.82	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69		
4.883	0.92	10.883	3.57	16.883	1.04	22.88	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69		
4.983	0.92	10.983	3.57	16.983	1.04	22.98	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.017	0.92	11.017	5.53	17.017	1.04	23.02	0.69		
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69		
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69		
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.117	0.92	11.117	5.53	17.117	1.04	23.12	0.69		
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69		
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.183	0.92	11.183	5.53	17.183	1.04	23.18	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.217	0.92	11.217	5.53	17.217	1.04	23.22	0.69		
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69		
5.283	0.92	11.283	5.53	17.283	1.04	23.28	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.317	0.92	11.317	5.53	17.317	1.04	23.32	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69		
5.383	0.92	11.383	5.53	17.383	1.04	23.38	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69		
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69		
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.483	0.92	11.483	5.53	17.483	1.04	23.48	0.69		
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69		
5.517	0.92	11.517	23.96	17.517	1.04	23.52	0.69		
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.617	0.92	11.617	23.96	17.617	1.04	23.62	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.683	0.92	11.683	23.96	17.683	1.04	23.68	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.717	0.92	11.717	23.96	17.717	1.04	23.72	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69		
5.767	0.92	11.767	63.57	17.767	1.04	23.77	0.69		
5.783	0.92	11.783	63.59	17.783	1.04	23.78	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.817	0.92	11.817	63.59	17.817	1.04	23.82	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.883	0.92	11.883	63.59	17.883	1.04	23.88	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		
5.983	0.92	11.983	63.59	17.983	1.04	23.98	0.69		
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69		
Max.Eff.Inten.(mm/hr)= 63.59 26.91									
over (min) 5.00 10.00									
Storage Coeff. (min)= 2.00 (ii) 9.90 (ii)									
Unit Hyd. Tpeak (min)= 5.00 10.00									
Unit Hyd. peak (cms)= 0.37 0.11									

HRP7-PR_2-100 YEAR.OUT									
TOTALS									
PEAK FLOW	(cms)=	0.08	0.02	0.100	(iii)				
TIME TO PEAK	(hrs)=	12.00	12.07	12.00					
RUNOFF VOLUME	(mm)=	56.10	20.32	39.99					
TOTAL RAINFALL	(mm)=	57.60	57.60	57.60					
RUNOFF COEFFICIENT	=	0.97	0.35	0.69					
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0026)									
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.					
	(ha)	(cms)	(hrs)	(mm)					
ID1= 1 (0143):	0.84	0.100	12.00	39.99					
+ ID2= 2 (0024):	64.94	1.893	12.28	30.43					
=====									
ID = 3 (0026):	65.78	1.895	8.18	20.54					
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

CALIB									
STANDHYD (0244)	Area (ha)=	6.58							
ID= 1 DT= 4.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)=	45.00					

IMPERVIOUS PERVIOUS (i)									
Surface Area	(ha)=	2.96	3.62						
Dep. Storage	(mm)=	1.50	1.50						
Average Slope	(%)=	2.00	2.00						
Length	(m)=	209.44	40.00						
Mannings n	=	0.013	0.250						
NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.									
---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	
0.067	0.58	6.067	1.15	12.067	0.39	18.07	1.04		
0.133	0.58	6.133	1.15	12.133	0.29	18.13	1.04		
0.200	0.58	6.200	1.15	12.200	0.29	18.20	1.04		
0.267	0.58	6.267	1.15	12.267	0.29	18.27	1.04		
0.333	0.58	6.333	1.15	12.333	0.29	18.33	1.04		
0.400	0.58	6.400	1.15	12.400	0.29	18.40	1.04		
0.467	0.58	6.467	1.15	12.467	0.29	18.47	1.04		
0.533	0.58	6.533	1.15	12.533	0.28	18.53	1.04		
0.600	0.58	6.600	1.15	12.600	0.26	18.60	1.04		
0.667	0.58	6.667	1.15	12.667	0.26	18.67	1.04		
0.733	0.58	6.733	1.15	12.733	0.26	18.73	1.04		
0.800	0.58	6.800	1.15	12.800	0.26	18.80	1.04		
0.867	0.58	6.867	1.15	12.867	0.26	18.87	1.04		
0.933	0.58	6.933	1.15	12.933	0.26	18.93	1.04		
1.000	0.58	7.000	1.15	13.000	0.26	19.00	1.04		
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04		
1.133	0.58	7.133	1.15	13.133	0.72	19.07	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		
1.533	0.58	7.533	1.15	13.533	0.76	19.53	1.04		
1.600	0.58	7.600	1.15	13.600	0.72	19.60	1.04		
1.667	0.58	7.667	1.15	13.667	0.72	19.67	1.04		
1.733	0.58	7.733	1.15	13.733	0.47	19.73	1.04		
1.800	0.92	7.800	1.15	13.800	0.72	19.80	1.04		
1.867	1.04	7.867	1.15	13.867	0.72	19.87	1.04		
1.933	1.04	7.933	1.15	13.933	0.72	19.93	1.04		
2.000	1.04	8.000	1.15	14.000	0.72	20.00	1.04		
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69		
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69		
2.533	0.75	8.533	1.56	14.533	1.72	20.53	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		

HRP7-PR_2-100 YEAR.OUT

2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69
3.533	0.75	9.533	1.96	15.533	1.73	21.53	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69
4.533	0.92	10.533	3.11	16.533	1.04	22.53	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69
5.533	0.92	11.533	14.74	17.533	1.04	23.53	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69
5.800	0.92	11.800	53.68	17.800	1.04	23.80	0.69
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 24.18
over (min) 5.00 20.00
Storage Coeff. (min)= 3.88 (ii) 16.33 (ii)
Unit Hyd. Tpeak (min)= 4.00 20.00
Unit Hyd. peak (cms)= 0.27 0.06

PEAK FLOW (cms)= 0.52 0.14 0.614 (iii)
TIME TO PEAK (hrs)= 12.00 12.20 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 36.42
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.63

TOTALS

0.614 (iii)

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0244):	6.58	0.614	12.00	36.42
+ ID2= 2 (0026):	65.78	1.895	8.18	20.54
=====				
ID = 3 (0028):	72.36	1.908	8.18	21.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

=====

V	V	I	SSSS	U	U	A	L	(v 6.1.2002)
V	V	I	SS	U	U	A	A L	
V	V	I	SS	U	U	AAAA	L	

HRP7-PR_2-100 YEAR.OUT

V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y M M 0 0
0 0 T T H H Y Y M M 0 0
000 T T H H Y Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voin.dat
Output filename: C:\Users\Abira\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\0c0fa964-b913-4005-8c99-d75de34d8ae2\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\0c0fa964-b913-4005-8c99-d75de34d8ae2\scenar

DATE: 03/24/2023 TIME: 10:46:28

USER:

COMMENTS: _____

** SIMULATION : Run 02 **

| MASS STORM | Filename: C:\Users\Abira\AppData
| | ata\Local\Temp\
| | e81b71e9-a066-4486-ac1c-480ed0ba9ce9\fb8e60ca
| Ptotal= 76.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.77	6.25	1.54	12.25	11.06	18.25	1.38	
0.50	0.77	6.50	1.54	12.50	11.06	18.50	1.38	
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38	
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38	
1.25	0.77	7.25	1.54	13.25	1.08	19.25	1.38	
1.50	0.77	7.50	1.54	13.50	1.08	19.50	1.38	
1.75	0.77	7.75	1.54	13.75	6.38	19.75	1.38	
2.00	1.38	8.00	1.54	14.00	6.38	20.00	1.38	
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92	
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92	
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92	
3.00	1.00	9.00	2.07	15.00	2.30	21.00	0.92	
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92	
3.50	1.00	9.50	2.46	15.50	2.30	21.50	0.92	
3.75	1.00	9.75	2.76	15.75	2.30	21.75	0.92	
4.00	1.00	10.00	2.76	16.00	2.30	22.00	0.92	
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92	
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92	
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92	
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92	
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92	
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92	
5.75	1.23	11.75	31.95	17.75	1.38	23.75	0.92	
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92	

| CALIB |
| NASHYD (1040)| Area (ha)= 10.35 Curve Number (CN)= 75.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38	
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38	
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38	
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38	

HRP7-PR_2-100 YEAR.OUT

0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 0.573 (i)
 TIME TO PEAK (hrs)= 12.250
 RUNOFF VOLUME (mm)= 32.941
 TOTAL RAINFALL (mm)= 76.800
 RUNOFF COEFFICIENT = 0.429

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 | CALIB |
 | STANDHYD (0240) |
ID= 1 DT= 3.0 min
 IMPERVIOUS PERVIOUS (1)
 Surface Area (ha)= 8.43 11.65

Dep. Storage (mm)= 1.50 1.50
 Average Slope (%)= 2.00 2.00
 Length (m)= 365.88 100.00
 Mannings n = 0.013 0.250

HRP7-PR_2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38				1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38				1.38
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38				1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38				1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38				1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38				1.38
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38				1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38				1.38
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38				1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38				1.38
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38				1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38				1.38
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38				1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38				1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38				1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38				1.38
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38				1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38				1.38
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38				1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38				1.38
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38				1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38				1.38
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38				1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38				1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38				1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38				1.38
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38				1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38				1.38
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38				1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38				1.38
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38				1.38
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38				1.38
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38				1.38
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38				1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38				1.38
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38				1.38
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38				1.38
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38				1.38
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38				1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38				1.38
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92				0.92
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92				0.92
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92				0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92				0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92				0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92				0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92				0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92				0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92				0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92				0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92				0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92				0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92				0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92				0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92				0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92				0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92				0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92				0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92				0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92				0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92				0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92				0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92				0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92				0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92				0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92				0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92				0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92				0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92				0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92				0.92
3.550	1.00	9.550	2.46	15.550	2.30	21.55	0.92				0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92				0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92				0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92				0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92				0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92				0.92

HRP7-PR_2-100 YEAR.OUT											
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92				
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92				
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92				
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92				
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92				
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92				
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92				
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92				
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92				
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92				
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92				
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92				
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92				
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92				
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92				
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92				
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92				
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92				
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92				
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92				
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92				
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92				
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92				
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92				
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92				
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92				
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92				
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92				
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92				
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92				
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92				
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92				
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92				
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92				
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92				
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92				
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92				
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92				
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92				
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92				
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92				
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92				
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92				
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92				

Max.Eff.Inten.(mm/hr)=	84.79	41.92	
over (min)	6.00	24.00	
Storage Coeff. (min)=	4.83 (ii)	22.14 (ii)	
Unit Hyd. Tpeak (min)=	6.00	24.00	
Unit Hyd. peak (cms)=	0.21	0.05	
			TOTALS
PEAK FLOW (cms)=	1.90	0.73	2.342 (iii)
TIME TO PEAK (hrs)=	12.00	12.25	12.00
RUNOFF VOLUME (mm)=	75.30	37.51	53.38
TOTAL RAINFALL (mm)=	76.80	76.80	76.80
RUNOFF COEFFICIENT =	0.98	0.49	0.70

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0038)					
1	2	3			
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (1040):	10.35	0.573	12.25	32.94	
+ ID2= 2 (0240):	20.00	2.342	12.00	53.30	
ID = 3 (0038):	30.43	2.751	12.00	46.43	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0029)			
IN= 2--> OUT= 1		Routing time step (min)'= 2.00	
<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.321E+02	0.0	0.28	35.15
0.09	100.09	.721E+02	0.1	0.42	23.51
0.14	100.14	.120E+03	0.1	0.53	18.76
0.19	100.19	.176E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.490E+03	0.8	0.97	10.26
0.44	100.44	.614E+03	1.1	1.07	9.26
0.50	100.50	.741E+03	1.4	1.16	8.55
0.55	100.55	.879E+03	1.8	1.24	8.01
0.61	100.61	.103E+04	2.3	1.31	7.60
0.66	100.66	.119E+04	2.7	1.37	7.20
0.72	100.72	.136E+04	3.2	1.42	6.98
0.78	100.78	.154E+04	3.8	1.47	6.74
0.83	100.83	.173E+04	4.4	1.52	6.53
0.89	100.89	.194E+04	5.1	1.56	6.35
0.94	100.94	.215E+04	5.8	1.60	6.19
1.00	101.00	.238E+04	6.6	1.64	6.05
<---- hydrograph ---->					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
					(m)
					(m/s)
INFLOW : ID= 2 (0038)	30.43	2.75	12.00	46.43	0.67
OUTFLOW: ID= 1 (0029)	30.43	2.35	12.07	46.42	0.62
					1.37
					1.32

CALCB
NASHYD (1041) | Area (ha)= 11.30 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.26

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38		
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38		
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38		
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38		
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38		
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38		
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38		
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38		
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38		
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38		
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38		
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38		
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38		
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38		
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38		
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38		
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92		
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92		
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92		
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92		
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92		
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92		
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92		
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92		
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92		
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92		
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92		
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92		

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3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 0.819 (l)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 34.887
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.454

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):	11.30	0.819	12.08	34.89
+ ID2= 2 (0029):	30.43	2.348	12.07	46.42
ID = 3 (0018):	41.73	3.155	12.07	43.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	12.29
STANDHYD (0241)	Total Imp(%)=	73.00	Dir. Conn.(%)= 73.00
ID= 1 DT= 2.0 min			

IMPERVIOUS	PERVIOUS (l)
Surface Area (ha)=	8.97 3.32
Dep. Storage (mm)=	1.50 1.50
Average Slope (%)=	2.00 2.00
Length (m)=	286.24 40.00
Mannings n	= 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38

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0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38
0.500	0.77	6.500	1.54	12.500	11.05	18.50	1.38
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38
1.000	0.77	7.000	1.54	13.000	5.67	19.00	1.38
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38
1.500	0.77	7.500	1.54	13.500	1.09	19.50	1.38
1.533	0.77	7.533	1.54	13.533	6.30	19.53	1.38
1.567	0.77	7.567	1.54	13.567	6.30	19.57	1.38
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38
1.633	0.77	7.633	1.54	13.633	6.30	19.63	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38
1.767	1.08	7.767	1.54	13.767	6.30	19.77	1.38
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38
1.967	1.38	7.967	1.54	13.967	6.30	19.97	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.033	1.00	8.033	2.07	14.033	2.30	20.03	0.92
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.233	1.00	8.233	2.07	14.233	2.30	20.23	0.92
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.367	1.00	8.367	2.07	14.367	2.30	20.37	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.433	1.00	8.433	2.07	14.433	2.30	20.43	0.92
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92
2.567	1.00	8.567	2.07	14.567	2.30	20.57	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.633	1.00	8.633	2.07	14.633	2.30	20.63	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92
2.767	1.00	8.767	2.07	14.767	2.30	20.77	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.867	1.00	8.867	2.07	14.867	2.30	20.87	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92
2.967	1.00	8.967	2.07	14.967	2.30	20.97	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.033	1.00	9.033	2.46	15.033	2.30	21.03	0.92
3.067	1.00	9.067	2.46	15.067	2.30	21.07	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.133	1.00	9.133	2.46	15.133	2.30	21.13	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.233	1.00	9.233	2.46	15.233	2.30	21.23	0.92
3.267	1.00	9.267	2.46	15.267	2.30	21.27	0.92

HRP7-PR_2-100 YEAR.OUT									
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92		
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92		
3.367	1.00	9.367	2.46	15.367	2.30	21.37	0.92		
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92		
3.433	1.00	9.433	2.46	15.433	2.30	21.43	0.92		
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92		
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92		
3.533	1.00	9.533	2.76	15.533	2.30	21.53	0.92		
3.567	1.00	9.567	2.76	15.567	2.30	21.57	0.92		
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92		
3.633	1.00	9.633	2.76	15.633	2.30	21.63	0.92		
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92		
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92		
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92		
3.767	1.00	9.767	2.76	15.767	2.30	21.77	0.92		
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92		
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92		
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92		
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92		
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92		
3.967	1.00	9.967	2.76	15.967	2.30	21.97	0.92		
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92		
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92		
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92		
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92		
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92		
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92		
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92		
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92		
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92		
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92		
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92		
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92		
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92		
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92		
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92		
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92		
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92		
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92		
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92		
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92		
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92		
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92		
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92		
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92		
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92		
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92		
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92		
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92		
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92		
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92		
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92		
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92		
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92		
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92		
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92		
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92		
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92		
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92		
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92		
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92		
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92		
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92		
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92		
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92		
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92		
5.500	1.23	11.500	7.40	17.500	1.38	23.50	0.92		
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92		
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92		
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92		
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92		
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92		
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92		
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92		
5.767	1.23	11.767	58.44	17.767	1.38	23.77	0.92		
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92		
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92		
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92		
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92		
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92		
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92		
6.000	1.23	12.000	84.68	18.000	1.38	24.00	0.92		
Max.Eff.Inten.(mm/hr)=	84.79	52.62							
over (min)	5.00	10.00							
Storage Coeff. (min)=	4.17 (ii)	9.23 (ii)							
Unit Hyd. Tpeak (min)=	4.00	10.00							

Unit Hyd. peak (cms)=						0.27	0.12	HRP7-PR_2-100 YEAR.OUT	
PEAK FLOW (cms)=						2.06	0.36	*TOTALS*	
TIME TO PEAK (hrs)=						12.00	12.07	2.462 (iii)	
RUNOFF VOLUME (mm)=						75.30	39.70	12.00	
TOTAL RAINFALL (mm)=						76.80	76.80	65.69	
RUNOFF COEFFICIENT =						0.98	0.52	76.80	
								0.86	
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN = 79.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0021)									
1 + 2 = 3									
ID1= 1 (0018): 41.73 3.155 12.07 43.30									
+ ID2= 2 (0241): 12.29 2.402 12.00 65.69									
=====									
ID = 3 (0021): 54.02 3.211 12.07 44.66									
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

CALIB									
STANDHYD (0142)									
ID= 1 DT= 3.0 min									
Area (ha)= 10.92									
Total Imp(%)= 53.00 Dir. Conn.(%)= 53.00									

IMPERVIOUS PERVIOUS (i)									
Surface Area (ha)= 5.79 5.13									
Dep. Storage (mm)= 1.50 1.50									
Average Slope (%)= 2.00 2.00									
Length (m)= 269.81 40.00									
Mannings n = 0.013 0.250									
NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.									

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38		
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38		
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38		
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38		
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38		
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38		
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38		
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38		
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38		
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38		
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92		

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2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 31.53
over (min) 6.00 12.00
Storage Coeff. (min)= 4.02 (ii) 11.21 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.24 0.10

PEAK FLOW (cms)= 1.33 0.30

TOTALS
1.605 (iii)

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TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 75.30 24.55 51.45
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.32 0.67

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0142):	10.92	1.605	12.00	51.45
+ ID2= 2 (0021):	54.02	3.211	12.07	44.66
ID = 3 (0023):	64.94	4.583	12.03	45.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)
IN= 2---> OUT= 1
DT= 3.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0830	0.5800
0.0370	0.1125	1.9000	0.7700
0.0530	0.2275	6.4000	1.1000
0.0650	0.3450	9.2000	1.2500
0.0750	0.4630	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0023)	64.940	4.583	12.03	45.80
OUTFLOW: ID= 1 (0024)	64.940	3.351	12.20	44.68

PEAK FLOW REDUCTION [Qout/Qin](%)= 73.11
TIME SHIFT OF PEAK FLOW (min)= 10.50
MAXIMUM STORAGE USED (ha.m.)= 0.8765

CALIB
STANDHYD (0143)
ID= 1 DT= 1.0 min

Area (ha)= 0.84
Total Imp(%)= 55.00 Dir. Conn.(%)= 55.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.46	0.38
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	74.83	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.77	6.017	1.54	12.017	11.11	18.02	1.38
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38
0.083	0.77	6.083	1.54	12.083	11.06	18.08	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.117	0.77	6.117	1.54	12.117	11.06	18.12	1.38
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.183	0.77	6.183	1.54	12.183	11.06	18.18	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.217	0.77	6.217	1.54	12.217	11.06	18.22	1.38
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.283	0.77	6.283	1.54	12.283	11.06	18.28	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.317	0.77	6.317	1.54	12.317	11.06	18.32	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38
0.383	0.77	6.383	1.54	12.383	11.06	18.38	1.38

HRP7-PR_2-100 YEAR.OUT											
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38				
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38				
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38				
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38				
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38				
0.483	0.77	6.483	1.54	12.483	11.06	18.48	1.38				
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38				
0.517	0.77	6.517	1.54	12.517	5.68	18.52	1.38				
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38				
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38				
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38				
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38				
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38				
0.617	0.77	6.617	1.54	12.617	5.68	18.62	1.38				
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38				
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38				
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38				
0.683	0.77	6.683	1.54	12.683	5.68	18.68	1.38				
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38				
0.717	0.77	6.717	1.54	12.717	5.68	18.72	1.38				
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38				
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38				
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38				
0.783	0.77	6.783	1.54	12.783	5.68	18.78	1.38				
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38				
0.817	0.77	6.817	1.54	12.817	5.68	18.82	1.38				
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38				
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38				
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38				
0.883	0.77	6.883	1.54	12.883	5.68	18.88	1.38				
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38				
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38				
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38				
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38				
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38				
0.983	0.77	6.983	1.54	12.983	5.68	18.98	1.38				
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38				
1.017	0.77	7.017	1.54	13.017	1.08	19.02	1.38				
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38				
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38				
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38				
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38				
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38				
1.117	0.77	7.117	1.54	13.117	1.08	19.12	1.38				
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38				
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38				
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38				
1.183	0.77	7.183	1.54	13.183	1.08	19.18	1.38				
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38				
1.217	0.77	7.217	1.54	13.217	1.08	19.22	1.38				
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38				
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38				
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38				
1.283	0.77	7.283	1.54	13.283	1.08	19.28	1.38				
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38				
1.317	0.77	7.317	1.54	13.317	1.08	19.32	1.38				
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38				
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38				
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38				
1.383	0.77	7.383	1.54	13.383	1.08	19.38	1.38				
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38				
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38				
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38				
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38				
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38				
1.483	0.77	7.483	1.54	13.483	1.08	19.48	1.38				
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38				
1.517	0.77	7.517	1.54	13.517	6.38	19.52	1.38				
1.533	0.77	7.533	1.54	13.533	6.38	19.53	1.38				
1.550	0.77	7.550	1.54	13.550	6.38	19.55	1.38				
1.567	0.77	7.567	1.54	13.567	6.38	19.57	1.38				
1.583	0.77	7.583	1.54	13.583	6.38	19.58	1.38				
1.600	0.77	7.600	1.54	13.600	6.38	19.60	1.38				
1.617	0.77	7.617	1.54	13.617	6.38	19.62	1.38				
1.633	0.77	7.633	1.54	13.633	6.38	19.63	1.38				
1.650	0.77	7.650	1.54	13.650	6.38	19.65	1.38				
1.667	0.77	7.667	1.54	13.667	6.38	19.67	1.38				
1.683	0.77	7.683	1.54	13.683	6.38	19.68	1.38				
1.700	0.77	7.700	1.54	13.700	6.38	19.70	1.38				
1.717	0.77	7.717	1.54	13.717	6.38	19.72	1.38				
1.733	0.77	7.733	1.54	13.733	6.38	19.73	1.38				
1.750	0.77	7.750	1.54	13.750	6.38	19.75	1.38				
1.767	1.38	7.767	1.54	13.767	6.38	19.77	1.38				
1.783	1.38	7.783	1.54	13.783	6.38	19.78	1.38				
1.800	1.38	7.800	1.54	13.800	6.38	19.80	1.38				
1.817	1.38	7.817	1.54	13.817	6.38	19.82	1.38				
1.833	1.38	7.833	1.54	13.833	6.38	19.83	1.38				

HRP7-PR_2-100 YEAR.OUT											
1.850	1.38	7.850	1.54	13.850	6.38	19.85	1.38				
1.867	1.38	7.867	1.54	13.867	6.38	19.87	1.38				
1.883	1.38	7.883	1.54	13.883	6.38	19.88	1.38				
1.900	1.38	7.900	1.54	13.900	6.38	19.90	1.38				
1.917	1.38	7.917	1.54	13.917	6.38	19.92	1.38				
1.933	1.38	7.933	1.54	13.933	6.38	19.93	1.38				
1.950	1.38	7.950	1.54	13.950	6.38	19.95	1.38				
1.967	1.38	7.967	1.54	13.967	6.38	19.97	1.38				
1.983	1.38	7.983	1.54	13.983	6.38	19.98	1.38				
2.000	1.38	8.000	1.54	14.000	6.38	20.00	1.38				
2.017	1.00	8.017	2.07	14.017	2.31	20.02	0.92				
2.033	1.00	8.033	2.07	14.033	2.38	20.03	0.92				
2.050	1.00	8.050	2.07	14.050	2.38	20.05	0.92				
2.067	1.00	8.067	2.07	14.067	2.38	20.07	0.92				
2.083	1.00	8.083	2.07	14.083	2.38	20.08	0.92				
2.100	1.00	8.100	2.07	14.100	2.38	20.10	0.92				
2.117	1.00	8.117	2.07	14.117	2.38	20.12	0.92				
2.133	1.00	8.133	2.07	14.133	2.38	20.13	0.92				
2.150	1.00	8.150	2.07	14.150	2.38	20.15	0.92				
2.167	1.00	8.167	2.07	14.167	2.38	20.17	0.92				
2.183	1.00	8.183	2.07	14.183	2.38	20.18	0.92				
2.200	1.00	8.200	2.07	14.200	2.38	20.20	0.92				
2.217	1.00	8.217	2.07	14.217	2.38	20.22	0.92				
2.233	1.00	8.233	2.07	14.233	2.38	20.23	0.92				
2.250	1.00	8.250	2.07	14.250	2.38	20.25	0.92				
2.267	1.00	8.267	2.07	14.267	2.38	20.27	0.92				
2.283	1.00	8.283	2.07	14.283	2.38	20.28	0.92				
2.300	1.00	8.300	2.07	14.300	2.38	20.30	0.92				
2.317	1.00	8.317	2.07	14.317	2.38	20.32	0.92				
2.333	1.00	8.333	2.07	14.333	2.38	20.33	0.92				
2.350	1.00	8.350	2.07	14.350	2.38	20.35	0.92				
2.367	1.00	8.367	2.07	14.367	2.38	20.37	0.92				
2.383	1.00	8.383	2.07	14.383	2.38	20.38	0.92				
2.400	1.00	8.400	2.07	14.400	2.38	20.40	0.92				
2.417	1.00	8.417	2.07	14.417	2.38	20.42	0.92				
2.433	1.00	8.433	2.07	14.433	2.38	20.43	0.92				
2.450	1.00	8.450	2.07	14.450	2.38	20.45	0.92				
2.467	1.00	8.467	2.07	14.467	2.38	20.47	0.92				
2.483	1.00	8.483	2.07	14.483	2.38	20.48	0.92				
2.500	1.00	8.500	2.07	14.500	2.38	20.50	0.92				
2.517	1.00	8.517	2.07	14.517	2.38	20.52	0.92				
2.533	1.00	8.533	2.07	14.533	2.38	20.53	0.92				
2.550	1.00	8.550	2.07	14.550	2.38	20.55	0.92				
2.567	1.00	8.567	2.07	14.567	2.38	20.57	0.92				
2.583	1.00	8.583	2.07	14.583	2.38	20.58	0.92				
2.600	1.00	8.600	2.07	14.600	2.38	20.60	0.92				
2.617	1.00	8.617	2.07	14.617	2.38	20.62	0.92				
2.633	1.00	8.633	2.07	14.633	2.38	20.63	0.92				
2.650	1.00	8.650	2.07	14.650	2.38	20.65	0.92				
2.667	1.00	8.667	2.07	14.667	2.38	20.67	0.92				
2.683	1.00	8.683	2.07	14.683	2.38	20.68	0.92				
2.700	1.00	8.700	2.07	14.700	2.38	20.70	0.92				
2.717	1.00	8.717	2.07	14.717	2.38	20.72	0.92				
2.733	1.00	8.733	2.07	14.733	2.38	20.73	0.92				
2.750	1.00	8.750	2.07	14.750	2.38	20.75	0.92				
2.767	1.00	8.767	2.07	14.767	2.38	20.77	0.92				
2.783	1.00	8.783	2.07	14.783	2.38	20.78	0.92				
2.800	1.00	8.800	2.07	14.800	2.38	20.80	0.92				
2.817	1.00	8.817	2.07	14.817	2.38	20.82	0.92				
2.833	1.00	8.833	2.07	14.833	2.38	20.83	0.92				
2.850	1.00	8.850	2.07	14.850	2.38	20.85	0.92				
2.867	1.00	8.867	2.07	14.867	2.38	20.87	0.92				
2.883	1.00	8.883	2.07	14.883	2.38	20.88	0.92				
2.900	1.00	8.900	2.07	14.900	2.38	20.90	0.92				
2.917	1.00	8.917	2.07	14.917	2.38	20.92	0.92				
2.933	1.00	8.933	2.07	14.933	2.38	20.93	0.92				
2.950	1.00	8.950	2.07	14.950	2.38	20.95	0.92				
2.967	1.00	8.967	2.07	14.967	2.38	20.97	0.92				
2.983	1.00	8.983	2.07	14.983	2.38	20.98	0.92				
3.000	1.00	9.000	2.07	15.000	2.38	21.00	0.92				
3.017	1.00	9.017	2.46	15.017	2.38	21.02	0.92				
3.033	1.00	9.033	2.46	15.033	2.38	21.03	0.92				
3.050	1.00	9.050	2.46	15.050	2.38	21.05	0.92				
3.067	1.00	9.067	2.46	15.067	2.38	21.07	0.92				
3.083	1.00	9.083	2.46	15.083	2.38	21.08	0.92				
3.100	1.00	9.100	2.46	15.100	2.38	21.10	0.92				
3.117	1.00	9.117	2.46	15.117	2.38	21.12	0.92				
3.133	1.00	9.133	2.46	15.133	2.38	21.13	0.92				
3.150	1.00	9.150	2.46	15.150	2.38	21.15	0.92				
3.167	1.00	9.167	2.46	15.167	2.38	21.17	0.92				
3.183	1.00	9.183	2.46	15.183	2.38	21.18	0.92				
3.200	1.00	9.200	2.46	15.200	2.38	21.20	0.92				
3.217	1.00	9.217	2.46	15.217	2.38	21.22	0.92				
3.233	1.00	9.233	2.46	15.233	2.38	21.23	0.92				
3.250	1.00	9.250	2.46	15.250	2.38	21.25	0.92				
3.267	1.00	9.267	2.46	15.267	2.38	21.27	0.92				
3.283	1.00	9.283	2.46	15.283	2.38	21.28	0.92				

HRP7-PR_2-100 YEAR.OUT									
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92		
3.317	1.00	9.317	2.46	15.317	2.30	21.32	0.92		
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92		
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92		
3.367	1.00	9.367	2.46	15.367	2.30	21.37	0.92		
3.383	1.00	9.383	2.46	15.383	2.30	21.38	0.92		
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92		
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92		
3.433	1.00	9.433	2.46	15.433	2.30	21.43	0.92		
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92		
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92		
3.483	1.00	9.483	2.46	15.483	2.30	21.48	0.92		
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92		
3.517	1.00	9.517	2.76	15.517	2.30	21.52	0.92		
3.533	1.00	9.533	2.76	15.533	2.30	21.53	0.92		
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92		
3.567	1.00	9.567	2.76	15.567	2.30	21.57	0.92		
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92		
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92		
3.617	1.00	9.617	2.76	15.617	2.30	21.62	0.92		
3.633	1.00	9.633	2.76	15.633	2.30	21.63	0.92		
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92		
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92		
3.683	1.00	9.683	2.76	15.683	2.30	21.68	0.92		
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92		
3.717	1.00	9.717	2.76	15.717	2.30	21.72	0.92		
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92		
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92		
3.767	1.00	9.767	2.76	15.767	2.30	21.77	0.92		
3.783	1.00	9.783	2.76	15.783	2.30	21.78	0.92		
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92		
3.817	1.00	9.817	2.76	15.817	2.30	21.82	0.92		
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92		
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92		
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92		
3.883	1.00	9.883	2.76	15.883	2.30	21.88	0.92		
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92		
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92		
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92		
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92		
3.967	1.00	9.967	2.76	15.967	2.30	21.97	0.92		
3.983	1.00	9.983	2.76	15.983	2.30	21.98	0.92		
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92		
4.017	1.23	10.017	3.53	16.017	1.30	22.02	0.92		
4.033	1.23	10.033	3.53	16.033	1.30	22.03	0.92		
4.050	1.23	10.050	3.53	16.050	1.30	22.05	0.92		
4.067	1.23	10.067	3.53	16.067	1.30	22.07	0.92		
4.083	1.23	10.083	3.53	16.083	1.30	22.08	0.92		
4.100	1.23	10.100	3.53	16.100	1.30	22.10	0.92		
4.117	1.23	10.117	3.53	16.117	1.30	22.12	0.92		
4.133	1.23	10.133	3.53	16.133	1.30	22.13	0.92		
4.150	1.23	10.150	3.53	16.150	1.30	22.15	0.92		
4.167	1.23	10.167	3.53	16.167	1.30	22.17	0.92		
4.183	1.23	10.183	3.53	16.183	1.30	22.18	0.92		
4.200	1.23	10.200	3.53	16.200	1.30	22.20	0.92		
4.217	1.23	10.217	3.53	16.217	1.30	22.22	0.92		
4.233	1.23	10.233	3.53	16.233	1.30	22.23	0.92		
4.250	1.23	10.250	3.53	16.250	1.30	22.25	0.92		
4.267	1.23	10.267	3.53	16.267	1.30	22.27	0.92		
4.283	1.23	10.283	3.53	16.283	1.30	22.28	0.92		
4.300	1.23	10.300	3.53	16.300	1.30	22.30	0.92		
4.317	1.23	10.317	3.53	16.317	1.30	22.32	0.92		
4.333	1.23	10.333	3.53	16.333	1.30	22.33	0.92		
4.350	1.23	10.350	3.53	16.350	1.30	22.35	0.92		
4.367	1.23	10.367	3.53	16.367	1.30	22.37	0.92		
4.383	1.23	10.383	3.53	16.383	1.30	22.38	0.92		
4.400	1.23	10.400	3.53	16.400	1.30	22.40	0.92		
4.417	1.23	10.417	3.53	16.417	1.30	22.42	0.92		
4.433	1.23	10.433	3.53	16.433	1.30	22.43	0.92		
4.450	1.23	10.450	3.53	16.450	1.30	22.45	0.92		
4.467	1.23	10.467	3.53	16.467	1.30	22.47	0.92		
4.483	1.23	10.483	3.53	16.483	1.30	22.48	0.92		
4.500	1.23	10.500	3.53	16.500	1.30	22.50	0.92		
4.517	1.23	10.517	4.76	16.517	1.30	22.52	0.92		
4.533	1.23	10.533	4.76	16.533	1.30	22.53	0.92		
4.550	1.23	10.550	4.76	16.550	1.30	22.55	0.92		
4.567	1.23	10.567	4.76	16.567	1.30	22.57	0.92		
4.583	1.23	10.583	4.76	16.583	1.30	22.58	0.92		
4.600	1.23	10.600	4.76	16.600	1.30	22.60	0.92		
4.617	1.23	10.617	4.76	16.617	1.30	22.62	0.92		
4.633	1.23	10.633	4.76	16.633	1.30	22.63	0.92		
4.650	1.23	10.650	4.76	16.650	1.30	22.65	0.92		
4.667	1.23	10.667	4.76	16.667	1.30	22.67	0.92		
4.683	1.23	10.683	4.76	16.683	1.30	22.68	0.92		
4.700	1.23	10.700	4.76	16.700	1.30	22.70	0.92		
4.717	1.23	10.717	4.76	16.717	1.30	22.72	0.92		
4.733	1.23	10.733	4.76	16.733	1.30	22.73	0.92		

HRP7-PR_2-100 YEAR.OUT									
4.750	1.23	10.750	4.76	16.750	1.30	22.75	0.92		
4.767	1.23	10.767	4.76	16.767	1.30	22.77	0.92		
4.783	1.23	10.783	4.76	16.783	1.30	22.78	0.92		
4.800	1.23	10.800	4.76	16.800	1.30	22.80	0.92		
4.817	1.23	10.817	4.76	16.817	1.30	22.82	0.92		
4.833	1.23	10.833	4.76	16.833	1.30	22.83	0.92		
4.850	1.23	10.850	4.76	16.850	1.30	22.85	0.92		
4.867	1.23	10.867	4.76	16.867	1.30	22.87	0.92		
4.883	1.23	10.883	4.76	16.883	1.30	22.88	0.92		
4.900	1.23	10.900	4.76	16.900	1.30	22.90	0.92		
4.917	1.23	10.917	4.76	16.917	1.30	22.92	0.92		
4.933	1.23	10.933	4.76	16.933	1.30	22.93	0.92		
4.950	1.23	10.950	4.76	16.950	1.30	22.95	0.92		
4.967	1.23	10.967	4.76	16.967	1.30	22.97	0.92		
4.983	1.23	10.983	4.76	16.983	1.30	22.98	0.92		
5.000	1.23	11.000	4.76	17.000	1.30	23.00	0.92		
5.017	1.23	11.017	7.37	17.017	1.30	23.02	0.92		
5.033	1.23	11.033	7.37	17.033	1.30	23.03	0.92		
5.050	1.23	11.050	7.37	17.050	1.30	23.05	0.92		
5.067	1.23	11.067	7.37	17.067	1.30	23.07	0.92		
5.083	1.23	11.083	7.37	17.083	1.30	23.08	0.92		
5.100	1.23	11.100	7.37	17.100	1.30	23.10	0.92		
5.117	1.23	11.117	7.37	17.117	1.30	23.12	0.92		
5.133	1.23	11.133	7.37	17.133	1.30	23.13	0.92		
5.150	1.23	11.150	7.37	17.150	1.30	23.15	0.92		
5.167	1.23	11.167	7.37	17.167	1.30	23.17	0.92		
5.183	1.23	11.183	7.37	17.183	1.30	23.18	0.92		
5.200	1.23	11.200	7.37	17.200	1.30	23.20	0.92		
5.217	1.23	11.217	7.37	17.217	1.30	23.22	0.92		
5.233	1.23	11.233	7.37	17.233	1.30	23.23	0.92		
5.250	1.23	11.250	7.37	17.250	1.30	23.25	0.92		
5.267	1.23	11.267	7.37	17.267	1.30	23.27	0.92		
5.283	1.23	11.283	7.37	17.283	1.30	23.28	0.92		
5.300	1.23	11.300	7.37	17.300	1.30	23.30	0.92		
5.317	1.23	11.317	7.37	17.317	1.30	23.32	0.92		
5.333	1.23	11.333	7.37	17.333	1.30	23.33	0.92		
5.350	1.23	11.350	7.37	17.350	1.30	23.35	0.92		
5.367	1.23	11.367	7.37	17.367	1.30	23.37	0.92		
5.383	1.23	11.383	7.37	17.383	1.30	23.38	0.92		
5.400	1.23	11.400	7.37	17.400	1.30	23.40	0.92		
5.417	1.23	11.417	7.37	17.417	1.30	23.42	0.92		
5.433	1.23	11.433	7.37	17.433	1.30	23.43	0.92		
5.450	1.23	11.450	7.37	17.450	1.30	23.45	0.92		
5.467	1.23	11.467	7.37	17.467	1.30	23.47	0.92		
5.483	1.23	11.483	7.37	17.483	1.30	23.48	0.92		
5.500	1.23	11.500	7.37	17.500	1.30	23.50	0.92		
5.517	1.23	11.517	31.95	17.517	1.30	23.52	0.92		
5.533	1.23	11.533	31.95	17.533	1.30	23.53	0.92		
5.550	1.23	11.550	31.95	17.550	1.30	23.55	0.92		
5.567	1.23	11.567	31.95	17.567	1.30	23.57	0.92		
5.583	1.23	11.583	31.95	17.583	1.30	23.58	0.92		
5.600	1.23	11.600	31.95	17.600	1.30	23.60	0.92		
5.617	1.23	11.617	31.95	17.617	1.30	23.62	0.92		
5.633	1.23	11.633	31.95	17.633	1.30	23.63	0.92		
5.650	1.23	11.650	31.95	17.650	1.30	23.65	0.92		
5.667	1.23	11.667	31.95	17.667	1.30	23.67	0.92		
5.683	1.23	11.683	31.95	17.683	1.30	23.68	0.92		
5.700	1.23	11.700	31.95	17.700	1.30	23.70	0.92		
5.717	1.23	11.717	31.95	17.717	1.30	23.72	0.92		
5.733	1.23	11.733	31.95	17.733	1.30	23.73	0.92		
5.750	1.23	11.750	31.95	17.750	1.30	23.75	0.92		
5.767	1.23	11.767	84.79	17.767	1.30	23.77	0.92		
5.783	1.23	11.783	84.79	17.783	1.30	23.78	0.92		
5.800	1.23	11.800	84.79	17.800	1.30	23.80	0.92		
5.817	1.23	11.817	84.79	17.817	1.30	23.82	0.92		
5.833	1.23	11.833	84.79	17.833	1.30	23.83	0.92		
5.850	1.23	11.850	84.79	17.850	1.30	23.85	0.92		
5.867	1.23	11.867	84.79	17.867	1.30	23.87	0.92		
5.883	1.23	11.883	84.79	17.883	1.30	23.88	0.92		
5.900	1.23	11.900	84.79	17.900	1.30	23.90	0.92		
5.917	1.23	11.917	84.79	17.917	1.30	23.92	0.92		
5.933	1.23	11.933	84.79	17.933	1.30	23.93	0.92		
5.950	1.23	11.950	84.79	17.950	1.30	23.95	0.92		
5.967	1.23	11.967	84.79	17.967	1.30	23.97	0.92		
5.983	1.23	11.983	84.79	17.983	1.30	23.98	0.92		
6.000	1.23	12.000	84.79	18.000	1.30	24.00	0.92		

RUNOFF COEFFICIENT = 0.98 0.42 HRP7-PR_2-100 YEAR.OUT
0.73

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0143):	0.84	0.141	12.00	56.07
+ ID2= 2 (0024):	64.94	3.351	12.20	44.68
=====				
ID = 3 (0026):	65.78	3.354	8.13	39.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0244)			
ID= 1 DT= 4.0 min	Area (ha)=	6.58	
	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.96	3.62
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	209.44	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	0.77	6.067	1.54	12.067	11.07	18.07	1.38				
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38				
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38				
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38				
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38				
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38				
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38				
0.533	0.77	6.533	1.54	12.533	8.37	18.53	1.38				
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38				
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38				
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38				
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38				
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38				
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38				
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38				
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38				
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38				
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38				
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38				
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38				
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38				
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38				
1.533	0.77	7.533	1.54	13.533	3.69	19.53	1.38				
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38				
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38				
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38				
1.800	1.23	7.800	1.54	13.800	6.30	19.80	1.38				
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38				
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38				
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38				
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92				
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92				
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92				
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92				
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92				
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92				
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92				
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92				
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92				
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92				
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92				
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92				
2.867	1.00	8.867	2.07	14.867	2.30	20.87	0.92				
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92				
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92				
3.067	1.00	9.067	2.46	15.067	2.30	21.07	0.92				
3.133	1.00	9.133	2.46	15.133	2.30	21.13	0.92				

HRP7-PR_2-100 YEAR.OUT											
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92				
3.267	1.00	9.267	2.46	15.267	2.30	21.27	0.92				
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92				
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92				
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92				
3.533	1.00	9.533	2.61	15.533	2.30	21.53	0.92				
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92				
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92				
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92				
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92				
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92				
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92				
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92				
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92				
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92				
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92				
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92				
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92				
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92				
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92				
4.533	1.23	10.533	4.15	16.533	1.38	22.53	0.92				
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92				
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92				
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92				
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92				
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92				
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92				
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92				
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92				
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92				
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92				
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92				
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92				
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92				
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92				
5.533	1.23	11.533	19.66	17.533	1.38	23.53	0.92				
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92				
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92				
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92				
5.800	1.23	11.800	71.57	17.800	1.38	23.80	0.92				
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92				
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92				
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92				

Max.Eff.Inten.(mm/hr)= 84.79 42.25
over (min) 5.00 16.00
Storage Coeff. (min)= 3.45 (ii) 13.42 (ii)
Unit Hyd. Tpeak (min)= 4.00 16.00
Unit Hyd. peak (cms)= 0.29 0.08

PEAK FLOW (cms)= 0.69 0.26 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.13 0.005 (iii)
RUNOFF VOLUME (mm)= 75.30 32.57 51.80
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.42 0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0244):	6.58	0.905	12.00	51.00	
+ ID2= 2 (0026):	65.78	3.354	8.13	39.13	
=====					
ID = 3 (0028):	72.36	3.373	8.13	32.10	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O

HRP7-PR_2-100 YEAR.OUT

O O T T H H Y M M O O
000 T T H H Y M M 000
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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voinput.dat
Output filename: C:\Users\AbirA\AppData\Local\CVica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\bda38cd8-059f-4d7e-b1e4-1572a81a89a9\scenar
Summary filename: C:\Users\AbirA\AppData\Local\CVica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\bda38cd8-059f-4d7e-b1e4-1572a81a89a9\scenar

DATE: 03/24/2023 TIME: 10:46:29

USER:

COMMENTS: _____

** SIMULATION : Run 03 **

MASS STORM
Filename: C:\Users\AbirA\AppData\Local\Temp\ea81b71e9-a066-4486-ac1c-480ed0ba9ce9\1913d010
Ptotal= 88.80 mm
Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60	
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60	
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60	
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60	
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60	
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60	
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60	
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60	
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07	
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07	
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07	
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07	
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07	
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07	
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07	
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07	
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07	
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07	
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07	
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07	
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07	
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07	
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07	
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07	

CALIB
NASHYD (1040)
ID= 1 DT= 5.0 min
Area (ha)= 10.35
Curve Number (CN)= 75.0
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.35
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60	
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60	
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60	
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60	
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60	
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60	
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60	
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60	
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60	

HRP7-PR_2-100 YEAR.OUT

0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60	
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60	
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60	
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60	
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60	
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60	
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60	
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60	
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60	
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60	
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60	
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60	
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60	
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60	
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60	
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07	
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07	
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07	
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07	
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07	
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07	
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07	
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07	
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07	
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07	
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07	
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07	
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07	
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07	
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07	
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07	
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07	
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07	
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07	
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07	
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07	
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07	
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07	
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07	
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07	
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07	
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07	
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07	
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07	
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07	
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07	
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07	
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07	
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07	
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07	
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07	
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07	
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07	
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07	
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07	
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07	
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07	
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07	
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07	
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07	
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07	
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07	
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07	

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 0.730 (l)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 41.676
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.469

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0240)
ID= 1 DT= 3.0 min
Area (ha)= 20.08
Total Imp(%)= 42.00
Dir. Conn.(%)= 42.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.43 11.65
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 365.88 100.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP7-PR_2-100 YEAR.OUT

HRP7-PR_2-100 YEAR.OUT

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07

4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)=	98.04	52.34
over (min)	6.00	21.00
Storage Coeff. (min)=	4.55 (ii)	20.40 (ii)
Unit Hyd. Tpeak (min)=	6.00	21.00
Unit Hyd. peak (cms)=	0.22	0.05
PEAK FLOW (cms)=	2.21	0.97
TIME TO PEAK (hrs)=	12.00	12.20
RUNOFF VOLUME (mm)=	87.30	46.71
TOTAL RAINFALL (mm)=	88.80	88.80
RUNOFF COEFFICIENT =	0.98	0.53
		0.72

TOTALS
2.858 (iii)

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0038)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1040):	10.35	0.730	12.17	41.68
+ ID2= 2 (0240):	20.08	2.858	12.00	63.76
ID = 3 (0038):	30.43	3.385	12.00	56.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0029)		Routing time step (min)'= 2.00	
IN= 2--> OUT= 1			
<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

HRP7-PR_2-100 YEAR.OUT

----- TRAVEL TIME TABLE -----

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.321E+02	0.0	0.28	35.15
0.09	100.09	.722E+02	0.1	0.42	23.51
0.14	100.14	.120E+03	0.1	0.53	18.76
0.19	100.19	.176E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.498E+03	0.8	0.97	10.26
0.44	100.44	.614E+03	1.1	1.07	9.26
0.50	100.50	.741E+03	1.4	1.16	8.55
0.55	100.55	.879E+03	1.8	1.24	8.01
0.61	100.61	.103E+04	2.3	1.31	7.60
0.66	100.66	.119E+04	2.7	1.37	7.26
0.72	100.72	.136E+04	3.2	1.42	6.98
0.78	100.78	.154E+04	3.8	1.47	6.74
0.83	100.83	.173E+04	4.4	1.52	6.53
0.89	100.89	.194E+04	5.1	1.56	6.35
0.94	100.94	.215E+04	5.8	1.60	6.19
1.00	101.00	.238E+04	6.6	1.64	6.05

<--- hydrograph --->				<-pipe / channel->		
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0030)	30.43	3.39	12.00	56.25	0.73	1.43
OUTFLOW: ID= 1 (0029)	30.43	2.92	12.07	56.24	0.68	1.39

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3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW	(cms)=	1.039 (i)
TIME TO PEAK	(hrs)=	12.083
RUNOFF VOLUME	(mm)=	43.951
TOTAL RAINFALL	(mm)=	88.800
RUNOFF COEFFICIENT	=	0.495

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME ' hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME ' hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.89	6.083	1.78	12.083	12.79	18.03	1.60
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60

ADD HYD (0018)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1041):	11.30	1.039	12.08	43.95
+ ID2= 2 (0029):	30.43	2.918	12.07	56.24
=====				
ID = 3 (0018):	41.73	3.942	12.07	52.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (0241)	Area (ha)=	12.29
ID= 1 DT= 2.0 min	Total Imp(%)=	73.00
	Dir. Conn.(%)=	73.00

			IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	8.97	3.32	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	286.24	40.00	
Mannings n	=	0.013	0.250	

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0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60		
1.000	0.89	7.000	1.78	13.000	6.56	19.00	1.60		
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.500	0.89	7.500	1.78	13.500	1.26	19.50	1.60		
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60		
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.767	1.24	7.767	1.78	13.767	7.28	19.77	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60		
2.000	1.60	8.000	1.78	14.000	7.27	20.00	1.60		
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07		

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3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.367	1.42	11.367	8.52	17.367	1.60	23.37	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07
5.767	1.42	11.767	67.57	17.767	1.60	23.77	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07
5.967	1.42	11.967	98.04	17.967	1.60	23.97	1.07
6.000	1.42	12.000	97.92	18.000	1.60	24.00	1.07
Max.Eff.Inten.(mm/hr)=				98.04	65.06		
over (min)				5.00	10.00		
Storage Coeff. (min)=				3.93 (ii)	8.71 (ii)		
Unit Hyd. Tpeak (min)=				4.00	10.00		
Unit Hyd. peak (cms)=				0.28	0.12		
PEAK FLOW				2.39	0.45	*TOTALS	
TIME TO PEAK (hrs)=				12.00	12.83	2.828 (iii)	
RUNOFF VOLUME (mm)=				87.09	49.22	77.00	

TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.55 0.87

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP7-PR_2-100 YEAR.OUT

HRP7-PR_2-100 YEAR.OUT

[ADD HYD (0021)]
[1 + 2 = 3]
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0018): 41.73 3.942 12.07 52.91
+ ID2= 2 (0241): 12.29 2.828 12.00 77.02
=====

ID = 3 (0021): 54.02 4.008 12.07 54.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

[CALIB
STANDHYD (0142)]
ID= 1 DT= 3.0 min]
Area (ha)= 10.02
Total Imp(%)= 53.00 Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.79
Dep. Storage (mm)= 1.50
Average Slope (%)= 2.00
Length (m)= 269.81
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.050 0.89 | 6.050 1.78 | 12.050 12.79 | 18.05 1.60
0.100 0.89 | 6.100 1.78 | 12.100 12.79 | 18.10 1.60
0.150 0.89 | 6.150 1.78 | 12.150 12.79 | 18.15 1.60
0.200 0.89 | 6.200 1.78 | 12.200 12.79 | 18.20 1.60
0.250 0.89 | 6.250 1.78 | 12.250 12.79 | 18.25 1.60
0.300 0.89 | 6.300 1.78 | 12.300 12.79 | 18.30 1.60
0.350 0.89 | 6.350 1.78 | 12.350 12.79 | 18.35 1.60
0.400 0.89 | 6.400 1.78 | 12.400 12.79 | 18.40 1.60
0.450 0.89 | 6.450 1.78 | 12.450 12.79 | 18.45 1.60
0.500 0.89 | 6.500 1.78 | 12.500 12.78 | 18.50 1.60
0.550 0.89 | 6.550 1.78 | 12.550 6.57 | 18.55 1.60
0.600 0.89 | 6.600 1.78 | 12.600 6.57 | 18.60 1.60
0.650 0.89 | 6.650 1.78 | 12.650 6.57 | 18.65 1.60
0.700 0.89 | 6.700 1.78 | 12.700 6.57 | 18.70 1.60
0.750 0.89 | 6.750 1.78 | 12.750 6.57 | 18.75 1.60
0.800 0.89 | 6.800 1.78 | 12.800 6.57 | 18.80 1.60
0.850 0.89 | 6.850 1.78 | 12.850 6.57 | 18.85 1.60
0.900 0.89 | 6.900 1.78 | 12.900 6.57 | 18.90 1.60
0.950 0.89 | 6.950 1.78 | 12.950 6.57 | 18.95 1.60
1.000 0.89 | 7.000 1.78 | 13.000 6.57 | 19.00 1.60
1.050 0.89 | 7.050 1.78 | 13.050 1.24 | 19.05 1.60
1.100 0.89 | 7.100 1.78 | 13.100 1.24 | 19.10 1.60
1.150 0.89 | 7.150 1.78 | 13.150 1.24 | 19.15 1.60
1.200 0.89 | 7.200 1.78 | 13.200 1.24 | 19.20 1.60
1.250 0.89 | 7.250 1.78 | 13.250 1.24 | 19.25 1.60
1.300 0.89 | 7.300 1.78 | 13.300 1.24 | 19.30 1.60
1.350 0.89 | 7.350 1.78 | 13.350 1.24 | 19.35 1.60
1.400 0.89 | 7.400 1.78 | 13.400 1.24 | 19.40 1.60
1.450 0.89 | 7.450 1.78 | 13.450 1.24 | 19.45 1.60
1.500 0.89 | 7.500 1.78 | 13.500 1.25 | 19.50 1.60
1.550 0.89 | 7.550 1.78 | 13.550 7.28 | 19.55 1.60
1.600 0.89 | 7.600 1.78 | 13.600 7.28 | 19.60 1.60
1.650 0.89 | 7.650 1.78 | 13.650 7.28 | 19.65 1.60
1.700 0.89 | 7.700 1.78 | 13.700 7.28 | 19.70 1.60
1.750 0.89 | 7.750 1.78 | 13.750 7.28 | 19.75 1.60
1.800 1.60 | 7.800 1.78 | 13.800 7.28 | 19.80 1.60
1.850 1.60 | 7.850 1.78 | 13.850 7.28 | 19.85 1.60
1.900 1.60 | 7.900 1.78 | 13.900 7.28 | 19.90 1.60
1.950 1.60 | 7.950 1.78 | 13.950 7.28 | 19.95 1.60
2.000 1.60 | 8.000 1.78 | 14.000 7.28 | 20.00 1.60
2.050 1.15 | 8.050 2.40 | 14.050 2.66 | 20.05 1.07
2.100 1.15 | 8.100 2.40 | 14.100 2.66 | 20.10 1.07
2.150 1.15 | 8.150 2.40 | 14.150 2.66 | 20.15 1.07
2.200 1.15 | 8.200 2.40 | 14.200 2.66 | 20.20 1.07
2.250 1.15 | 8.250 2.40 | 14.250 2.66 | 20.25 1.07
2.300 1.15 | 8.300 2.40 | 14.300 2.66 | 20.30 1.07

2.350 1.15 | 8.350 2.40 | 14.350 2.66 | 20.35 1.07
2.400 1.15 | 8.400 2.40 | 14.400 2.66 | 20.40 1.07
2.450 1.15 | 8.450 2.40 | 14.450 2.66 | 20.45 1.07
2.500 1.15 | 8.500 2.40 | 14.500 2.66 | 20.50 1.07
2.550 1.15 | 8.550 2.40 | 14.550 2.66 | 20.55 1.07
2.600 1.15 | 8.600 2.40 | 14.600 2.66 | 20.60 1.07
2.650 1.15 | 8.650 2.40 | 14.650 2.66 | 20.65 1.07
2.700 1.15 | 8.700 2.40 | 14.700 2.66 | 20.70 1.07
2.750 1.15 | 8.750 2.40 | 14.750 2.66 | 20.75 1.07
2.800 1.15 | 8.800 2.40 | 14.800 2.66 | 20.80 1.07
2.850 1.15 | 8.850 2.40 | 14.850 2.66 | 20.85 1.07
2.900 1.15 | 8.900 2.40 | 14.900 2.66 | 20.90 1.07
2.950 1.15 | 8.950 2.40 | 14.950 2.66 | 20.95 1.07
3.000 1.15 | 9.000 2.40 | 15.000 2.66 | 21.00 1.07
3.050 1.15 | 9.050 2.84 | 15.050 2.66 | 21.05 1.07
3.100 1.15 | 9.100 2.84 | 15.100 2.66 | 21.10 1.07
3.150 1.15 | 9.150 2.84 | 15.150 2.66 | 21.15 1.07
3.200 1.15 | 9.200 2.84 | 15.200 2.66 | 21.20 1.07
3.250 1.15 | 9.250 2.84 | 15.250 2.66 | 21.25 1.07
3.300 1.15 | 9.300 2.84 | 15.300 2.66 | 21.30 1.07
3.350 1.15 | 9.350 2.84 | 15.350 2.66 | 21.35 1.07
3.400 1.15 | 9.400 2.84 | 15.400 2.66 | 21.40 1.07
3.450 1.15 | 9.450 2.84 | 15.450 2.66 | 21.45 1.07
3.500 1.15 | 9.500 2.84 | 15.500 2.66 | 21.50 1.07
3.550 1.15 | 9.550 3.20 | 15.550 2.66 | 21.55 1.07
3.600 1.15 | 9.600 3.20 | 15.600 2.66 | 21.60 1.07
3.650 1.15 | 9.650 3.20 | 15.650 2.66 | 21.65 1.07
3.700 1.15 | 9.700 3.20 | 15.700 2.66 | 21.70 1.07
3.750 1.15 | 9.750 3.20 | 15.750 2.66 | 21.75 1.07
3.800 1.15 | 9.800 3.20 | 15.800 2.66 | 21.80 1.07
3.850 1.15 | 9.850 3.20 | 15.850 2.66 | 21.85 1.07
3.900 1.15 | 9.900 3.20 | 15.900 2.66 | 21.90 1.07
3.950 1.15 | 9.950 3.20 | 15.950 2.66 | 21.95 1.07
4.000 1.15 | 10.000 3.20 | 16.000 2.66 | 22.00 1.07
4.050 1.42 | 10.050 4.08 | 16.050 1.60 | 22.05 1.07
4.100 1.42 | 10.100 4.08 | 16.100 1.60 | 22.10 1.07
4.150 1.42 | 10.150 4.08 | 16.150 1.60 | 22.15 1.07
4.200 1.42 | 10.200 4.08 | 16.200 1.60 | 22.20 1.07
4.250 1.42 | 10.250 4.08 | 16.250 1.60 | 22.25 1.07
4.300 1.42 | 10.300 4.08 | 16.300 1.60 | 22.30 1.07
4.350 1.42 | 10.350 4.08 | 16.350 1.60 | 22.35 1.07
4.400 1.42 | 10.400 4.08 | 16.400 1.60 | 22.40 1.07
4.450 1.42 | 10.450 4.08 | 16.450 1.60 | 22.45 1.07
4.500 1.42 | 10.500 4.09 | 16.500 1.60 | 22.50 1.07
4.550 1.42 | 10.550 5.51 | 16.550 1.60 | 22.55 1.07
4.600 1.42 | 10.600 5.51 | 16.600 1.60 | 22.60 1.07
4.650 1.42 | 10.650 5.51 | 16.650 1.60 | 22.65 1.07
4.700 1.42 | 10.700 5.51 | 16.700 1.60 | 22.70 1.07
4.750 1.42 | 10.750 5.51 | 16.750 1.60 | 22.75 1.07
4.800 1.42 | 10.800 5.51 | 16.800 1.60 | 22.80 1.07
4.850 1.42 | 10.850 5.51 | 16.850 1.60 | 22.85 1.07
4.900 1.42 | 10.900 5.51 | 16.900 1.60 | 22.90 1.07
4.950 1.42 | 10.950 5.51 | 16.950 1.60 | 22.95 1.07
5.000 1.42 | 11.000 5.51 | 17.000 1.60 | 23.00 1.07
5.050 1.42 | 11.050 8.52 | 17.050 1.60 | 23.05 1.07
5.100 1.42 | 11.100 8.52 | 17.100 1.60 | 23.10 1.07
5.150 1.42 | 11.150 8.52 | 17.150 1.60 | 23.15 1.07
5.200 1.42 | 11.200 8.52 | 17.200 1.60 | 23.20 1.07
5.250 1.42 | 11.250 8.52 | 17.250 1.60 | 23.25 1.07
5.300 1.42 | 11.300 8.52 | 17.300 1.60 | 23.30 1.07
5.350 1.42 | 11.350 8.52 | 17.350 1.60 | 23.35 1.07
5.400 1.42 | 11.400 8.52 | 17.400 1.60 | 23.40 1.07
5.450 1.42 | 11.450 8.52 | 17.450 1.60 | 23.45 1.07
5.500 1.42 | 11.500 8.54 | 17.500 1.60 | 23.50 1.07
5.550 1.42 | 11.550 36.94 | 17.550 1.60 | 23.55 1.07
5.600 1.42 | 11.600 36.94 | 17.600 1.60 | 23.60 1.07
5.650 1.42 | 11.650 36.94 | 17.650 1.60 | 23.65 1.07
5.700 1.42 | 11.700 36.94 | 17.700 1.60 | 23.70 1.07
5.750 1.42 | 11.750 36.97 | 17.750 1.60 | 23.75 1.07
5.800 1.42 | 11.800 98.04 | 17.800 1.60 | 23.80 1.07
5.850 1.42 | 11.850 98.04 | 17.850 1.60 | 23.85 1.07
5.900 1.42 | 11.900 98.04 | 17.900 1.60 | 23.90 1.07
5.950 1.42 | 11.950 98.04 | 17.950 1.60 | 23.95 1.07
6.000 1.42 | 12.000 97.99 | 18.000 1.60 | 24.00 1.07

Max.Eff.Inten.(mm/hr)= 98.04 40.38
over (min) 6.00 12.00
Storage Coeff. (min)= 3.79 (ii) 10.57 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.24 0.18

TOTALS

PEAK FLOW (cms)= 1.54 0.40 1.908 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 87.30 31.37 61.01
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.35 0.69

HRP7-PR_2-100 YEAR.OUT

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0142):	10.92	1.908	12.00	61.01
+ ID2= 2 (0021):	54.02	4.008	12.07	54.02
=====				
ID = 3 (0023):	64.94	5.623	12.03	55.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)				
OVERFLOW IS OFF				
IN= 2--> OUT= 1				
DT= 3.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0030	0.5000
	0.0370	0.1125	1.9000	0.7700
	0.0530	0.2275	6.4000	1.1000
	0.0650	0.3450	9.2000	1.2500
	0.0750	0.4630	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0023)	64.940	5.623	12.03	55.19
OUTFLOW: ID= 1 (0024)	64.940	4.183	12.20	54.07

PEAK FLOW REDUCTION [Qout/Qin](%)= 74.39
TIME SHIFT OF PEAK FLOW (min)= 10.50
MAXIMUM STORAGE USED (ha.m.)= 0.9376

CALIB				
STANDHYD (0143)				
ID= 1 DT= 1.0 min				
	Area (ha)=	0.84		
	Total Imp(%)=	55.00	Dir. Conn.(%)=	55.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	0.46	0.38	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	74.83	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.017	0.09	6.017	1.78	12.017	12.85	18.02	1.60		
0.033	0.09	6.033	1.78	12.033	12.79	18.03	1.60		
0.050	0.09	6.050	1.78	12.050	12.79	18.05	1.60		
0.067	0.09	6.067	1.78	12.067	12.79	18.07	1.60		
0.083	0.09	6.083	1.78	12.083	12.79	18.08	1.60		
0.100	0.09	6.100	1.78	12.100	12.79	18.10	1.60		
0.117	0.09	6.117	1.78	12.117	12.79	18.12	1.60		
0.133	0.09	6.133	1.78	12.133	12.79	18.13	1.60		
0.150	0.09	6.150	1.78	12.150	12.79	18.15	1.60		
0.167	0.09	6.167	1.78	12.167	12.79	18.17	1.60		
0.183	0.09	6.183	1.78	12.183	12.79	18.18	1.60		
0.200	0.09	6.200	1.78	12.200	12.79	18.20	1.60		
0.217	0.09	6.217	1.78	12.217	12.79	18.22	1.60		
0.233	0.09	6.233	1.78	12.233	12.79	18.23	1.60		
0.250	0.09	6.250	1.78	12.250	12.79	18.25	1.60		
0.267	0.09	6.267	1.78	12.267	12.79	18.27	1.60		
0.283	0.09	6.283	1.78	12.283	12.79	18.28	1.60		
0.300	0.09	6.300	1.78	12.300	12.79	18.30	1.60		
0.317	0.09	6.317	1.78	12.317	12.79	18.32	1.60		
0.333	0.09	6.333	1.78	12.333	12.79	18.33	1.60		
0.350	0.09	6.350	1.78	12.350	12.79	18.35	1.60		
0.367	0.09	6.367	1.78	12.367	12.79	18.37	1.60		
0.383	0.09	6.383	1.78	12.383	12.79	18.38	1.60		
0.400	0.09	6.400	1.78	12.400	12.79	18.40	1.60		
0.417	0.09	6.417	1.78	12.417	12.79	18.42	1.60		
0.433	0.09	6.433	1.78	12.433	12.79	18.43	1.60		
0.450	0.09	6.450	1.78	12.450	12.79	18.45	1.60		
0.467	0.09	6.467	1.78	12.467	12.79	18.47	1.60		

HRP7-PR_2-100 YEAR.OUT

0.483	0.09	6.483	1.78	12.483	12.79	18.48	1.60
0.500	0.09	6.500	1.78	12.500	12.79	18.50	1.60
0.517	0.09	6.517	1.78	12.517	6.58	18.52	1.60
0.533	0.09	6.533	1.78	12.533	6.57	18.53	1.60
0.550	0.09	6.550	1.78	12.550	6.57	18.55	1.60
0.567	0.09	6.567	1.78	12.567	6.57	18.57	1.60
0.583	0.09	6.583	1.78	12.583	6.57	18.58	1.60
0.600	0.09	6.600	1.78	12.600	6.57	18.60	1.60
0.617	0.09	6.617	1.78	12.617	6.57	18.62	1.60
0.633	0.09	6.633	1.78	12.633	6.57	18.63	1.60
0.650	0.09	6.650	1.78	12.650	6.57	18.65	1.60
0.667	0.09	6.667	1.78	12.667	6.57	18.67	1.60
0.683	0.09	6.683	1.78	12.683	6.57	18.68	1.60
0.700	0.09	6.700	1.78	12.700	6.57	18.70	1.60
0.717	0.09	6.717	1.78	12.717	6.57	18.72	1.60
0.733	0.09	6.733	1.78	12.733	6.57	18.73	1.60
0.750	0.09	6.750	1.78	12.750	6.57	18.75	1.60
0.767	0.09	6.767	1.78	12.767	6.57	18.77	1.60
0.783	0.09	6.783	1.78	12.783	6.57	18.78	1.60
0.800	0.09	6.800	1.78	12.800	6.57	18.80	1.60
0.817	0.09	6.817	1.78	12.817	6.57	18.82	1.60
0.833	0.09	6.833	1.78	12.833	6.57	18.83	1.60
0.850	0.09	6.850	1.78	12.850	6.57	18.85	1.60
0.867	0.09	6.867	1.78	12.867	6.57	18.87	1.60
0.883	0.09	6.883	1.78	12.883	6.57	18.88	1.60
0.900	0.09	6.900	1.78	12.900	6.57	18.90	1.60
0.917	0.09	6.917	1.78	12.917	6.57	18.92	1.60
0.933	0.09	6.933	1.78	12.933	6.57	18.93	1.60
0.950	0.09	6.950	1.78	12.950	6.57	18.95	1.60
0.967	0.09	6.967	1.78	12.967	6.57	18.97	1.60
0.983	0.09	6.983	1.78	12.983	6.57	18.98	1.60
1.000	0.09	7.000	1.78	13.000	6.57	19.00	1.60
1.017	0.09	7.017	1.78	13.017	1.25	19.02	1.60
1.033	0.09	7.033	1.78	13.033	1.24	19.03	1.60
1.050	0.09	7.050	1.78	13.050	1.24	19.05	1.60
1.067	0.09	7.067	1.78	13.067	1.24	19.07	1.60
1.083	0.09	7.083	1.78	13.083	1.24	19.08	1.60
1.100	0.09	7.100	1.78	13.100	1.24	19.10	1.60
1.117	0.09	7.117	1.78	13.117	1.24	19.12	1.60
1.133	0.09	7.133	1.78	13.133	1.24	19.13	1.60
1.150	0.09	7.150	1.78	13.150	1.24	19.15	1.60
1.167	0.09	7.167	1.78	13.167	1.24	19.17	1.60
1.183	0.09	7.183	1.78	13.183	1.24	19.18	1.60
1.200	0.09	7.200	1.78	13.200	1.24	19.20	1.60
1.217	0.09	7.217	1.78	13.217	1.24	19.22	1.60
1.233	0.09	7.233	1.78	13.233	1.24	19.23	1.60
1.250	0.09	7.250	1.78	13.250	1.24	19.25	1.60
1.267	0.09	7.267	1.78	13.267	1.24	19.27	1.60
1.283	0.09	7.283	1.78	13.283	1.24	19.28	1.60
1.300	0.09	7.300	1.78	13.300	1.24	19.30	1.60
1.317	0.09	7.317	1.78	13.317	1.24	19.32	1.60
1.333	0.09	7.333	1.78	13.333	1.24	19.33	1.60
1.350	0.09	7.350	1.78	13.350	1.24	19.35	1.60
1.367	0.09	7.367	1.78	13.367	1.24	19.37	1.60
1.383	0.09	7.383	1.78	13.383	1.24	19.38	1.60
1.400	0.09	7.400	1.78	13.400	1.24	19.40	1.60
1.417	0.09	7.417	1.78	13.417	1.24	19.42	1.60
1.433	0.09	7.433	1.78	13.433	1.24	19.43	1.60
1.450	0.09	7.450	1.78	13.450	1.24	19.45	1.60
1.467	0.09	7.467	1.78	13.467	1.24	19.47	1.60
1.483	0.09	7.483	1.78	13.483	1.24	19.48	1.60
1.500	0.09	7.500	1.78	13.500	1.24	19.50	1.60
1.517	0.09	7.517	1.78	13.517	7.27	19.52	1.60
1.533	0.09	7.533	1.78	13.533	7.28	19.53	1.60
1.550	0.09	7.550	1.78	13.550	7.28	19.55	1.60
1.567	0.09	7.567	1.78	13.567	7.28	19.57	1.60
1.583	0.09	7.583	1.78	13.583	7.28	19.58	1.60
1.600	0.09	7.600	1.78	13.600	7.28	19.60	1.60
1.617	0.09	7.617	1.78	13.617	7.28	19.62	1.60
1.633	0.09	7.633	1.78	13.633	7.28	19.63	1.60
1.650	0.09	7.650	1.78	13.650	7.28	19.65	1.60
1.667	0.09	7.667	1.78	13.667	7.28	19.67	1.60
1.683	0.09	7.683	1.78	13.683	7.28	19.68	1.60
1.700	0.09	7.700	1.78	13.700	7.28	19.70	1.60
1.717	0.09	7.717	1.78	13.717	7.28	19.72	1.60
1.733	0.09	7.733	1.78	13.733	7.28	19.73	1.60
1.750	0.09	7.750	1.78	13.750	7.28	19.75	1.60
1.767	1.60	7.767	1.78	13.767	7.28	19.77	1.60
1.783	1.60	7.783	1.78	13.783	7.28	19.78	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.817	1.60	7.817	1.78	13.817	7.28	19.82	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60
1.883	1.60	7.883	1.78	13.883	7.28	19.88	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60

HRP7-PR_2-100 YEAR.OUT									
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60		
1.983	1.60	7.983	1.78	13.983	7.28	19.98	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.017	1.15	8.017	2.40	14.017	2.66	20.02	1.07		
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.117	1.15	8.117	2.40	14.117	2.66	20.12	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.183	1.15	8.183	2.40	14.183	2.66	20.18	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.217	1.15	8.217	2.40	14.217	2.66	20.22	1.07		
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.283	1.15	8.283	2.40	14.283	2.66	20.28	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.317	1.15	8.317	2.40	14.317	2.66	20.32	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07		
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07		
2.383	1.15	8.383	2.40	14.383	2.66	20.38	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07		
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07		
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.483	1.15	8.483	2.40	14.483	2.66	20.48	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.517	1.15	8.517	2.40	14.517	2.66	20.52	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07		
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07		
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.617	1.15	8.617	2.40	14.617	2.66	20.62	1.07		
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07		
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.683	1.15	8.683	2.40	14.683	2.66	20.68	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.717	1.15	8.717	2.40	14.717	2.66	20.72	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07		
2.783	1.15	8.783	2.40	14.783	2.66	20.78	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.817	1.15	8.817	2.40	14.817	2.66	20.82	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07		
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.883	1.15	8.883	2.40	14.883	2.66	20.88	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07		
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07		
2.983	1.15	8.983	2.40	14.983	2.66	20.98	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.017	1.15	9.017	2.84	15.017	2.66	21.02	1.07		
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07		
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.117	1.15	9.117	2.84	15.117	2.66	21.12	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07		
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07		
3.183	1.15	9.183	2.84	15.183	2.66	21.18	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.217	1.15	9.217	2.84	15.217	2.66	21.22	1.07		
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.283	1.15	9.283	2.84	15.283	2.66	21.28	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.317	1.15	9.317	2.84	15.317	2.66	21.32	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07		
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07		

HRP7-PR_2-100 YEAR.OUT									
3.383	1.15	9.383	2.84	15.383	2.66	21.38	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07		
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07		
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07		
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07		
3.483	1.15	9.483	2.84	15.483	2.66	21.48	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.517	1.15	9.517	3.20	15.517	2.66	21.52	1.07		
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07		
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07		
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07		
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.617	1.15	9.617	3.20	15.617	2.66	21.62	1.07		
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07		
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.683	1.15	9.683	3.20	15.683	2.66	21.68	1.07		
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07		
3.717	1.15	9.717	3.20	15.717	2.66	21.72	1.07		
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07		
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07		
3.783	1.15	9.783	3.20	15.783	2.66	21.78	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.817	1.15	9.817	3.20	15.817	2.66	21.82	1.07		
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07		
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07		
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07		
3.883	1.15	9.883	3.20	15.883	2.66	21.88	1.07		
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07		
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07		
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07		
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07		
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07		
3.983	1.15	9.983	3.20	15.983	2.66	21.98	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.017	1.42	10.017	4.08	16.017	1.60	22.02	1.07		
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07		
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07		
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07		
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07		
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07		
4.117	1.42	10.117	4.08	16.117	1.60	22.12	1.07		
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07		
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07		
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07		
4.183	1.42	10.183	4.08	16.183	1.60	22.18	1.07		

HRP7-PR_2-100 YEAR.OUT									
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07		
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07		
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07		
4.883	1.42	10.883	5.51	16.883	1.60	22.88	1.07		
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07		
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07		
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07		
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07		
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07		
4.983	1.42	10.983	5.51	16.983	1.60	22.98	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.017	1.42	11.017	8.52	17.017	1.60	23.02	1.07		
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07		
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07		
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07		
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07		
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07		
5.117	1.42	11.117	8.52	17.117	1.60	23.12	1.07		
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07		
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07		
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07		
5.183	1.42	11.183	8.52	17.183	1.60	23.18	1.07		
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07		
5.217	1.42	11.217	8.52	17.217	1.60	23.22	1.07		
5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07		
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07		
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07		
5.283	1.42	11.283	8.52	17.283	1.60	23.28	1.07		
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07		
5.317	1.42	11.317	8.52	17.317	1.60	23.32	1.07		
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07		
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07		
5.367	1.42	11.367	8.52	17.367	1.60	23.37	1.07		
5.383	1.42	11.383	8.52	17.383	1.60	23.38	1.07		
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07		
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07		
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07		
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07		
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07		
5.483	1.42	11.483	8.52	17.483	1.60	23.48	1.07		
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07		
5.517	1.42	11.517	36.93	17.517	1.60	23.52	1.07		
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07		
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07		
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07		
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07		
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07		
5.617	1.42	11.617	36.94	17.617	1.60	23.62	1.07		
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07		
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07		
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07		
5.683	1.42	11.683	36.94	17.683	1.60	23.68	1.07		
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07		
5.717	1.42	11.717	36.94	17.717	1.60	23.72	1.07		
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07		
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07		
5.767	1.42	11.767	98.01	17.767	1.60	23.77	1.07		
5.783	1.42	11.783	98.04	17.783	1.60	23.78	1.07		
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07		
5.817	1.42	11.817	98.04	17.817	1.60	23.82	1.07		
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07		
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07		
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07		
5.883	1.42	11.883	98.04	17.883	1.60	23.88	1.07		
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07		
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07		
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07		
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07		
5.967	1.42	11.967	98.04	17.967	1.60	23.97	1.07		
5.983	1.42	11.983	98.04	17.983	1.60	23.98	1.07		
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07		
Max.Eff.Inten.(mm/hr)= 98.04 54.22									
over (min) 5.00 9.00									
Storage Coeff. (min)= 1.76 (ii) 8.32 (ii)									
Unit Hyd. Tpeak (min)= 5.00 9.00									
Unit Hyd. peak (cms)= 0.39 0.13									
TOTALS									
PEAK FLOW (cms)= 0.13 0.04 0.167 (iii)									
TIME TO PEAK (hrs)= 12.00 12.05									
RUNOFF VOLUME (mm)= 87.30 40.95 66.44									
TOTAL RAINFALL (mm)= 88.80 88.80 88.80									
RUNOFF COEFFICIENT = 0.98 0.46 0.75									

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)

HRP7-PR_2-100 YEAR.OUT

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)					
1 + 2 = 3					

		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0143):		0.84	0.167	12.00	66.44
+ ID2= 2 (0024):		64.94	4.187	12.20	54.07
		=====			
ID = 3 (0026):		65.78	4.187	8.13	36.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0244)				
ID= 1 DT= 4.0 min				

		Area	(ha)=	6.58
		Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

		IMPERVIOUS	PERVIOUS (1)	
Surface Area		(ha)=	2.96	3.62
Dep. Storage		(mm)=	1.50	1.50
Average Slope		(%)=	2.00	2.00
Length		(m)=	209.44	40.00
Mannings n		=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	mm/hr
0.067	0.89	6.067	1.78	12.067	12.80	18.07	1.60		
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60		
0.533	0.89	6.533	1.78	12.533	9.68	18.53	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.533	0.89	7.533	1.78	13.533	4.26	19.53	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.800	1.42	7.800	1.78	13.800	7.28	19.80	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07		

HRP7-PR_2-100 YEAR.OUT

HRP7-PR_2-100 YEAR.OUT

3.533	1.15		9.533	3.02		15.533	2.66		21.53	1.07
3.600	1.15		9.600	3.20		15.600	2.66		21.60	1.07
3.667	1.15		9.667	3.20		15.667	2.66		21.67	1.07
3.733	1.15		9.733	3.20		15.733	2.66		21.73	1.07
3.800	1.15		9.800	3.20		15.800	2.66		21.80	1.07
3.867	1.15		9.867	3.20		15.867	2.66		21.87	1.07
3.933	1.15		9.933	3.20		15.933	2.66		21.93	1.07
4.000	1.15		10.000	3.20		16.000	2.66		22.00	1.07
4.067	1.42		10.067	4.08		16.067	1.60		22.07	1.07
4.133	1.42		10.133	4.08		16.133	1.60		22.13	1.07
4.200	1.42		10.200	4.08		16.200	1.60		22.20	1.07
4.267	1.42		10.267	4.08		16.267	1.60		22.27	1.07
4.333	1.42		10.333	4.08		16.333	1.60		22.33	1.07
4.400	1.42		10.400	4.08		16.400	1.60		22.40	1.07
4.467	1.42		10.467	4.08		16.467	1.60		22.47	1.07
4.533	1.42		10.533	4.80		16.533	1.60		22.53	1.07
4.600	1.42		10.600	5.51		16.600	1.60		22.60	1.07
4.667	1.42		10.667	5.51		16.667	1.60		22.67	1.07
4.733	1.42		10.733	5.51		16.733	1.60		22.73	1.07
4.800	1.42		10.800	5.51		16.800	1.60		22.80	1.07
4.867	1.42		10.867	5.51		16.867	1.60		22.87	1.07
4.933	1.42		10.933	5.51		16.933	1.60		22.93	1.07
5.000	1.42		11.000	5.51		17.000	1.60		23.00	1.07
5.067	1.42		11.067	8.52		17.067	1.60		23.07	1.07
5.133	1.42		11.133	8.52		17.133	1.60		23.13	1.07
5.200	1.42		11.200	8.52		17.200	1.60		23.20	1.07
5.267	1.42		11.267	8.52		17.267	1.60		23.27	1.07
5.333	1.42		11.333	8.52		17.333	1.60		23.33	1.07
5.400	1.42		11.400	8.52		17.400	1.60		23.40	1.07
5.467	1.42		11.467	8.52		17.467	1.60		23.47	1.07
5.533	1.42		11.533	22.73		17.533	1.60		23.53	1.07
5.600	1.42		11.600	36.94		17.600	1.60		23.60	1.07
5.667	1.42		11.667	36.94		17.667	1.60		23.67	1.07
5.733	1.42		11.733	36.94		17.733	1.60		23.73	1.07
5.800	1.42		11.800	82.75		17.800	1.60		23.80	1.07
5.867	1.42		11.867	98.04		17.867	1.60		23.87	1.07
5.933	1.42		11.933	98.04		17.933	1.60		23.93	1.07
6.000	1.42		12.000	98.04		18.000	1.60		24.00	1.06

Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min) 5.00 12.00
Storage Coeff. (min)= 3.26 (ii) 10.97 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.30 0.10

PEAK FLOW (cms)= 0.80 0.37 1.148 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 87.30 40.96 61.81
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0244):	6.58	1.148	12.00	61.81
+ ID2= 2 (0026):	65.78	4.187	8.13	36.43
ID = 3 (0028):	72.36	4.209	8.13	38.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\vo1n.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\fb6b38fa-7a41-45b1-8ee7-b1372aae3b8b\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\fb6b38fa-7a41-45b1-8ee7-b1372aae3b8b\scenar

DATE: 03/24/2023

TIME: 10:46:29

USER:

COMMENTS:

** SIMULATION : Run 04 **

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\ e81b71e9-a066-4486-ac1c-480ed0ba9ce9\cdfb3d47
Ptotal=103.20 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86	
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86	
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86	
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86	
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86	
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86	
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86	
2.00	1.86	8.00	2.06	14.00	8.46	20.00	1.86	
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24	
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24	
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24	
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24	
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24	
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24	
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24	
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24	
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24	
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24	
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24	
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24	
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24	
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24	
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24	
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24	

CALIB	
NASHYD (1040)	Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86	
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86	
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86	
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86	
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86	
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86	
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86	
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86	
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86	
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86	
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86	
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86	
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86	
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86	

HRP7-PR_2-100 YEAR.OUT

1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86
1.917	1.06	7.917	2.06	13.917	8.46	19.92	1.86
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 0.930 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 52.723
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.511

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

----- CALIB STANDHYD (0240) ID= 1 DT= 3.0 min -----	Area (ha)= 20.00 Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00
Surface Area (ha)= 8.43 Dep. Storage (mm)= 1.50 Average Slope (%)= 2.00 Length (m)= 365.00 Mannings n = 0.013	IMPERVIOUS 11.65 PERVIOUS (i) 1.50 2.00 100.00 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

HRP7-PR_2-100 YEAR.OUT

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86	
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86	
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86	
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86	
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86	
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86	
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86	
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86	
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86	
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86	
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86	
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86	
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86	
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86	
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86	
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86	
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86	
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86	
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86	
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86	
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86	
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86	
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86	
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86	
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86	
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86	
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86	
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86	
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86	
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86	
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86	
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86	
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86	
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86	
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86	
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86	
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86	
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86	
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86	
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86	
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24	
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24	
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24	
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24	
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24	
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24	
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24	
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24	
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24	
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24	
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24	
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24	
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24	
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24	
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24	
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24	
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24	
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24	
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24	
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24	
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24	
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24	
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24	
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24	
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24	
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24	
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24	
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24	
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24	
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24	
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24	
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24	
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24	
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24	
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24	
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24	
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24	
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24	
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24	
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24	
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1	
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1	
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1	
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1	
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1	
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1	

HRP7-PR_2-100 YEAR.OUT									
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	4.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)=	113.93	73.75
over (min)=	6.00	21.00
Storage Coeff. (min)=	4.29 (ii)	18.10 (ii)
Unit Hyd. Tpeak (min)=	6.00	21.00
Unit Hyd. peak (cms)=	0.23	0.06
PEAK FLOW (cms)=	2.59	1.28
TIME TO PEAK (hrs)=	12.00	12.00
RUNOFF VOLUME (mm)=	101.70	58.24
TOTAL RAINFALL (mm)=	103.20	103.20
RUNOFF COEFFICIENT =	0.99	0.56
		0.74

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0038)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1040):	10.35	0.930	12.17	52.72
+ ID2= 2 (0240):	20.08	3.454	12.00	76.50
ID = 3 (0038):	30.43	4.131	12.00	68.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0029)	Routing time step (min)'= 2.00
IN= 2----> OUT= 1	

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.321E+02	0.0	0.28	35.15
0.09	100.09	.721E+02	0.1	0.42	23.51

HRP7-PR_2-100 YEAR.OUT									
0.14	100.14	.120E+03	0.1	0.53	18.76				
0.19	100.19	.176E+03	0.2	0.62	16.03				
0.24	100.24	.240E+03	0.3	0.70	14.19				
0.28	100.28	.313E+03	0.4	0.77	12.85				
0.33	100.33	.393E+03	0.5	0.84	11.81				
0.39	100.39	.498E+03	0.8	0.97	10.26				
0.44	100.44	.614E+03	1.1	1.07	9.26				
0.50	100.50	.741E+03	1.4	1.16	8.55				
0.55	100.55	.879E+03	1.8	1.24	8.01				
0.61	100.61	.103E+04	2.3	1.31	7.60				
0.66	100.66	.119E+04	2.7	1.37	7.26				
0.72	100.72	.136E+04	3.2	1.42	6.98				
0.78	100.78	.154E+04	3.8	1.47	6.74				
0.83	100.83	.173E+04	4.4	1.52	6.53				
0.89	100.89	.194E+04	5.1	1.56	6.35				
0.94	100.94	.215E+04	5.8	1.60	6.19				
1.00	101.00	.238E+04	6.6	1.64	6.05				

<---- hydrograph ---->					
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0038)	30.43	4.13	12.00	68.41	1.50
OUTFLOW: ID= 1 (0029)	30.43	3.59	12.07	68.40	0.75

CALIB	Area (ha)=	11.30	Curve Number (CN)=	77.0
NASHYD (1041)	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.26		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86		
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86		
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86		
1.917	1.06	7.917	2.06	13.917	8.46	19.92	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		

HRP7-PR_2-100 YEAR.OUT

4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.315 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 55.362
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.536

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1	2	3	AREA (ha)	QPEAK (cms)
1	2	3	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1041):	11.30	1.315	12.08	55.36
+ ID2= 2 (0029):	30.43	3.589	12.07	68.40
ID = 3 (0018):	41.73	4.886	12.07	64.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (0241)			
ID= 1 DT= 2.0 min	Area (ha)= 12.29	Total Imp(%)= 73.00	Dir. Conn.(%)= 73.00
IMPERVIOUS PERVIOUS (i)			
Surface Area (ha)=	8.97	3.32	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	286.24	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86
0.500	1.03	6.500	2.06	12.500	14.85	18.50	1.86
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86

HRP7-PR_2-100 YEAR.OUT

0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24

HRP7-PR_2-100 YEAR.OUT									
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24		
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24		
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24		
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24		
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24		
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24		
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24		
5.500	1.65	11.500	9.95	17.500	1.86	23.50	1.24		
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24		
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24		
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24		
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24		
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24		
Max.Eff.Inten.(mm/hr)= 113.93 80.45									
over (min) 5.00 10.00									
Storage Coeff. (min)= 3.70 (ii) 8.20 (ii)									
Unit Hyd. Tpeak (min)= 4.00 10.00									
Unit Hyd. peak (cms)= 0.29 0.13									
TOTALS									
PEAK FLOW (cms)= 2.79 0.58									
TIME TO PEAK (hrs)= 12.00 12.03									
RUNOFF VOLUME (mm)= 181.69 98.74									
TOTAL RAINFALL (mm)= 103.20 103.20									
RUNOFF COEFFICIENT = 0.99 0.59 0.88									

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

HRP7-PR_2-100 YEAR.OUT

CN* = 79.0

Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)

1 + 2 = 3

AREA (ha)

QPEAK (cms)

TPEAK (hrs)

R.V. (mm)

ID1= 1 (0018): 41.73 4.886 12.07 64.87

+ ID2= 2 (0241): 12.29 3.345 12.00 98.74

=====

ID = 3 (0021): 54.02 4.963 12.07 65.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

STANDHYD (0142)

ID= 1 DT= 3.0 min

Area (ha)= 10.92

Total Imp(%)= 53.00

Dir. Conn.(%)= 53.00

IMPERVIOUS

PERVIOUS (i)

Surface Area (ha)= 5.79 5.13

Dep. Storage (mm)= 1.50 1.50

Average Slope (%)= 2.00 2.00

Length (m)= 269.81 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---

TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN

hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr

0.050 1.03 | 6.050 2.06 | 12.050 14.86 | 18.05 1.86

0.100 1.03 | 6.100 2.06 | 12.100 14.86 | 18.10 1.86

0.150 1.03 | 6.150 2.06 | 12.150 14.86 | 18.15 1.86

0.200 1.03 | 6.200 2.06 | 12.200 14.86 | 18.20 1.86

0.250 1.03 | 6.250 2.06 | 12.250 14.86 | 18.25 1.86

0.300 1.03 | 6.300 2.06 | 12.300 14.86 | 18.30 1.86

0.350 1.03 | 6.350 2.06 | 12.350 14.86 | 18.35 1.86

0.400 1.03 | 6.400 2.06 | 12.400 14.86 | 18.40 1.86

0.450 1.03 | 6.450 2.06 | 12.450 14.86 | 18.45 1.86

0.500 1.03 | 6.500 2.06 | 12.500 14.86 | 18.50 1.86

0.550 1.03 | 6.550 2.06 | 12.550 7.64 | 18.55 1.86

0.600 1.03 | 6.600 2.06 | 12.600 7.64 | 18.60 1.86

0.650 1.03 | 6.650 2.06 | 12.650 7.64 | 18.65 1.86

0.700 1.03 | 6.700 2.06 | 12.700 7.64 | 18.70 1.86

0.750 1.03 | 6.750 2.06 | 12.750 7.64 | 18.75 1.86

0.800 1.03 | 6.800 2.06 | 12.800 7.64 | 18.80 1.86

0.850 1.03 | 6.850 2.06 | 12.850 7.64 | 18.85 1.86

0.900 1.03 | 6.900 2.06 | 12.900 7.64 | 18.90 1.86

0.950 1.03 | 6.950 2.06 | 12.950 7.64 | 18.95 1.86

1.000 1.03 | 7.000 2.06 | 13.000 7.63 | 19.00 1.86

1.050 1.03 | 7.050 2.06 | 13.050 1.44 | 19.05 1.86

1.100 1.03 | 7.100 2.06 | 13.100 1.44 | 19.10 1.86

1.150 1.03 | 7.150 2.06 | 13.150 1.44 | 19.15 1.86

1.200 1.03 | 7.200 2.06 | 13.200 1.44 | 19.20 1.86

1.250 1.03 | 7.250 2.06 | 13.250 1.44 | 19.25 1.86

1.300 1.03 | 7.300 2.06 | 13.300 1.44 | 19.30 1.86

1.350 1.03 | 7.350 2.06 | 13.350 1.44 | 19.35 1.86

1.400 1.03 | 7.400 2.06 | 13.400 1.44 | 19.40 1.86

1.450 1.03 | 7.450 2.06 | 13.450 1.44 | 19.45 1.86

1.500 1.03 | 7.500 2.06 | 13.500 1.45 | 19.50 1.86

1.550 1.03 | 7.550 2.06 | 13.550 8.46 | 19.55 1.86

1.600 1.03 | 7.600 2.06 | 13.600 8.46 | 19.60 1.86

1.650 1.03 | 7.650 2.06 | 13.650 8.46 | 19.65 1.86

1.700 1.03 | 7.700 2.06 | 13.700 8.46 | 19.70 1.86

1.750 1.03 | 7.750 2.06 | 13.750 8.46 | 19.75 1.86

1.800 1.06 | 7.800 2.06 | 13.800 8.46 | 19.80 1.86

1.850 1.86 | 7.850 2.06 | 13.850 8.46 | 19.85 1.86

1.900 1.86 | 7.900 2.06 | 13.900 8.46 | 19.90 1.86

1.950 1.86 | 7.950 2.06 | 13.950 8.46 | 19.95 1.86

2.000 1.86 | 8.000 2.06 | 14.000 8.46 | 20.00 1.86

2.050 1.34 | 8.050 2.79 | 14.050 3.10 | 20.05 1.24

2.100 1.34 | 8.100 2.79 | 14.100 3.10 | 20.10 1.24

2.150 1.34 | 8.150 2.79 | 14.150 3.10 | 20.15 1.24

2.200 1.34 | 8.200 2.79 | 14.200 3.10 | 20.20 1.24

2.250 1.34 | 8.250 2.79 | 14.250 3.10 | 20.25 1.24

2.300 1.34 | 8.300 2.79 | 14.300 3.10 | 20.30 1.24

2.350 1.34 | 8.350 2.79 | 14.350 3.10 | 20.35 1.24

2.400 1.34 | 8.400 2.79 | 14.400 3.10 | 20.40 1.24

2.450 1.34 | 8.450 2.79 | 14.450 3.10 | 20.45 1.24

2.500 1.34 | 8.500 2.79 | 14.500 3.10 | 20.50 1.24

2.550 1.34 | 8.550 2.79 | 14.550 3.10 | 20.55 1.24

HRP7-PR_2-100 YEAR.OUT									
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)= 113.93 51.85
CN* = 62.0 Ia = Dep. Storage (Above)
Storage Coeff. (min)= 3.57 (ii) 9.96 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.11

TOTALS
PEAK FLOW (cms)= 1.80 0.52 2.284 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 181.70 40.18 72.79
TOTAL RAINFALL (mm)= 183.20 163.20 183.20
RUNOFF COEFFICIENT = 0.99 0.39 0.71

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0142):	10.92	2.284	12.00	72.79
+ ID2= 2 (0021):	54.02	4.963	12.07	65.60
ID = 3 (0023):	64.94	6.889	12.05	66.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)				
IN= 2---> OUT= 1	OVERFLOW IS OFF			
DT= 3.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0030	0.5000
	0.0370	0.1125	1.0000	0.7700
	0.0530	0.2275	6.4000	1.1000
	0.0650	0.3450	9.2000	1.2500
	0.0750	0.4630	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0023)	64.940	6.889	12.05	66.81
OUTFLOW: ID= 1 (0024)	64.940	5.161	12.20	65.67

PEAK FLOW REDUCTION [Qout/Qin](%)= 75.20
TIME SHIFT OF PEAK FLOW (min)= 9.00
MAXIMUM STORAGE USED (ha.m.)= 1.0109

CALIB (0143)		Area (ha)= 0.84
ID= 1 DT= 1.0 min	Total Imp(%)= 55.00	Dir. Conn.(%)= 55.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.46	0.38	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	74.83	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.03	6.017	2.06	12.017	14.93	18.02	1.86
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86
0.083	1.03	6.083	2.06	12.083	14.86	18.08	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.117	1.03	6.117	2.06	12.117	14.86	18.12	1.86
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.183	1.03	6.183	2.06	12.183	14.86	18.18	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.217	1.03	6.217	2.06	12.217	14.86	18.22	1.86
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86
0.283	1.03	6.283	2.06	12.283	14.86	18.28	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.317	1.03	6.317	2.06	12.317	14.86	18.32	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86
0.383	1.03	6.383	2.06	12.383	14.86	18.38	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86
0.483	1.03	6.483	2.06	12.483	14.86	18.48	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.517	1.03	6.517	2.06	12.517	7.64	18.52	1.86
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86

HRP7-PR_2-100 YEAR.OUT									
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.617	1.03	6.617	2.06	12.617	7.64	18.62	1.86		
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.683	1.03	6.683	2.06	12.683	7.64	18.68	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.717	1.03	6.717	2.06	12.717	7.64	18.72	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86		
0.783	1.03	6.783	2.06	12.783	7.64	18.78	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.817	1.03	6.817	2.06	12.817	7.64	18.82	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.883	1.03	6.883	2.06	12.883	7.64	18.88	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86		
0.983	1.03	6.983	2.06	12.983	7.64	18.98	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.017	1.03	7.017	2.06	13.017	7.64	19.02	1.86		
1.033	1.03	7.033	2.06	13.033	7.64	19.03	1.86		
1.050	1.03	7.050	2.06	13.050	7.64	19.05	1.86		
1.067	1.03	7.067	2.06	13.067	7.64	19.07	1.86		
1.083	1.03	7.083	2.06	13.083	7.64	19.08	1.86		
1.100	1.03	7.100	2.06	13.100	7.64	19.10	1.86		
1.117	1.03	7.117	2.06	13.117	7.64	19.12	1.86		
1.133	1.03	7.133	2.06	13.133	7.64	19.13	1.86		
1.150	1.03	7.150	2.06	13.150	7.64	19.15	1.86		
1.167	1.03	7.167	2.06	13.167	7.64	19.17	1.86		
1.183	1.03	7.183	2.06	13.183	7.64	19.18	1.86		
1.200	1.03	7.200	2.06	13.200	7.64	19.20	1.86		
1.217	1.03	7.217	2.06	13.217	7.64	19.22	1.86		
1.233	1.03	7.233	2.06	13.233	7.64	19.23	1.86		
1.250	1.03	7.250	2.06	13.250	7.64	19.25	1.86		
1.267	1.03	7.267	2.06	13.267	7.64	19.27	1.86		
1.283	1.03	7.283	2.06	13.283	7.64	19.28	1.86		
1.300	1.03	7.300	2.06	13.300	7.64	19.30	1.86		
1.317	1.03	7.317	2.06	13.317	7.64	19.32	1.86		
1.333	1.03	7.333	2.06	13.333	7.64	19.33	1.86		
1.350	1.03	7.350	2.06	13.350	7.64	19.35	1.86		
1.367	1.03	7.367	2.06	13.367	7.64	19.37	1.86		
1.383	1.03	7.383	2.06	13.383	7.64	19.38	1.86		
1.400	1.03	7.400	2.06	13.400	7.64	19.40	1.86		
1.417	1.03	7.417	2.06	13.417	7.64	19.42	1.86		
1.433	1.03	7.433	2.06	13.433	7.64	19.43	1.86		
1.450	1.03	7.450	2.06	13.450	7.64	19.45	1.86		
1.467	1.03	7.467	2.06	13.467	7.64	19.47	1.86		
1.483	1.03	7.483	2.06	13.483	7.64	19.48	1.86		
1.500	1.03	7.500	2.06	13.500	7.64	19.50	1.86		
1.517	1.03	7.517	2.06	13.517	7.64	19.52	1.86		
1.533	1.03	7.533	2.06	13.533	7.64	19.53	1.86		
1.550	1.03	7.550	2.06	13.550	7.64	19.55	1.86		
1.567	1.03	7.567	2.06	13.567	7.64	19.57	1.86		
1.583	1.03	7.583	2.06	13.583	7.64	19.58	1.86		
1.600	1.03	7.600	2.06	13.600	7.64	19.60	1.86		
1.617	1.03	7.617	2.06	13.617	7.64	19.62	1.86		
1.633	1.03	7.633	2.06	13.633	7.64	19.63	1.86		
1.650	1.03	7.650	2.06	13.650	7.64	19.65	1.86		
1.667	1.03	7.667	2.06	13.667	7.64	19.67	1.86		
1.683	1.03	7.683	2.06	13.683	7.64	19.68	1.86		
1.700	1.03	7.700	2.06	13.700	7.64	19.70	1.86		
1.717	1.03	7.717	2.06	13.717	7.64	19.72	1.86		
1.733	1.03	7.733	2.06	13.733	7.64	19.73	1.86		
1.750	1.03	7.750	2.06	13.750	7.64	19.75	1.86		
1.767	1.03	7.767	2.06	13.767	7.64	19.77	1.86		
1.783	1.03	7.783	2.06	13.783	7.64	19.78	1.86		
1.800	1.03	7.800	2.06	13.800	7.64	19.80	1.86		
1.817	1.03	7.817	2.06	13.817	7.64	19.82	1.86		
1.833	1.03	7.833	2.06	13.833	7.64	19.83	1.86		
1.850	1.03	7.850	2.06	13.850	7.64	19.85	1.86		
1.867	1.03	7.867	2.06	13.867	7.64	19.87	1.86		
1.883	1.03	7.883	2.06	13.883	7.64	19.88	1.86		
1.900	1.03	7.900	2.06	13.900	7.64	19.90	1.86		
1.917	1.03	7.917	2.06	13.917	7.64	19.92	1.86		
1.933	1.03	7.933	2.06	13.933	7.64	19.93	1.86		
1.950	1.03	7.950	2.06	13.950	7.64	19.95	1.86		
1.967	1.03	7.967	2.06	13.967	7.64	19.97	1.86		
1.983	1.03	7.983	2.06	13.983	7.64	19.98	1.86		
2.000	1.03	8.000	2.07	14.000	7.64	20.00	1.86		

HRP7-PR_2-100 YEAR.OUT									
2.017	1.34	8.017	2.79	14.017	3.11	20.02	1.24		
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24		
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.117	1.34	8.117	2.79	14.117	3.10	20.12	1.24		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.183	1.34	8.183	2.79	14.183	3.10	20.18	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.217	1.34	8.217	2.79	14.217	3.10	20.22	1.24		
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		
2.283	1.34	8.283	2.79	14.283	3.10	20.28	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.317	1.34	8.317	2.79	14.317	3.10	20.32	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24		
2.383	1.34	8.383	2.79	14.383	3.10	20.38	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24		
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24		
2.483	1.34	8.483	2.79	14.483	3.10	20.48	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.517	1.34	8.517	2.79	14.517	3.10	20.52	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24		
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.617	1.34	8.617	2.79	14.617	3.10	20.62	1.24		
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.683	1.34	8.683	2.79	14.683	3.10	20.68	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.717	1.34	8.717	2.79	14.717	3.10	20.72	1.24		
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24		
2.783	1.34	8.783	2.79	14.783	3.10	20.78	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.817	1.34	8.817	2.79	14.817	3.10	20.82	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.883	1.34	8.883	2.79	14.883	3.10	20.88	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24		
2.983	1.34	8.983	2.79	14.983	3.10	20.98	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.017	1.34	9.017	3.30	15.017	3.10	21.02	1.24		
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.117	1.34	9.117	3.30	15.117	3.10	21.12	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.183	1.34	9.183	3.30	15.183	3.10	21.18	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.217	1.34	9.217	3.30	15.217	3.10	21.22	1.24		
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.283	1.34	9.283	3.30	15.283	3.10	21.28	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.317	1.34	9.317	3.30	15.317	3.10	21.32	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.383	1.34	9.383	3.30	15.383	3.10	21.38	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		

HRP7-PR_2-100 YEAR.OUT									
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.483	1.34	9.483	3.30	15.483	3.10	21.48	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.517	1.34	9.517	3.72	15.517	3.10	21.52	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.617	1.34	9.617	3.72	15.617	3.10	21.62	1.24		
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.683	1.34	9.683	3.72	15.683	3.10	21.68	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.717	1.34	9.717	3.72	15.717	3.10	21.72	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.783	1.34	9.783	3.72	15.783	3.10	21.78	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.817	1.34	9.817	3.72	15.817	3.10	21.82	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.883	1.34	9.883	3.72	15.883	3.10	21.88	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
3.983	1.34	9.983	3.72	15.983	3.10	21.98	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.017	1.65	10.017	4.75	16.017	1.86	22.02	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.117	1.65	10.117	4.75	16.117	1.86	22.12	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.183	1.65	10.183	4.75	16.183	1.86	22.18	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.217	1.65	10.217	4.75	16.217	1.86	22.22	1.24		
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.283	1.65	10.283	4.75	16.283	1.86	22.28	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.317	1.65	10.317	4.75	16.317	1.86	22.32	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24		
4.383	1.65	10.383	4.75	16.383	1.86	22.38	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24		
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24		
4.483	1.65	10.483	4.75	16.483	1.86	22.48	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.517	1.65	10.517	6.40	16.517	1.86	22.52	1.24		
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24		
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.617	1.65	10.617	6.40	16.617	1.86	22.62	1.24		
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.683	1.65	10.683	6.40	16.683	1.86	22.68	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.717	1.65	10.717	6.40	16.717	1.86	22.72	1.24		
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24		
4.783	1.65	10.783	6.40	16.783	1.86	22.78	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.817	1.65	10.817	6.40	16.817	1.86	22.82	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24		
4.883	1.65	10.883	6.40	16.883	1.86	22.88	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		

HRP7-PR_2-100 YEAR.OUT							
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24
4.983	1.65	10.983	6.40	16.983	1.86	22.98	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.017	1.65	11.017	9.91	17.017	1.86	23.02	1.24
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.117	1.65	11.117	9.91	17.117	1.86	23.12	1.24
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.183	1.65	11.183	9.91	17.183	1.86	23.18	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.217	1.65	11.217	9.91	17.217	1.86	23.22	1.24
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24
5.283	1.65	11.283	9.91	17.283	1.86	23.28	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.317	1.65	11.317	9.91	17.317	1.86	23.32	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24
5.383	1.65	11.383	9.91	17.383	1.86	23.38	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24
5.483	1.65	11.483	9.91	17.483	1.86	23.48	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.517	1.65	11.517	42.92	17.517	1.86	23.52	1.24
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.617	1.65	11.617	42.93	17.617	1.86	23.62	1.24
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.683	1.65	11.683	42.93	17.683	1.86	23.68	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.717	1.65	11.717	42.93	17.717	1.86	23.72	1.24
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.767	1.65	11.767	113.90	17.767	1.86	23.77	1.24
5.783	1.65	11.783	113.93	17.783	1.86	23.78	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.817	1.65	11.817	113.93	17.817	1.86	23.82	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24
5.883	1.65	11.883	113.93	17.883	1.86	23.88	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24
5.983	1.65	11.983	113.93	17.983	1.86	23.98	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24
Max.Eff.Inten.(mm/hr)=	113.93	68.20					
over (min)	5.00	8.00					
Storage Coeff. (min)=	1.66 (ii)	7.84 (ii)					
Unit Hyd. Tpeak (min)=	5.00	8.00					
Unit Hyd. peak (cms)=	0.40	0.14					
			*TOTALS				
PEAK FLOW (cms)	0.15	0.06	0.201 (iii)				
TIME TO PEAK (hrs)=	12.00	12.03	12.00				
RUNOFF VOLUME (mm)	181.69	51.58	79.15				
TOTAL RAINFALL (mm)=	193.20	103.20	193.20				
RUNOFF COEFFICIENT =	0.99	0.50	0.77				
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:							
CN* = 72.0 Ia = Dep. Storage (Above)							
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.							
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

HRP7-PR_2-100 YEAR.OUT

ADD HYD (0026)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0143):	0.84	0.201	12.00	79.15
+ ID2= 2 (0024):	64.94	5.181	12.20	65.67
=====				
ID = 3 (0026):	65.78	5.185	8.13	44.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0244)	Area (ha)=	6.58	
ID= 1 DT= 4.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.96	3.62
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	209.44	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.067	1.03	6.067	2.06	12.067	14.87	18.07	1.86
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86
0.533	1.03	6.533	2.06	12.533	11.25	18.53	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.067	1.03	7.067	2.06	13.067	1.45	19.07	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.533	1.03	7.533	2.06	13.533	4.95	19.53	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.800	1.65	7.800	2.06	13.800	8.46	19.80	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24
3.533	1.34	9.533	3.51	15.533	3.10	21.53	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24

HRP7-PR_2-100 YEAR.OUT

3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24
4.533	1.65	10.533	5.57	16.533	1.86	22.53	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24
5.533	1.65	11.533	26.42	17.533	1.86	23.53	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24
5.800	1.65	11.800	96.17	17.800	1.86	23.80	1.24
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Max.Eff.Inten.(mm/hr)=	113.93	66.99
over (min)	5.00	12.00
Storage Coeff. (min)=	3.07 (ii)	10.33 (iii)
Unit Hyd. Tpeak (min)=	4.00	12.00
Unit Hyd. peak (cms)=	0.31	0.10

TOTALS

PEAK FLOW (cms)=	0.93	0.48	1.384 (iii)
TIME TO PEAK (hrs)=	12.00	12.07	12.00
RUNOFF VOLUME (mm)=	101.70	51.59	74.14
TOTAL RAINFALL (mm)=	103.20	103.20	103.20
RUNOFF COEFFICIENT =	0.99	0.50	0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0244):	6.58	1.384	12.00	74.14
+ ID2= 2 (0026):	65.78	5.185	8.13	44.23
=====				
ID = 3 (0028):	72.36	5.212	8.13	46.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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HRP7-PR_2-100 YEAR.OUT

***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\8b7b53a9-38d6-40cc-92ad-36e25ead5412\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\8b7b53a9-38d6-40cc-92ad-36e25ead5412\scenar

DATE: 03/24/2023 TIME: 10:46:29

USER:

COMMENTS: _____

** SIMULATION : Run 05

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\
| | ata\Local\Temp\
| Ptotal=115.20 mm | e81b71e9-a066-4486-ac1c-480ed0ba9ce9\95accb52
| | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07	
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07	
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07	
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07	
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07	
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07	
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07	
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07	
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38	
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38	
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38	
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38	
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38	
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38	
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38	
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38	
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38	
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38	
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38	
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38	
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38	
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38	
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38	
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38	

| CALIB |
| NASHYD (1040) | Area (ha)= 10.35 Curve Number (CN)= 75.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| | U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07	
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07	
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07	
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07	
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07	
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07	
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07	
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07	
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07	
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07	
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07	
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07	
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07	
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07	
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07	

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1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07	
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07	
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07	
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07	
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07	
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07	
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07	
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07	
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07	
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38	
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38	
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38	
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38	
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38	
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38	
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38	
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38	
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38	
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38	
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38	
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38	
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38	
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38	
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38	
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38	
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38	
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38	
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38	
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38	
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38	
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38	
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38	
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38	
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38	
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38	
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38	
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38	
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38	
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38	
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38	
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38	
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38	
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38	
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38	
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38	
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38	
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38	
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38	
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38	
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38	
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38	
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38	
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38	
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38	
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38	
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38	
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38	

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 1.104 (1)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 62.307
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.541

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| NASHYD (0240) | Area (ha)= 20.08
| ID= 1 DT= 3.0 min | Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

		IMPERVIOUS		PERVIOUS (1)	
Surface Area	(ha)=	8.43		11.65	
Dep. Storage	(mm)=	1.50		1.50	
Average Slope	(%)=	2.00		2.00	
Length	(m)=	365.08		100.00	
Mannings n	=	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr

HRP7-PR_2-100 YEAR.OUT						
0.050	1.15	6.050	2.30	12.050	16.59	18.05
0.100	1.15	6.100	2.30	12.100	16.59	18.10
0.150	1.15	6.150	2.30	12.150	16.59	18.15
0.200	1.15	6.200	2.30	12.200	16.59	18.20
0.250	1.15	6.250	2.30	12.250	16.59	18.25
0.300	1.15	6.300	2.30	12.300	16.59	18.30
0.350	1.15	6.350	2.30	12.350	16.59	18.35
0.400	1.15	6.400	2.30	12.400	16.59	18.40
0.450	1.15	6.450	2.30	12.450	16.59	18.45
0.500	1.15	6.500	2.30	12.500	16.58	18.50
0.550	1.15	6.550	2.30	12.550	8.52	18.55
0.600	1.15	6.600	2.30	12.600	8.52	18.60
0.650	1.15	6.650	2.30	12.650	8.52	18.65
0.700	1.15	6.700	2.30	12.700	8.52	18.70
0.750	1.15	6.750	2.30	12.750	8.52	18.75
0.800	1.15	6.800	2.30	12.800	8.52	18.80
0.850	1.15	6.850	2.30	12.850	8.52	18.85
0.900	1.15	6.900	2.30	12.900	8.52	18.90
0.950	1.15	6.950	2.30	12.950	8.52	18.95
1.000	1.15	7.000	2.30	13.000	8.52	19.00
1.050	1.15	7.050	2.30	13.050	1.61	19.05
1.100	1.15	7.100	2.30	13.100	1.61	19.10
1.150	1.15	7.150	2.30	13.150	1.61	19.15
1.200	1.15	7.200	2.30	13.200	1.61	19.20
1.250	1.15	7.250	2.30	13.250	1.61	19.25
1.300	1.15	7.300	2.30	13.300	1.61	19.30
1.350	1.15	7.350	2.30	13.350	1.61	19.35
1.400	1.15	7.400	2.30	13.400	1.61	19.40
1.450	1.15	7.450	2.30	13.450	1.61	19.45
1.500	1.15	7.500	2.30	13.500	1.62	19.50
1.550	1.15	7.550	2.30	13.550	9.45	19.55
1.600	1.15	7.600	2.30	13.600	9.45	19.60
1.650	1.15	7.650	2.30	13.650	9.45	19.65
1.700	1.15	7.700	2.30	13.700	9.45	19.70
1.750	1.15	7.750	2.30	13.750	9.45	19.75
1.800	2.07	7.800	2.30	13.800	9.45	19.80
1.850	2.07	7.850	2.30	13.850	9.45	19.85
1.900	2.07	7.900	2.30	13.900	9.45	19.90
1.950	2.07	7.950	2.30	13.950	9.45	19.95
2.000	2.07	8.000	2.30	14.000	9.44	20.00
2.050	1.50	8.050	3.11	14.050	3.46	20.05
2.100	1.50	8.100	3.11	14.100	3.46	20.10
2.150	1.50	8.150	3.11	14.150	3.46	20.15
2.200	1.50	8.200	3.11	14.200	3.46	20.20
2.250	1.50	8.250	3.11	14.250	3.46	20.25
2.300	1.50	8.300	3.11	14.300	3.46	20.30
2.350	1.50	8.350	3.11	14.350	3.46	20.35
2.400	1.50	8.400	3.11	14.400	3.46	20.40
2.450	1.50	8.450	3.11	14.450	3.46	20.45
2.500	1.50	8.500	3.11	14.500	3.46	20.50
2.550	1.50	8.550	3.11	14.550	3.46	20.55
2.600	1.50	8.600	3.11	14.600	3.46	20.60
2.650	1.50	8.650	3.11	14.650	3.46	20.65
2.700	1.50	8.700	3.11	14.700	3.46	20.70
2.750	1.50	8.750	3.11	14.750	3.46	20.75
2.800	1.50	8.800	3.11	14.800	3.46	20.80
2.850	1.50	8.850	3.11	14.850	3.46	20.85
2.900	1.50	8.900	3.11	14.900	3.46	20.90
2.950	1.50	8.950	3.11	14.950	3.46	20.95
3.000	1.50	9.000	3.11	15.000	3.46	21.00
3.050	1.50	9.050	3.69	15.050	3.46	21.05
3.100	1.50	9.100	3.69	15.100	3.46	21.10
3.150	1.50	9.150	3.69	15.150	3.46	21.15
3.200	1.50	9.200	3.69	15.200	3.46	21.20
3.250	1.50	9.250	3.69	15.250	3.46	21.25
3.300	1.50	9.300	3.69	15.300	3.46	21.30
3.350	1.50	9.350	3.69	15.350	3.46	21.35
3.400	1.50	9.400	3.69	15.400	3.46	21.40
3.450	1.50	9.450	3.69	15.450	3.46	21.45
3.500	1.50	9.500	3.69	15.500	3.46	21.50
3.550	1.50	9.550	4.15	15.550	3.46	21.55
3.600	1.50	9.600	4.15	15.600	3.46	21.60
3.650	1.50	9.650	4.15	15.650	3.46	21.65
3.700	1.50	9.700	4.15	15.700	3.46	21.70
3.750	1.50	9.750	4.15	15.750	3.46	21.75
3.800	1.50	9.800	4.15	15.800	3.46	21.80
3.850	1.50	9.850	4.15	15.850	3.46	21.85
3.900	1.50	9.900	4.15	15.900	3.46	21.90
3.950	1.50	9.950	4.15	15.950	3.46	21.95
4.000	1.50	10.000	4.15	16.000	3.45	22.00
4.050	1.84	10.050	5.30	16.050	2.07	22.05
4.100	1.84	10.100	5.30	16.100	2.07	22.10
4.150	1.84	10.150	5.30	16.150	2.07	22.15
4.200	1.84	10.200	5.30	16.200	2.07	22.20
4.250	1.84	10.250	5.30	16.250	2.07	22.25
4.300	1.84	10.300	5.30	16.300	2.07	22.30
4.350	1.84	10.350	5.30	16.350	2.07	22.35

HRP7-PR_2-100 YEAR.OUT						
4.400	1.84	10.400	5.30	16.400	2.07	22.40
4.450	1.84	10.450	5.30	16.450	2.07	22.45
4.500	1.84	10.500	5.30	16.500	2.07	22.50
4.550	1.84	10.550	7.14	16.550	2.07	22.55
4.600	1.84	10.600	7.14	16.600	2.07	22.60
4.650	1.84	10.650	7.14	16.650	2.07	22.65
4.700	1.84	10.700	7.14	16.700	2.07	22.70
4.750	1.84	10.750	7.14	16.750	2.07	22.75
4.800	1.84	10.800	7.14	16.800	2.07	22.80
4.850	1.84	10.850	7.14	16.850	2.07	22.85
4.900	1.84	10.900	7.14	16.900	2.07	22.90
4.950	1.84	10.950	7.14	16.950	2.07	22.95
5.000	1.84	11.000	7.14	17.000	2.07	23.00
5.050	1.84	11.050	11.06	17.050	2.07	23.05
5.100	1.84	11.100	11.06	17.100	2.07	23.10
5.150	1.84	11.150	11.06	17.150	2.07	23.15
5.200	1.84	11.200	11.06	17.200	2.07	23.20
5.250	1.84	11.250	11.06	17.250	2.07	23.25
5.300	1.84	11.300	11.06	17.300	2.07	23.30
5.350	1.84	11.350	11.06	17.350	2.07	23.35
5.400	1.84	11.400	11.06	17.400	2.07	23.40
5.450	1.84	11.450	11.06	17.450	2.07	23.45
5.500	1.84	11.500	11.08	17.500	2.07	23.50
5.550	1.84	11.550	47.92	17.550	2.07	23.55
5.600	1.84	11.600	47.92	17.600	2.07	23.60
5.650	1.84	11.650	47.92	17.650	2.07	23.65
5.700	1.84	11.700	47.92	17.700	2.07	23.70
5.750	1.84	11.750	47.97	17.750	2.07	23.75
5.800	1.84	11.800	127.18	17.800	2.07	23.80
5.850	1.84	11.850	127.18	17.850	2.07	23.85
5.900	1.84	11.900	127.18	17.900	2.07	23.90
5.950	1.84	11.950	127.18	17.950	2.07	23.95
6.000	1.84	12.000	127.12	18.000	2.07	24.00
Max.Eff.Inten.(mm/hr)=			127.18	86.35		
over (min)=			6.00	18.00		
Storage Coeff. (min)=			4.10 (ii)	17.07 (iii)		
Unit Hyd. Tpeak (min)=			6.00	18.00		
Unit Hyd. peak (cms)=			0.23	0.07		
TOTALS						
PEAK FLOW (cms)=			2.90	1.58	4.082 (iii)	
TIME TO PEAK (hrs)=			12.00	12.15	12.00	
RUNOFF VOLUME (mm)=			113.70	68.19	87.31	
TOTAL RAINFALL (mm)=			115.20	115.20	115.20	
RUNOFF COEFFICIENT =			0.99	0.59	0.76	
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:						
CN* = 77.0 Ia = Dep. Storage (Above)						
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.						
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.						

ADD HYD (0038)						
1 + 2 = 3						

ID1= 1 (1040): 10.35 1.104 12.17 62.31						
+ ID2= 2 (0240): 20.08 4.082 12.00 87.31						
=====						
ID = 3 (0038): 30.43 4.890 12.00 78.00						
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.						

ROUTE CHN(0029)						
IN= 2---> OUT= 1						

ROUTING time step (min)'= 2.00						

<----- DATA FOR SECTION (1.1) ----->						
Distance Elevation Manning						
0.00 101.00 0.0500						
1.00 100.67 0.0500						
2.00 100.33 0.0500 / 0.0300 Main Channel						
3.00 100.00 0.0300 Main Channel						
4.00 100.00 0.0300 Main Channel						
5.00 100.33 0.0300 / 0.0500 Main Channel						
6.00 100.67 0.0500						
7.00 101.00 0.0500						

<----- TRAVEL TIME TABLE ----->						
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME						
(m) (cu.m.) (m/s)						
0.05	100.05	.321E+02	0.0	0.28	35.15	
0.09	100.09	.721E+02	0.1	0.42	23.51	
0.14	100.14	.120E+03	0.1	0.53	18.76	

HRP7-PR_2-100 YEAR.OUT

0.19	100.19	.176E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.498E+03	0.8	0.97	10.26
0.44	100.44	.614E+03	1.1	1.07	9.26
0.50	100.50	.741E+03	1.4	1.16	8.55
0.55	100.55	.879E+03	1.8	1.24	8.01
0.61	100.61	.103E+04	2.3	1.31	7.60
0.66	100.66	.119E+04	2.7	1.37	7.26
0.72	100.72	.136E+04	3.2	1.42	6.98
0.78	100.78	.154E+04	3.8	1.47	6.74
0.83	100.83	.173E+04	4.4	1.52	6.53
0.89	100.89	.194E+04	5.1	1.56	6.35
0.94	100.94	.215E+04	5.8	1.60	6.19
1.00	101.00	.238E+04	6.6	1.64	6.05

<---- hydrograph ----> <-pipe / channel->

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0038)	30.43	4.89	12.00	78.00	0.87
OUTFLOW: ID= 1 (0029)	30.43	4.28	12.07	78.00	0.82
					1.51

HRP7-PR_2-100 YEAR.OUT

4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.554 (1)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 65.222
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.566

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)

1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):	11.30	1.554	12.08	65.22
+ ID2= 2 (0029):	30.43	4.281	12.07	78.00
ID = 3 (0018):	41.73	5.814	12.07	75.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0241)

Area	(ha)=	12.29
Total Imp(%)=	73.00	Dir. Conn.(%)= 73.00

Surface Area	(ha)=	8.97	3.32
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	286.24	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	1.15	6.083	2.30	12.083	16.60	18.00	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38

HRP7-PR_2-100 YEAR.OUT									
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07		
1.000	1.15	7.000	2.30	13.000	8.51	19.00	2.07		
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07		
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07		
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07		
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07		
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.767	1.61	7.767	2.30	13.767	9.45	19.77	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38		
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38		

HRP7-PR_2-100 YEAR.OUT									
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38		
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38		
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38		
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38		
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38		
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38		
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38		
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38		
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38		
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38		
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38		
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP7-PR_2-100 YEAR.OUT

ADD HYD (0021)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0018):	41.73	5.814	12.07	75.12
+ ID2= 2 (0241):	12.29	3.814	12.00	102.26

ID = 3 (0021):	54.02	5.899	12.07	75.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (0142)			
ID= 1 DT= 3.0 min			
Area (ha)=	10.92		
Total Imp(%)=	53.00	Dir. Conn.(%)=	53.00

IMPERVIOUS			
PERVIOUS (i)			
Surface Area (ha)=	5.79	5.13	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	269.81	40.00	
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		

HRP7-PR_2-100 YEAR.OUT									
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38		
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38		
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38		
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38		

Max.Eff.Inten.(mm/hr)= 127.18 62.00
over (min) 6.00 12.00
Storage Coeff. (min)= 3.42 (ii) 9

HRP7-PR_2-100 YEAR.OUT

ADD HYD (0023)					
1 + 2 = 3					

	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0142):	10.92	2.607	12.00	82.82	
+ ID2= 2 (0021):	54.02	5.899	12.07	75.48	
=====					
ID = 3 (0023):	64.94	8.089	12.05	76.71	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)				
IN= 2--> OUT= 1				
DT= 3.0 min				

	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0030	0.5000
	0.0370	0.1125	1.9000	0.7700
	0.0530	0.2275	6.4000	1.1000
	0.0650	0.3450	9.2000	1.2500
	0.0750	0.4630	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0023)	64.940	8.089	12.05	76.71	
OUTFLOW: ID= 1 (0024)	64.940	6.112	12.20	75.57	

PEAK FLOW REDUCTION [qout/qin](%)= 75.56
TIME SHIFT OF PEAK FLOW (min)= 9.00
MAXIMUM STORAGE USED (ha.m.)= 1.0793

CALIB			
STANDHYD (0143)			
ID= 1 DT= 1.0 min			

	Area (ha)=	0.04	
	Total Imp(%)=	55.00	
	Dir. Conn.(%)=	55.00	

	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	0.30	
Dep. Storage	(mm)=	1.50	
Average Slope	(%)=	2.00	
Length	(m)=	74.83	
Mannings n	=	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH									

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	1.15	6.017	2.30	12.017	16.00	18.02	2.07		
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07		
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07		
0.083	1.15	6.083	2.30	12.083	16.59	18.08	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.117	1.15	6.117	2.30	12.117	16.59	18.12	2.07		
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07		
0.183	1.15	6.183	2.30	12.183	16.59	18.18	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.217	1.15	6.217	2.30	12.217	16.59	18.22	2.07		
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07		
0.283	1.15	6.283	2.30	12.283	16.59	18.28	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.317	1.15	6.317	2.30	12.317	16.59	18.32	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07		
0.383	1.15	6.383	2.30	12.383	16.59	18.38	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07		
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07		
0.483	1.15	6.483	2.30	12.483	16.59	18.48	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.517	1.15	6.517	2.30	12.517	8.53	18.52	2.07		
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07		

HRP7-PR_2-100 YEAR.OUT							
0.583	1.15	6.583	2.30	12.583	8.52	18.58	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.617	1.15	6.617	2.30	12.617	8.52	18.62	2.07
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.683	1.15	6.683	2.30	12.683	8.52	18.68	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.717	1.15	6.717	2.30	12.717	8.52	18.72	2.07
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07
0.783	1.15	6.783	2.30	12.783	8.52	18.78	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.817	1.15	6.817	2.30	12.817	8.52	18.82	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07
0.883	1.15	6.883	2.30	12.883	8.52	18.88	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07
0.983	1.15	6.983	2.30	12.983	8.52	18.98	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.017	1.15	7.017	2.30	13.017	1.62	19.02	2.07
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.117	1.15	7.117	2.30	13.117	1.61	19.12	2.07
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.183	1.15	7.183	2.30	13.183	1.61	19.18	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.217	1.15	7.217	2.30	13.217	1.61	19.22	2.07
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07
1.283	1.15	7.283	2.30	13.283	1.61	19.28	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.317	1.15	7.317	2.30	13.317	1.61	19.32	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07
1.383	1.15	7.383	2.30	13.383	1.61	19.38	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07
1.483	1.15	7.483	2.30	13.483	1.61	19.48	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.517	1.15	7.517	2.30	13.517	9.43	19.52	2.07
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07
1.583	1.15	7.583	2.30	13.583	9.45	19.58	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.617	1.15	7.617	2.30	13.617	9.45	19.62	2.07
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.683	1.15	7.683	2.30	13.683	9.45	19.68	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.717	1.15	7.717	2.30	13.717	9.45	19.72	2.07
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.767	2.07	7.767	2.30	13.767	9.45	19.77	2.07
1.783	2.07	7.783	2.30	13.783	9.45	19.78	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.817	2.07	7.817	2.30	13.817	9.45	19.82	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07
1.883	2.07	7.883	2.30	13.883	9.45	19.88	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07
1.983	2.07	7.983	2.30	13.983	9.45	19.98	2.07
2.000	2.07	8.000	2.31	14.000	9.45	20.00	2.07
2.017	1.50	8.017	3.11	14.017	3.47	20.02	1.39

HRP7-PR_2-100 YEAR.OUT						
2.033	1.50	8.033	3.11	14.033	3.46	20.03
2.050	1.50	8.050	3.11	14.050	3.46	20.05
2.067	1.50	8.067	3.11	14.067	3.46	20.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08
2.100	1.50	8.100	3.11	14.100	3.46	20.10
2.117	1.50	8.117	3.11	14.117	3.46	20.12
2.133	1.50	8.133	3.11	14.133	3.46	20.13
2.150	1.50	8.150	3.11	14.150	3.46	20.15
2.167	1.50	8.167	3.11	14.167	3.46	20.17
2.183	1.50	8.183	3.11	14.183	3.46	20.18
2.200	1.50	8.200	3.11	14.200	3.46	20.20
2.217	1.50	8.217	3.11	14.217	3.46	20.22
2.233	1.50	8.233	3.11	14.233	3.46	20.23
2.250	1.50	8.250	3.11	14.250	3.46	20.25
2.267	1.50	8.267	3.11	14.267	3.46	20.27
2.283	1.50	8.283	3.11	14.283	3.46	20.28
2.300	1.50	8.300	3.11	14.300	3.46	20.30
2.317	1.50	8.317	3.11	14.317	3.46	20.32
2.333	1.50	8.333	3.11	14.333	3.46	20.33
2.350	1.50	8.350	3.11	14.350	3.46	20.35
2.367	1.50	8.367	3.11	14.367	3.46	20.37
2.383	1.50	8.383	3.11	14.383	3.46	20.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40
2.417	1.50	8.417	3.11	14.417	3.46	20.42
2.433	1.50	8.433	3.11	14.433	3.46	20.43
2.450	1.50	8.450	3.11	14.450	3.46	20.45
2.467	1.50	8.467	3.11	14.467	3.46	20.47
2.483	1.50	8.483	3.11	14.483	3.46	20.48
2.500	1.50	8.500	3.11	14.500	3.46	20.50
2.517	1.50	8.517	3.11	14.517	3.46	20.52
2.533	1.50	8.533	3.11	14.533	3.46	20.53
2.550	1.50	8.550	3.11	14.550	3.46	20.55
2.567	1.50	8.567	3.11	14.567	3.46	20.57
2.583	1.50	8.583	3.11	14.583	3.46	20.58
2.600	1.50	8.600	3.11	14.600	3.46	20.60
2.617	1.50	8.617	3.11	14.617	3.46	20.62
2.633	1.50	8.633	3.11	14.633	3.46	20.63
2.650	1.50	8.650	3.11	14.650	3.46	20.65
2.667	1.50	8.667	3.11	14.667	3.46	20.67
2.683	1.50	8.683	3.11	14.683	3.46	20.68
2.700	1.50	8.700	3.11	14.700	3.46	20.70
2.717	1.50	8.717	3.11	14.717	3.46	20.72
2.733	1.50	8.733	3.11	14.733	3.46	20.73
2.750	1.50	8.750	3.11	14.750	3.46	20.75
2.767	1.50	8.767	3.11	14.767	3.46	20.77
2.783	1.50	8.783	3.11	14.783	3.46	20.78
2.800	1.50	8.800	3.11	14.800	3.46	20.80
2.817	1.50	8.817	3.11	14.817	3.46	20.82
2.833	1.50	8.833	3.11	14.833	3.46	20.83
2.850	1.50	8.850	3.11	14.850	3.46	20.85
2.867	1.50	8.867	3.11	14.867	3.46	20.87
2.883	1.50	8.883	3.11	14.883	3.46	20.88
2.900	1.50	8.900	3.11	14.900	3.46	20.90
2.917	1.50	8.917	3.11	14.917	3.46	20.92
2.933	1.50	8.933	3.11	14.933	3.46	20.93
2.950	1.50	8.950	3.11	14.950	3.46	20.95
2.967	1.50	8.967	3.11	14.967	3.46	20.97
2.983	1.50	8.983	3.11	14.983	3.46	20.98
3.000	1.50	9.000	3.11	15.000	3.46	21.00
3.017	1.50	9.017	3.69	15.017	3.46	21.02
3.033	1.50	9.033	3.69	15.033	3.46	21.03
3.050	1.50	9.050	3.69	15.050	3.46	21.05
3.067	1.50	9.067	3.69	15.067	3.46	21.07
3.083	1.50	9.083	3.69	15.083	3.46	21.08
3.100	1.50	9.100	3.69	15.100	3.46	21.10
3.117	1.50	9.117	3.69	15.117	3.46	21.12
3.133	1.50	9.133	3.69	15.133	3.46	21.13
3.150	1.50	9.150	3.69	15.150	3.46	21.15
3.167	1.50	9.167	3.69	15.167	3.46	21.17
3.183	1.50	9.183	3.69	15.183	3.46	21.18
3.200	1.50	9.200	3.69	15.200	3.46	21.20
3.217	1.50	9.217	3.69	15.217	3.46	21.22
3.233	1.50	9.233	3.69	15.233	3.46	21.23
3.250	1.50	9.250	3.69	15.250	3.46	21.25
3.267	1.50	9.267	3.69	15.267	3.46	21.27
3.283	1.50	9.283	3.69	15.283	3.46	21.28
3.300	1.50	9.300	3.69	15.300	3.46	21.30
3.317	1.50	9.317	3.69	15.317	3.46	21.32
3.333	1.50	9.333	3.69	15.333	3.46	21.33
3.350	1.50	9.350	3.69	15.350	3.46	21.35
3.367	1.50	9.367	3.69	15.367	3.46	21.37
3.383	1.50	9.383	3.69	15.383	3.46	21.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40
3.417	1.50	9.417	3.69	15.417	3.46	21.42
3.433	1.50	9.433	3.69	15.433	3.46	21.43
3.450	1.50	9.450	3.69	15.450	3.46	21.45
3.467	1.50	9.467	3.69	15.467	3.46	21.47

HRP7-PR_2-100 YEAR.OUT						
3.483	1.50	9.483	3.69	15.483	3.46	21.48
3.500	1.50	9.500	3.69	15.500	3.46	21.50
3.517	1.50	9.517	4.15	15.517	3.46	21.52
3.533	1.50	9.533	4.15	15.533	3.46	21.53
3.550	1.50	9.550	4.15	15.550	3.46	21.55
3.567	1.50	9.567	4.15	15.567	3.46	21.57
3.583	1.50	9.583	4.15	15.583	3.46	21.58
3.600	1.50	9.600	4.15	15.600	3.46	21.60
3.617	1.50	9.617	4.15	15.617	3.46	21.62
3.633	1.50	9.633	4.15	15.633	3.46	21.63
3.650	1.50	9.650	4.15	15.650	3.46	21.65
3.667	1.50	9.667	4.15	15.667	3.46	21.67
3.683	1.50	9.683	4.15	15.683	3.46	21.68
3.700	1.50	9.700	4.15	15.700	3.46	21.70
3.717	1.50	9.717	4.15	15.717	3.46	21.72
3.733	1.50	9.733	4.15	15.733	3.46	21.73
3.750	1.50	9.750	4.15	15.750	3.46	21.75
3.767	1.50	9.767	4.15	15.767	3.46	21.77
3.783	1.50	9.783	4.15	15.783	3.46	21.78
3.800	1.50	9.800	4.15	15.800	3.46	21.80
3.817	1.50	9.817	4.15	15.817	3.46	21.82
3.833	1.50	9.833	4.15	15.833	3.46	21.83
3.850	1.50	9.850	4.15	15.850	3.46	21.85
3.867	1.50	9.867	4.15	15.867	3.46	21.87
3.883	1.50	9.883	4.15	15.883	3.46	21.88
3.900	1.50	9.900	4.15	15.900	3.46	21.90
3.917	1.50	9.917	4.15	15.917	3.46	21.92
3.933	1.50	9.933	4.15	15.933	3.46	21.93
3.950	1.50	9.950	4.15	15.950	3.46	21.95
3.967	1.50	9.967	4.15	15.967	3.46	21.97
3.983	1.50	9.983	4.15	15.983	3.46	21.98
4.000	1.50	10.000	4.15	16.000	3.46	22.00
4.017	1.84	10.017	5.30	16.017	2.08	22.02
4.033	1.84	10.033	5.30	16.033	2.07	22.03
4.050	1.84	10.050	5.30	16.050	2.07	22.05
4.067	1.84	10.067	5.30	16.067	2.07	22.07
4.083	1.84	10.083	5.30	16.083	2.07	22.08
4.100	1.84	10.100	5.30	16.100	2.07	22.10
4.117	1.84	10.117	5.30	16.117	2.07	22.12
4.133	1.84	10.133	5.30	16.133	2.07	22.13
4.150	1.84	10.150	5.30	16.150	2.07	22.15
4.167	1.84	10.167	5.30	16.167	2.07	22.17
4.183	1.84	10.183	5.30	16.183	2.07	22.18
4.200	1.84	10.200	5.30	16.200	2.07	22.20
4.217	1.84	10.217	5.30	16.217	2.07	22.22
4.233	1.84	10.233	5.30	16.233	2.07	22.23
4.250	1.84	10.250	5.30	16.250	2.07	22.25
4.267	1.84	10.267	5.30	16.267	2.07	22.27
4.283	1.84	10.283	5.30	16.283	2.07	22.28
4.300	1.84	10.300	5.30	16.300	2.07	22.30
4.317	1.84	10.317	5.30	16.317	2.07	22.32
4.333	1.84	10.333	5.30	16.333	2.07	22.33
4.350	1.84	10.350	5.30	16.350	2.07	22.35
4.367	1.84	10.367	5.30	16.367	2.07	22.37
4.383	1.84	10.383	5.30	16.383	2.07	22.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40
4.417	1.84	10.417	5.30	16.417	2.07	22.42
4.433	1.84	10.433	5.30	16.433	2.07	22.43
4.450	1.84	10.450	5.30	16.450	2.07	22.45
4.467	1.84	10.467	5.30	16.467	2.07	22.47
4.483	1.84	10.483	5.30	16.483	2.07	22.48
4.500	1.84	10.500	5.30	16.500	2.07	22.50
4.517	1.84	10.517	7.14	16.517	2.07	22.52
4.533	1.84	10.533	7.14	16.533	2.07	22.53
4.550	1.84	10.550	7.14	16.550	2.07	22.55
4.567	1.84	10.567	7.14	16.567	2.07	22.57
4.583	1.84	10.583	7.14	16.583	2.07	22.58
4.600	1.84	10.600	7.14	16.600	2.07	22.60
4.617	1.84	10.617	7.14	16.617	2.07	22.62
4.633	1.84	10.633	7.14	16.633	2.07	22.63
4.650	1.84	10.650	7.14	16.650	2.07	22.65
4.667	1.84	10.667	7.14	16.667	2.07	22.67
4.683	1.84	10.683	7.14	16.683	2.07	22.68
4.700	1.84	10.700	7.14	16.700	2.07	22.70
4.717	1.84	10.717	7.14	16.717	2.07	22.72
4.733	1.84	10.733	7.14	16.733	2.07	22.73
4.750	1.84	10.750	7.14	16.750	2.07	22.75
4.767	1.84	10.767	7.14	16.767	2.07	22.77
4.783	1.84	10.783	7.14	16.783	2.07	22.78
4.800	1.84	10.800	7.14	16.800	2.07	22.80
4.817	1.84	10.817	7.14	16.817	2.07	22.82
4.833	1.84	10.833	7.14	16.833	2.07	22.83
4.850	1.84	10.850	7.14	16.850	2.07	22.85
4.867	1.84	10.867	7.14	16.867	2.07	22.87
4.883	1.84	10.883	7.14	16.883	2.07	22.88
4.900	1.84	10.900	7.14	16.900	2.07	22.90
4.917	1.84	10.917	7.14	16.917	2.07	22.92

HRP7-PR_2-100 YEAR.OUT									
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38		
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38		
4.983	1.84	10.983	7.14	16.983	2.07	22.98	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.017	1.84	11.017	11.06	17.017	2.07	23.02	1.38		
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38		
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38		
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38		
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.117	1.84	11.117	11.06	17.117	2.07	23.12	1.38		
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38		
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38		
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38		
5.183	1.84	11.183	11.06	17.183	2.07	23.18	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.217	1.84	11.217	11.06	17.217	2.07	23.22	1.38		
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38		
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38		
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38		
5.283	1.84	11.283	11.06	17.283	2.07	23.28	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.317	1.84	11.317	11.06	17.317	2.07	23.32	1.38		
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38		
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38		
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38		
5.383	1.84	11.383	11.06	17.383	2.07	23.38	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38		
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38		
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38		
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38		
5.483	1.84	11.483	11.06	17.483	2.07	23.48	1.38		
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38		
5.517	1.84	11.517	47.91	17.517	2.07	23.52	1.38		
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38		
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38		
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38		
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.617	1.84	11.617	47.92	17.617	2.07	23.62	1.38		
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38		
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38		
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38		
5.683	1.84	11.683	47.92	17.683	2.07	23.68	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.717	1.84	11.717	47.92	17.717	2.07	23.72	1.38		
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38		
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38		
5.767	1.84	11.767	127.14	17.767	2.07	23.77	1.38		
5.783	1.84	11.783	127.18	17.783	2.07	23.78	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.817	1.84	11.817	127.18	17.817	2.07	23.82	1.38		
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38		
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38		
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38		
5.883	1.84	11.883	127.18	17.883	2.07	23.88	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38		
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38		
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38		
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38		
5.983	1.84	11.983	127.18	17.983	2.07	23.98	1.38		
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38		
Max.Eff.Inten.(mm/hr)=	127.18	80.31							
over (min)	5.00	8.00							
Storage Coeff. (min)=	1.58 (ii)	7.50 (ii)							
Unit Hyd. Tpeak (min)=	5.00	8.00							
Unit Hyd. peak (cms)=	0.41	0.15							
PEAK FLOW (cms)=	0.16	0.07							
TIME TO PEAK (hrs)=	12.00	12.03							
RUNOFF VOLUME (mm)=	113.71	60.83							
TOTAL RAINFALL (mm)=	115.20	115.20							
RUNOFF COEFFICIENT =	0.99	0.53							

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP7-PR_2-100 YEAR.OUT

ADD HYD (0026)		AREA		QPEAK		TPEAK		R.V.			
1 + 2 = 3		(ha)		(cms)		(hrs)		(mm)			
ID1= 1 (0143):		0.84		0.229		12.00		89.91			
+ ID2= 2 (0024):		64.94		6.112		12.20		75.57			
=====											
ID = 3 (0026):		65.78		6.117		8.13		50.89			
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.											
CALIB		Area (ha)=		6.58							
STANDHYD (0244)		Total Imp(%)=		45.00		Dir. Conn.(%)=		45.00			
ID= 1 DT= 4.0 min											
		IMPERVIOUS		PERVIOUS (i)							
Surface Area		(ha)=		2.96							
Dep. Storage		(mm)=		1.50							
Average Slope		(%)=		2.00							
Length		(m)=		209.44		40.00					
Mannings n		=		0.013		0.250					
NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.											
TIME		RAIN		TIME		RAIN		TIME		RAIN	
hrs		mm/hr		hrs		mm/hr		hrs		mm/hr	
0.067	1.15	6.067	2.30	12.067	16.60	18.07	2.07				
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07				
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07				
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07				
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07				
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07				
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07				
0.533	1.15	6.533	2.30	12.533	12.56	18.53	2.07				
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07				
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07				
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07				
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07				
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07				
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07				
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07				
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07				
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07				
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07				
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07				
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07				
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07				
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07				
1.533	1.15	7.533	2.30	13.533	5.53	19.53	2.07				
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07				
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07				
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07				
1.800	1.84	7.800	2.30	13.800	9.45	19.80	2.07				
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07				
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07				
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07				
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38				
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38				
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38				
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38				
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38				
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38				
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38				
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38				
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38				
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38				
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38				
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38				
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38				
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38				
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38				
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38				
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38				
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38				
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38				
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38				
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38				
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38				
3.533	1.50	9.533	3.92	15.533	3.46	21.53	1.38				
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38				
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38				
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38				
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38				
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38				

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3.933	1.50		9.933	4.15		15.933	3.46		21.93	1.38
4.000	1.50		10.000	4.15		16.000	3.46		22.00	1.38
4.067	1.84		10.067	5.30		16.067	2.07		22.07	1.38
4.133	1.84		10.133	5.30		16.133	2.07		22.13	1.38
4.200	1.84		10.200	5.30		16.200	2.07		22.20	1.38
4.267	1.84		10.267	5.30		16.267	2.07		22.27	1.38
4.333	1.84		10.333	5.30		16.333	2.07		22.33	1.38
4.400	1.84		10.400	5.30		16.400	2.07		22.40	1.38
4.467	1.84		10.467	5.30		16.467	2.07		22.47	1.38
4.533	1.84		10.533	6.22		16.533	2.07		22.53	1.38
4.600	1.84		10.600	7.14		16.600	2.07		22.60	1.38
4.667	1.84		10.667	7.14		16.667	2.07		22.67	1.38
4.733	1.84		10.733	7.14		16.733	2.07		22.73	1.38
4.800	1.84		10.800	7.14		16.800	2.07		22.80	1.38
4.867	1.84		10.867	7.14		16.867	2.07		22.87	1.38
4.933	1.84		10.933	7.14		16.933	2.07		22.93	1.38
5.000	1.84		11.000	7.14		17.000	2.07		23.00	1.38
5.067	1.84		11.067	11.06		17.067	2.07		23.07	1.38
5.133	1.84		11.133	11.06		17.133	2.07		23.13	1.38
5.200	1.84		11.200	11.06		17.200	2.07		23.20	1.38
5.267	1.84		11.267	11.06		17.267	2.07		23.27	1.38
5.333	1.84		11.333	11.06		17.333	2.07		23.33	1.38
5.400	1.84		11.400	11.06		17.400	2.07		23.40	1.38
5.467	1.84		11.467	11.06		17.467	2.07		23.47	1.38
5.533	1.84		11.533	29.49		17.533	2.07		23.53	1.38
5.600	1.84		11.600	47.92		17.600	2.07		23.60	1.38
5.667	1.84		11.667	47.92		17.667	2.07		23.67	1.38
5.733	1.84		11.733	47.92		17.733	2.07		23.73	1.38
5.800	1.84		11.800	107.36		17.800	2.07		23.80	1.38
5.867	1.84		11.867	127.18		17.867	2.07		23.87	1.38
5.933	1.84		11.933	127.18		17.933	2.07		23.93	1.38
6.000	1.84		12.000	127.18		18.000	2.07		24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 78.97
over (min) 5.00 12.00
Storage Coeff. (min)= 2.94 (ii) 9.88 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.32 0.11

PEAK FLOW (cms)= 1.04 0.58
TIME TO PEAK (hrs)= 12.00 12.07
RUNOFF VOLUME (mm)= 113.70 60.84
TOTAL RAINFALL (mm)= 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53

TOTALS
1.587 (iii)
12.00
84.63
115.20
0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0244): 6.58 1.587 12.00 84.63
+ ID2= 2 (0026): 65.78 6.117 8.13 50.89
=====

ID = 3 (0028): 72.36 6.147 8.13 53.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat

HRP7-PR_2-100 YEAR.OUT

Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\6b2f149c-a323-4b41-8968-1b0e9d8ee27a\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\6b2f149c-a323-4b41-8968-1b0e9d8ee27a\scenar

DATE: 03/24/2023 TIME: 10:46:29

USER:

COMMENTS:

** SIMULATION : Run 06 **

MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\6b1b71e9-a066-4486-ac1c-480ed0ba9ce9\2985551a
| ata\Local\Temp\6b1b71e9-a066-4486-ac1c-480ed0ba9ce9\2985551a
| Ptotal=127.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53

CALIB |
NASHYD (1040) | Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29

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1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 1.283 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 72.171
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (0240)	Area	(ha)= 20.08		
ID= 1 DT= 3.0 min	Total Imp(%)=	42.00	Dir. Conn.(%)=	42.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.43	11.65
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	365.88	100.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME	RAIN	TIME	RAIN	'	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29

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0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53

HRP7-PR_2-100 YEAR.OUT											
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53				
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53				
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53				
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53				
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53				
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53				
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53				
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53				
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53				
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53				
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53				
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53				
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53				
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53				
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53				
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53				
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53				
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53				
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53				
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53				
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53				
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53				
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53				
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53				
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53				
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53				
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53				
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53				

Max.Eff.Inten.(mm/hr)=	140.43	99.21
over (min)	6.00	18.00
Storage Coeff. (min)=	3.95 (ii)	16.21 (ii)
Unit Hyd. Tpeak (min)=	6.00	18.00
Unit Hyd. peak (cms)=	0.24	0.07
TOTALS		
PEAK FLOW (cms)=	3.21	1.86
TIME TO PEAK (hrs)=	12.00	12.15
RUNOFF VOLUME (mm)=	125.70	78.39
TOTAL RAINFALL (mm)=	127.20	127.20
RUNOFF COEFFICIENT =	0.99	0.62
		0.77

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0038)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1040):	10.35	1.283	12.17	72.17
+ ID2= 2 (0240):	20.08	4.615	12.00	98.26
=====				
ID = 3 (0038):	30.43	5.559	12.00	89.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0029)					
IN= 2---> OUT= 1					
Routing time step (min)= 2.00					
<----- DATA FOR SECTION (1.1) ----->					
Distance	Elevation	Manning			
0.00	101.00	0.0500			
1.00	100.67	0.0500			
2.00	100.33	0.0500 /0.0300	Main Channel		
3.00	100.00	0.0300	Main Channel		
4.00	100.00	0.0300	Main Channel		
5.00	100.33	0.0300 /0.0500	Main Channel		
6.00	100.67	0.0500			
7.00	101.00	0.0500			
<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(ft)	(m)	(cu.ft.)	(cms)	(ft/s)	(min)
0.05	100.05	.321E+02	0.0	0.28	35.15
0.09	100.09	.721E+02	0.1	0.42	23.51
0.14	100.14	.120E+03	0.1	0.53	18.76
0.19	100.19	.170E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.498E+03	0.8	0.97	10.26

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0.44	100.44	.614E+03	1.1	1.07	9.26	
0.50	100.50	.741E+03	1.4	1.16	8.55	
0.55	100.55	.879E+03	1.8	1.24	8.01	
0.61	100.61	.103E+04	2.3	1.31	7.60	
0.66	100.66	.110E+04	2.7	1.37	7.26	
0.72	100.72	.136E+04	3.2	1.42	6.98	
0.78	100.78	.154E+04	3.8	1.47	6.74	
0.83	100.83	.173E+04	4.4	1.52	6.53	
0.89	100.89	.194E+04	5.1	1.56	6.35	
0.94	100.94	.215E+04	5.8	1.60	6.19	
1.00	101.00	.238E+04	6.6	1.64	6.05	

<---- hydrograph ---->						
<-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0038)	30.43	5.56	12.00	89.38	0.93	1.59
OUTFLOW: ID= 1 (0029)	30.43	4.89	12.07	89.38	0.87	1.55

CALIB	
NASHYD (1041)	Area (ha)= 11.30 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.26

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08					2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17					2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25					2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33					2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42					2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50					2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58					2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67					2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75					2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83					2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92					2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00					2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08					2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17					2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25					2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33					2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42					2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50					2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58					2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67					2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75					2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83					2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92					2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00					2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08					1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17					1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25					1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33					1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42					1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50					1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58					1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67					1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75					1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83					1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92					1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00					1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08					1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17					1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25					1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33					1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42					1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50					1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58					1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67					1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75					1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83					1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92					1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00					1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08					1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17					1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25					1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33					1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42					1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50					1.53

HRP7-PR_2-100 YEAR.OUT

4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.92	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.799 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 75.341
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.592

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):	11.30	1.799	12.08	75.34
+ ID2= 2 (0029):	30.43	4.887	12.07	89.38
=====				
ID = 3 (0018):	41.73	6.662	12.07	85.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0241)			
ID= 1 DT= 2.0 min			
	Area (ha)=	12.29	
	Total Imp(%)=	73.00	Dir. Conn.(%)= 73.00

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	8.97	3.32	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	286.24	40.00	
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29
0.500	1.27	6.500	2.54	12.500	18.30	18.50	2.29
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29

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0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.767	1.78	7.767	2.54	13.767	10.43	19.77	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53

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- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.79	5.13
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	269.81	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	----- TRANSFORMED HYETOGRAPH -----							
	RAIN		RAIN		RAIN		RAIN	
	mm/hr	hrs	mm/hr	' hrs	mm/hr	' hrs	mm/hr	TIME
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29	
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29	
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29	
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29	
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29	
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29	
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29	
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29	
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29	
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29	
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29	
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29	
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29	
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29	
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29	
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29	
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29	
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29	
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29	
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29	
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29	
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29	
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29	
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29	
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29	
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29	
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29	
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29	
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29	
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29	
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29	
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29	
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29	
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29	
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29	
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29	
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29	
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29	
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29	
2.000	1.65	8.000	3.43	14.000	3.82	20.00	1.53	
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53	
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53	
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53	
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53	
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53	
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53	
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53	
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53	
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53	
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53	
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53	
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53	
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53	
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53	
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53	
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53	
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53	

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2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 72.61
over (min) 6.00 12.00
Storage Coeff. (min)= 3.29 (ii) 9.16 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.26 0.11

TOTALS

PEAK FLOW (cms)= 2.23 0.76 2.936 (iii)
TIME TO PEAK (hrs)= 12.00 12.00
RUNOFF VOLUME (mm)= 125.70 56.15 93.01
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.44 0.73

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
Cv = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0023)|

HRP7-PR_2-100 YEAR.OUT

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0142):	10.92	2.936	12.00	93.01
+ ID2= 2 (0021):	54.02	6.756	12.07	85.53
ID = 3 (0023):	64.94	9.221	12.05	86.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)	OVERFLOW IS OFF			
IN= 2--> OUT= 1 DT= 3.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0030	0.5800
	0.0370	0.1125	1.9000	0.7700
	0.0530	0.2275	6.4000	1.1000
	0.0650	0.3450	9.2000	1.2500
	0.0750	0.4630	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0023)	64.940	9.221	12.05	86.79
OUTFLOW: ID= 1 (0024)	64.940	7.125	12.18	85.64
PEAK FLOW REDUCTION [Qout/Qin](%)= 77.27				
TIME SHIFT OF PEAK FLOW (min)= 7.50				
MAXIMUM STORAGE USED (ha.m.)= 1.1393				

CALIB	Area (ha)=	0.84
STANDHYD (0143)	Total Imp(%)=	55.00
ID= 1 DT= 1.0 min	Dir. Conn.(%)=	55.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.46	0.38
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	74.83	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.27	6.017	2.54	12.017	18.40	18.02	2.29
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29
0.083	1.27	6.083	2.54	12.083	18.32	18.08	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.117	1.27	6.117	2.54	12.117	18.32	18.12	2.29
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.183	1.27	6.183	2.54	12.183	18.32	18.18	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.217	1.27	6.217	2.54	12.217	18.32	18.22	2.29
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29
0.283	1.27	6.283	2.54	12.283	18.32	18.28	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.317	1.27	6.317	2.54	12.317	18.32	18.32	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29
0.383	1.27	6.383	2.54	12.383	18.32	18.38	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29
0.483	1.27	6.483	2.54	12.483	18.32	18.48	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.517	1.27	6.517	2.54	12.517	9.42	18.52	2.29
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.617	1.27	6.617	2.54	12.617	9.41	18.62	2.29
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29

HRP7-PR_2-100 YEAR.OUT									
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.683	1.27	6.683	2.54	12.683	9.41	18.68	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.717	1.27	6.717	2.54	12.717	9.41	18.72	2.29		
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29		
0.783	1.27	6.783	2.54	12.783	9.41	18.78	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.817	1.27	6.817	2.54	12.817	9.41	18.82	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29		
0.883	1.27	6.883	2.54	12.883	9.41	18.88	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29		
0.983	1.27	6.983	2.54	12.983	9.41	18.98	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.017	1.27	7.017	2.54	13.017	1.78	19.02	2.29		
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.117	1.27	7.117	2.54	13.117	1.78	19.12	2.29		
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.183	1.27	7.183	2.54	13.183	1.78	19.18	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.217	1.27	7.217	2.54	13.217	1.78	19.22	2.29		
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29		
1.283	1.27	7.283	2.54	13.283	1.78	19.28	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.317	1.27	7.317	2.54	13.317	1.78	19.32	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29		
1.383	1.27	7.383	2.54	13.383	1.78	19.38	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29		
1.483	1.27	7.483	2.54	13.483	1.78	19.48	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.517	1.27	7.517	2.54	13.517	10.41	19.52	2.29		
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.617	1.27	7.617	2.54	13.617	10.43	19.62	2.29		
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.683	1.27	7.683	2.54	13.683	10.43	19.68	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.717	1.27	7.717	2.54	13.717	10.43	19.72	2.29		
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.767	2.29	7.767	2.54	13.767	10.43	19.77	2.29		
1.783	2.29	7.783	2.54	13.783	10.43	19.78	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.817	2.29	7.817	2.54	13.817	10.43	19.82	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29		
1.883	2.29	7.883	2.54	13.883	10.43	19.88	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29		
1.983	2.29	7.983	2.54	13.983	10.43	19.98	2.29		
2.000	2.29	8.000	2.55	14.000	10.43	20.00	2.29		
2.017	1.65	8.017	3.43	14.017	3.83	20.02	1.53		
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		

HRP7-PR_2-100 YEAR.OUT									
2.117	1.65	8.117	3.43	14.117	3.82	20.12	1.53		
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.183	1.65	8.183	3.43	14.183	3.82	20.18	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.217	1.65	8.217	3.43	14.217	3.82	20.22	1.53		
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53		
2.283	1.65	8.283	3.43	14.283	3.82	20.28	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.317	1.65	8.317	3.43	14.317	3.82	20.32	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53		
2.383	1.65	8.383	3.43	14.383	3.82	20.38	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53		
2.483	1.65	8.483	3.43	14.483	3.82	20.48	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.517	1.65	8.517	3.43	14.517	3.82	20.52	1.53		
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.617	1.65	8.617	3.43	14.617	3.82	20.62	1.53		
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.683	1.65	8.683	3.43	14.683	3.82	20.68	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.717	1.65	8.717	3.43	14.717	3.82	20.72	1.53		
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53		
2.783	1.65	8.783	3.43	14.783	3.82	20.78	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.817	1.65	8.817	3.43	14.817	3.82	20.82	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53		
2.883	1.65	8.883	3.43	14.883	3.82	20.88	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53		
2.983	1.65	8.983	3.43	14.983	3.82	20.98	1.53		
2.999	1.65	8.999	3.43	14.999	3.82	20.99	1.53		
3.017	1.65	9.017	4.07	15.017	3.82	21.02	1.53		
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.117	1.65	9.117	4.07	15.117	3.82	21.12	1.53		
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.183	1.65	9.183	4.07	15.183	3.82	21.18	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.217	1.65	9.217	4.07	15.217	3.82	21.22	1.53		
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53		
3.283	1.65	9.283	4.07	15.283	3.82	21.28	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.317	1.65	9.317	4.07	15.317	3.82	21.32	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53		
3.383	1.65	9.383	4.07	15.383	3.82	21.38	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53		
3.483	1.65	9.483	4.07	15.483	3.82	21.48	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.517	1.65	9.517	4.58	15.517	3.82	21.52	1.53		
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		

HRP7-PR_2-100 YEAR.OUT				
3.567	1.65	9.567	4.58	15.567
3.583	1.65	9.583	4.58	15.583
3.600	1.65	9.600	4.58	15.600
3.617	1.65	9.617	4.58	15.617
3.633	1.65	9.633	4.58	15.633
3.650	1.65	9.650	4.58	15.650
3.667	1.65	9.667	4.58	15.667
3.683	1.65	9.683	4.58	15.683
3.700	1.65	9.700	4.58	15.700
3.717	1.65	9.717	4.58	15.717
3.733	1.65	9.733	4.58	15.733
3.750	1.65	9.750	4.58	15.750
3.767	1.65	9.767	4.58	15.767
3.783	1.65	9.783	4.58	15.783
3.800	1.65	9.800	4.58	15.800
3.817	1.65	9.817	4.58	15.817
3.833	1.65	9.833	4.58	15.833
3.850	1.65	9.850	4.58	15.850
3.867	1.65	9.867	4.58	15.867
3.883	1.65	9.883	4.58	15.883
3.900	1.65	9.900	4.58	15.900
3.917	1.65	9.917	4.58	15.917
3.933	1.65	9.933	4.58	15.933
3.950	1.65	9.950	4.58	15.950
3.967	1.65	9.967	4.58	15.967
3.983	1.65	9.983	4.58	15.983
4.000	1.65	10.000	4.58	16.000
4.017	2.04	10.017	5.85	16.017
4.033	2.04	10.033	5.85	16.033
4.050	2.04	10.050	5.85	16.050
4.067	2.04	10.067	5.85	16.067
4.083	2.04	10.083	5.85	16.083
4.100	2.04	10.100	5.85	16.100
4.117	2.04	10.117	5.85	16.117
4.133	2.04	10.133	5.85	16.133
4.150	2.04	10.150	5.85	16.150
4.167	2.04	10.167	5.85	16.167
4.183	2.04	10.183	5.85	16.183
4.200	2.04	10.200	5.85	16.200
4.217	2.04	10.217	5.85	16.217
4.233	2.04	10.233	5.85	16.233
4.250	2.04	10.250	5.85	16.250
4.267	2.04	10.267	5.85	16.267
4.283	2.04	10.283	5.85	16.283
4.300	2.04	10.300	5.85	16.300
4.317	2.04	10.317	5.85	16.317
4.333	2.04	10.333	5.85	16.333
4.350	2.04	10.350	5.85	16.350
4.367	2.04	10.367	5.85	16.367
4.383	2.04	10.383	5.85	16.383
4.400	2.04	10.400	5.85	16.400
4.417	2.04	10.417	5.85	16.417
4.433	2.04	10.433	5.85	16.433
4.450	2.04	10.450	5.85	16.450
4.467	2.04	10.467	5.85	16.467
4.483	2.04	10.483	5.85	16.483
4.500	2.04	10.500	5.85	16.500
4.517	2.04	10.517	7.89	16.517
4.533	2.04	10.533	7.89	16.533
4.550	2.04	10.550	7.89	16.550
4.567	2.04	10.567	7.89	16.567
4.583	2.04	10.583	7.89	16.583
4.600	2.04	10.600	7.89	16.600
4.617	2.04	10.617	7.89	16.617
4.633	2.04	10.633	7.89	16.633
4.650	2.04	10.650	7.89	16.650
4.667	2.04	10.667	7.89	16.667
4.683	2.04	10.683	7.89	16.683
4.700	2.04	10.700	7.89	16.700
4.717	2.04	10.717	7.89	16.717
4.733	2.04	10.733	7.89	16.733
4.750	2.04	10.750	7.89	16.750
4.767	2.04	10.767	7.89	16.767
4.783	2.04	10.783	7.89	16.783
4.800	2.04	10.800	7.89	16.800
4.817	2.04	10.817	7.89	16.817
4.833	2.04	10.833	7.89	16.833
4.850	2.04	10.850	7.89	16.850
4.867	2.04	10.867	7.89	16.867
4.883	2.04	10.883	7.89	16.883
4.900	2.04	10.900	7.89	16.900
4.917	2.04	10.917	7.89	16.917
4.933	2.04	10.933	7.89	16.933
4.950	2.04	10.950	7.89	16.950
4.967	2.04	10.967	7.89	16.967
4.983	2.04	10.983	7.89	16.983
5.000	2.04	11.000	7.89	17.000

HRP7-PR_2-100 YEAR.OUT				
5.017	2.04	11.017	12.21	17.017
5.033	2.04	11.033	12.21	17.033
5.050	2.04	11.050	12.21	17.050
5.067	2.04	11.067	12.21	17.067
5.083	2.04	11.083	12.21	17.083
5.100	2.04	11.100	12.21	17.100
5.117	2.04	11.117	12.21	17.117
5.133	2.04	11.133	12.21	17.133
5.150	2.04	11.150	12.21	17.150
5.167	2.04	11.167	12.21	17.167
5.183	2.04	11.183	12.21	17.183
5.200	2.04	11.200	12.21	17.200
5.217	2.04	11.217	12.21	17.217
5.233	2.04	11.233	12.21	17.233
5.250	2.04	11.250	12.21	17.250
5.267	2.04	11.267	12.21	17.267
5.283	2.04	11.283	12.21	17.283
5.300	2.04	11.300	12.21	17.300
5.317	2.04	11.317	12.21	17.317
5.333	2.04	11.333	12.21	17.333
5.350	2.04	11.350	12.21	17.350
5.367	2.04	11.367	12.21	17.367
5.383	2.04	11.383	12.21	17.383
5.400	2.04	11.400	12.21	17.400
5.417	2.04	11.417	12.21	17.417
5.433	2.04	11.433	12.21	17.433
5.450	2.04	11.450	12.21	17.450
5.467	2.04	11.467	12.21	17.467
5.483	2.04	11.483	12.21	17.483
5.500	2.04	11.500	12.21	17.500
5.517	2.04	11.517	52.92	17.517
5.533	2.04	11.533	52.92	17.533
5.550	2.04	11.550	52.92	17.550
5.567	2.04	11.567	52.92	17.567
5.583	2.04	11.583	52.92	17.583
5.600	2.04	11.600	52.92	17.600
5.617	2.04	11.617	52.92	17.617
5.633	2.04	11.633	52.92	17.633
5.650	2.04	11.650	52.92	17.650
5.667	2.04	11.667	52.92	17.667
5.683	2.04	11.683	52.92	17.683
5.700	2.04	11.700	52.92	17.700
5.717	2.04	11.717	52.92	17.717
5.733	2.04	11.733	52.92	17.733
5.750	2.04	11.750	52.92	17.750
5.767	2.04	11.767	140.43	17.767
5.783	2.04	11.783	140.43	17.783
5.800	2.04	11.800	140.43	17.800
5.817	2.04	11.817	140.43	17.817
5.833	2.04	11.833	140.43	17.833
5.850	2.04	11.850	140.43	17.850
5.867	2.04	11.867	140.43	17.867
5.883	2.04	11.883	140.43	17.883
5.900	2.04	11.900	140.43	17.900
5.917	2.04	11.917	140.43	17.917
5.933	2.04	11.933	140.43	17.933
5.950	2.04	11.950	140.43	17.950
5.967	2.04	11.967	140.43	17.967
5.983	2.04	11.983	140.43	17.983
6.000	2.04	12.000	140.43	18.000

Max.Eff.Inten.(mm/hr)=	140.43	92.74
over (min)	5.00	8.00
Storage Coeff. (min)=	1.52 (ii)	7.21 (iii)
Unit Hyd. Tpeak (min)=	5.00	8.00
Unit Hyd. peak (cms)=	0.42	0.15

TOTALS		
PEAK FLOW (cms)=	0.18	0.08
TIME TO PEAK (hrs)=	12.00	12.03
RUNOFF VOLUME (mm)=	125.69	70.38
TOTAL RAINFALL (mm)=	127.20	127.20
RUNOFF COEFFICIENT =	0.99	0.55

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)				
1 + 2 = 3				

ID1= 1 (0143):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	0.84	0.258	12.00	100.81

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+ ID2= 2 (0024): 64.94 7.125 12.18 85.64
=====

ID = 3 (0026): 65.78 7.130 8.12 57.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0244) | Area (ha)= 6.58
ID= 1 DT= 4.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.62
Dep. Storage (mm)= 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 209.44 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.067	1.27	6.067	2.54	12.067	18.33	18.07	2.29	
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29	
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29	
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29	
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29	
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29	
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29	
0.533	1.27	6.533	2.54	12.533	13.87	18.53	2.29	
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29	
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29	
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29	
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29	
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29	
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29	
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29	
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29	
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29	
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29	
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29	
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29	
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29	
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29	
1.533	1.27	7.533	2.54	13.533	6.10	19.53	2.29	
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29	
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29	
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29	
1.800	2.04	7.800	2.54	13.800	10.43	19.80	2.29	
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29	
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29	
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29	
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53	
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53	
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53	
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53	
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53	
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53	
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53	
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53	
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53	
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53	
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53	
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53	
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53	
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53	
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53	
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53	
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53	
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53	
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53	
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53	
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53	
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53	
3.533	1.65	9.533	4.32	15.533	3.82	21.53	1.53	
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53	
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53	
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53	
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53	
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53	
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53	
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53	
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53	
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53	
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53	

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4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53
4.533	2.04	10.533	6.87	16.533	2.29	22.53	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.533	2.04	11.533	32.56	17.533	2.29	23.53	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.800	2.04	11.800	118.54	17.800	2.29	23.80	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.52

Max.Eff.Inten.(mm/hr)= 140.43 91.29
over (min)= 5.00 12.00
Storage Coeff. (min)= 2.82 (ii) 9.58 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.32 0.11
TOTALS
PEAK FLOW (cms)= 1.15 0.68 1.794 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 125.70 70.39 95.28
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.55 0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID= 1 (0244): 6.58 1.794 12.00 95.28
+ ID2= 2 (0026): 65.78 7.130 8.12 57.65
=====

ID = 3 (0028): 72.36 7.163 8.12 61.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP8-PR_2-100 YEAR.OUT

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

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000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VM5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\393c90d3-f4ad-4350-95b4-36587a15aac4\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VM5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\393c90d3-f4ad-4350-95b4-36587a15aac4\scenar

DATE: 03/24/2023 TIME: 11:11:22

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\73397f8f-c1c2-418c-b250-352fb19c09d1\571fbdef
Ptotal= 57.60 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

CALIB NASHYD (1050) Area (ha)= 4.49 Curve Number (CN)= 77.0
ID= 1 DT= 2.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04	
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04	
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04	
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04	
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04	
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04	
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04	
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04	
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04	
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04	
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04	
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04	
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04	
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04	
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04	
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04	
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04	
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04	
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04	
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04	
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04	
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04	
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04	
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04	
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04	
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04	
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04	
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04	
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04	
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04	
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04	
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04	
1.767	0.81	7.767	1.15	13.767	4.72	19.77	1.04	
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04	
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04	
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04	
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69	
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69	
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69	
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69	
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69	
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69	
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69	
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69	
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69	
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69	
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69	
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69	
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69	
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69	
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69	
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69	
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69	
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69	
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69	
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69	

HRP8-PR_2-100 YEAR.OUT									
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69		
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69		
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69		
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69		
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69		
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69		

HRP8-PR_2-100 YEAR.OUT									
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69		

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.260 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 21.534
TOTAL RAINFALL (mm)= 57.689
RUNOFF COEFFICIENT = 0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)= 4.37
STANDHYD (0250)	Total Imp(%)= 46.00 Dir. Conn.(%)= 46.00
ID= 1 DT= 2.0 min	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.01	2.36
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	178.68	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.58	6.833	1.15	12.033	8.29	18.03	1.04		
0.067	0.58	6.867	1.15	12.067	8.29	18.07	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04		
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04		
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04		
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04		
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04		
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04		
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04		
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04		
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04		
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04		
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04		

HRP8-PR_2-100 YEAR.OUT									
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04		
1.767	0.81	7.767	1.15	13.767	4.72	19.77	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04		
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04		
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69		
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69		
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69		
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69		
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69		
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69		
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69		
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		

HRP8-PR_2-100 YEAR.OUT							
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69
Max.Eff.Inten.(mm/hr)= 63.59 33.18							
over (min) 5.00 16.00							
Storage Coeff. (min)= 3.43 (ii) 14.40 (ii)							
Unit Hyd. Tpeak (min)= 4.00 16.00							
Unit Hyd. peak (cms)= 0.31 0.08							
TOTALS							
PEAK FLOW (cms)= 0.35 0.13 0.450 (iii)							
TIME TO PEAK (hrs)= 12.00 12.13 12.00							
RUNOFF VOLUME (mm)= 56.10 25.46 39.55							
TOTAL RAINFALL (mm)= 57.60 57.60 57.60							
RUNOFF COEFFICIENT = 0.97 0.44 0.69							
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:							
CN* = 79.0 Ia = Dep. Storage (Above)							
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.							
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

ADD HYD (0018)							
1 + 2 = 3							

ID= 1 (0050): 4.49 0.260 12.00 21.53							
+ ID2= 2 (0250): 4.37 0.450 12.00 39.55							
=====							
ID = 3 (0018): 8.86 0.684 12.00 38.42							
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.							

ROUTE CHN(0037)							
IN= 2--> OUT= 1							
Routing time step (min)'= 2.00							
<----- DATA FOR SECTION (1.1) ----->							
Distance Elevation Manning							
0.00 101.00 0.0500							
1.00 100.67 0.05000							
2.00 100.33 0.0500 / 0.0300 Main Channel							
3.00 100.00 0.0300 Main Channel							
4.00 100.00 0.0300 Main Channel							

HRP8-PR_2-100 YEAR.OUT
5.00 100.33 0.0300 /0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.05	100.05	.636E+02	0.0	0.33	58.96	
0.09	100.09	.143E+03	0.1	0.50	39.44	
0.14	100.14	.239E+03	0.1	0.63	31.47	
0.19	100.19	.350E+03	0.2	0.73	26.89	
0.24	100.24	.477E+03	0.3	0.83	23.81	
0.28	100.28	.620E+03	0.5	0.91	21.56	
0.33	100.33	.779E+03	0.7	0.99	19.92	
0.39	100.39	.988E+03	1.0	1.14	17.21	
0.44	100.44	.122E+04	1.3	1.27	15.53	
0.50	100.50	.147E+04	1.7	1.37	14.34	
0.55	100.55	.174E+04	2.2	1.46	13.44	
0.61	100.61	.204E+04	2.7	1.54	12.74	
0.66	100.66	.236E+04	3.2	1.62	12.17	
0.72	100.72	.269E+04	3.8	1.68	11.70	
0.78	100.78	.306E+04	4.5	1.74	11.30	
0.83	100.83	.344E+04	5.2	1.80	10.96	
0.89	100.89	.385E+04	6.0	1.85	10.65	
0.94	100.94	.427E+04	6.9	1.90	10.38	
1.00	101.00	.472E+04	7.8	1.94	10.14	

<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(ft)	(m/s)
INFLOW : ID= 2 (0018)	8.86	0.60	12.00	30.42	0.34	1.01
OUTFLOW: ID= 1 (0037)	8.86	0.40	12.13	30.38	0.26	0.86

CALIB			
NASHYD (1051)			
Area (ha)=	50.34	Curve Number (CN)=	82.0
Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.63		

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.133	0.58	6.133	1.15	12.133	8.30	18.13	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.533	0.58	6.533	1.15	12.533	7.29	18.53	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04		
1.067	0.58	7.067	1.15	13.067	2.53	19.07	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		
1.600	0.58	7.600	1.15	13.600	3.74	19.60	1.04		
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04		
1.867	0.98	7.867	1.15	13.867	4.72	19.87	1.04		
2.000	1.84	8.000	1.15	14.000	4.72	20.00	1.04		
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69		
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
3.067	0.75	9.067	1.70	15.067	1.73	21.07	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.600	0.75	9.600	2.02	15.600	1.73	21.60	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.533	0.92	10.533	2.88	16.533	1.04	22.53	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
5.067	0.92	11.067	4.55	17.067	1.04	23.07	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		

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5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.600	0.92	11.600	19.35	17.600	1.04	23.60	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.867	0.92	11.867	58.64	17.867	1.04	23.87	0.69		
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69		

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 1.451 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 25.530
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.443

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)					
1 * 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (1051):	50.34	1.451	12.53	25.53	
+ ID2= 2 (0037):	8.86	0.398	12.13	30.38	
=====					
ID = 3 (0029):	59.20	1.741	12.40	26.26	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (0251)		
Area (ha)=	10.65	
Total Imp(%)=	37.00	Dir. Conn.(%)= 37.00
ID= 1 DT= 3.0 min		

IMPERVIOUS			
Surface Area	(ha)=	3.94	6.71
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	266.46	220.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		

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2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 11.50
over (min) 6.00 54.00
Storage Coeff. (min)= 4.48 (ii) 51.11 (ii)
Unit Hyd. Tpeak (min)= 6.00 54.00
Unit Hyd. peak (cms)= 0.22 0.02

HRP8-PR_2-100 YEAR.OUT

TOTALS

PEAK FLOW (cms)=	0.67	0.13	0.709 (iii)
TIME TO PEAK (hrs)=	12.00	12.80	12.00
RUNOFF VOLUME (mm)=	56.10	20.32	33.56
TOTAL RAINFALL (mm)=	57.60		57.60
RUNOFF COEFFICIENT =	0.97	0.35	0.58

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0251):	10.65	0.709	12.00	33.56
+ ID2= 2 (0029):	59.20	1.741	12.40	26.26
=====				
ID = 3 (0031):	69.85	1.927	12.40	27.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0039)	Routing time step (min)'= 2.00			
IN= 2 ---> OUT= 1				
<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.509E+02	0.0	0.27	30.87
0.14	100.14	.908E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

<---- hydrograph ---->					<-pipe / channel->	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)	
INFLOW : ID= 2 (0031)	69.85	1.93	12.40	27.37	0.70 0.89	
OUTFLOW: ID= 1 (0039)	69.85	1.88	12.53	27.36	0.69 0.88	

CALIB	Area (ha)= 15.48			
STANDHYD (0252)	Total Imp(%)= 45.00	Dir. Conn.(%)= 45.00		
ID= 1 DT= 5.0 min				

Surface Area (ha)=	6.97	PERVIOUS (i)	8.51	
Dep. Storage (mm)=	1.50		1.50	
Average Slope (%)=	2.00		2.00	
Length (m)=	321.25		100.00	
Mannings n =	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

HRP8-PR_2-100 YEAR.OUT

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.39	18.08	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04		
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04		
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04		
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04		
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69		
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69		
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69		
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69		

Max.Eff.Inten.(mm/hr)= 63.59 14.45
 over (min)= 5.00 35.00
 Storage Coeff. (min)= 5.01 (ii) 31.52 (iii)
 Unit Hyd. Tpeak (min)= 5.00 35.00
 Unit Hyd. peak (cms)= 0.21 0.03

TOTALS
 PEAK FLOW (cms)= 1.19 0.20 1.282 (iii)
 TIME TO PEAK (hrs)= 12.00 12.42 12.00
 RUNOFF VOLUME (mm)= 56.10 18.49 35.41

TOTAL RAINFALL (mm)= 57.60 57.60 57.60
 RUNOFF COEFFICIENT = 0.97 0.32 0.61

HRP8-PR_2-100 YEAR.OUT

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 69.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)
 1 + 2 = 3
 AREA QPEAK TPEAK R.V.
 (ha) (cms) (hrs) (mm)
 ID1= 1 (0252): 15.48 1.282 12.00 35.41
 + ID2= 2 (0039): 69.85 1.877 12.53 27.36
 ID = 3 (0033): 85.33 2.511 12.00 28.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)
 IN= 2--> OUT= 1
 Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
 Distance Elevation Manning
 0.00 101.00 0.0500
 1.00 100.67 0.0500
 2.00 100.33 0.0500 /0.0300 Main Channel
 3.00 100.00 0.0300 Main Channel
 4.00 100.00 0.0300 Main Channel
 5.00 100.33 0.0300 /0.0500 Main Channel
 6.00 100.67 0.0500
 7.00 101.00 0.0500

TRAVEL TIME TABLE
 DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
 (m) (m) (cu.m.) (cms) (m/s) (min)
 0.05 100.05 .155E+02 0.0 0.18 26.80
 0.09 100.09 .348E+02 0.0 0.27 17.93
 0.14 100.14 .580E+02 0.1 0.33 14.31
 0.19 100.19 .850E+02 0.1 0.39 12.22
 0.24 100.24 .116E+03 0.2 0.44 10.83
 0.28 100.28 .151E+03 0.3 0.49 9.80
 0.33 100.33 .189E+03 0.4 0.53 9.01
 0.39 100.39 .240E+03 0.5 0.61 7.82
 0.44 100.44 .296E+03 0.7 0.68 7.06
 0.50 100.50 .357E+03 0.9 0.73 6.52
 0.55 100.55 .424E+03 1.2 0.78 6.11
 0.61 100.61 .496E+03 1.4 0.83 5.79
 0.66 100.66 .573E+03 1.7 0.86 5.53
 0.72 100.72 .655E+03 2.1 0.90 5.32
 0.78 100.78 .743E+03 2.4 0.93 5.14
 0.83 100.83 .836E+03 2.8 0.96 4.98
 0.89 100.89 .934E+03 3.2 0.99 4.84
 0.94 100.94 .104E+04 3.7 1.01 4.72
 1.00 101.00 .115E+04 4.1 1.04 4.61

hydrograph
 AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
 (ha) (cms) (hrs) (mm) (m) (m/s)
 INFLOW : ID= 2 (0033) 85.33 2.51 12.00 28.83 0.79 0.94
 OUTFLOW: ID= 1 (0040) 85.33 2.22 12.03 28.83 0.75 0.91

RESERVOIR(0036)
 IN= 2--> OUT= 1
 DT= 4.0 min
 OVERFLOW IS OFF
 OUTFLOW STORAGE OUTFLOW STORAGE
 (cms) (ha.m.) (cms) (ha.m.)
 0.0000 0.0000 1.5621 0.7845
 0.0206 0.1029 3.2275 0.8811
 0.0461 0.1764 5.2638 0.9799
 0.0618 0.2539 7.6097 1.0811
 0.0743 0.3353 10.2263 1.1844
 0.0850 0.4205 13.0858 1.2900
 0.0945 0.5081 16.1669 1.3979
 0.1031 0.5980 19.5735 1.5082
 0.1071 0.6438 23.5541 1.6210
 0.3892 0.6901 35.0828 1.9135

AREA QPEAK TPEAK R.V.

HRP8-PR_2-100 YEAR.OUT
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0040) 85.330 2.222 12.03 28.83
OUTFLOW: ID= 1 (0036) 85.330 1.867 12.97 28.50

PEAK FLOW REDUCTION [Qout/Qin](%)= 84.02
TIME SHIFT OF PEAK FLOW (min)= 56.00
MAXIMUM STORAGE USED (ha.m.)= 0.8022

CALIB
NASHYD (0253) Area (ha)= 1.51 Curve Number (CN)= 75.0
ID= 1 DT= 1.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.11

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.017 0.58 6.017 1.15 12.017 8.33 18.02 1.04
0.033 0.58 6.033 1.15 12.033 8.29 18.03 1.04
0.050 0.58 6.050 1.15 12.050 8.29 18.05 1.04
0.067 0.58 6.067 1.15 12.067 8.29 18.07 1.04
0.083 0.58 6.083 1.15 12.083 8.29 18.08 1.04
0.100 0.58 6.100 1.15 12.100 8.29 18.10 1.04
0.117 0.58 6.117 1.15 12.117 8.29 18.12 1.04
0.133 0.58 6.133 1.15 12.133 8.29 18.13 1.04
0.150 0.58 6.150 1.15 12.150 8.29 18.15 1.04
0.167 0.58 6.167 1.15 12.167 8.29 18.17 1.04
0.183 0.58 6.183 1.15 12.183 8.29 18.18 1.04
0.200 0.58 6.200 1.15 12.200 8.29 18.20 1.04
0.217 0.58 6.217 1.15 12.217 8.29 18.22 1.04
0.233 0.58 6.233 1.15 12.233 8.29 18.23 1.04
0.250 0.58 6.250 1.15 12.250 8.29 18.25 1.04
0.267 0.58 6.267 1.15 12.267 8.29 18.27 1.04
0.283 0.58 6.283 1.15 12.283 8.29 18.28 1.04
0.300 0.58 6.300 1.15 12.300 8.29 18.30 1.04
0.317 0.58 6.317 1.15 12.317 8.29 18.32 1.04
0.333 0.58 6.333 1.15 12.333 8.29 18.33 1.04
0.350 0.58 6.350 1.15 12.350 8.29 18.35 1.04
0.367 0.58 6.367 1.15 12.367 8.29 18.37 1.04
0.383 0.58 6.383 1.15 12.383 8.29 18.38 1.04
0.400 0.58 6.400 1.15 12.400 8.29 18.40 1.04
0.417 0.58 6.417 1.15 12.417 8.29 18.42 1.04
0.433 0.58 6.433 1.15 12.433 8.29 18.43 1.04
0.450 0.58 6.450 1.15 12.450 8.29 18.45 1.04
0.467 0.58 6.467 1.15 12.467 8.29 18.47 1.04
0.483 0.58 6.483 1.15 12.483 8.29 18.48 1.04
0.500 0.58 6.500 1.15 12.500 8.29 18.50 1.04
0.517 0.58 6.517 1.15 12.517 4.27 18.52 1.04
0.533 0.58 6.533 1.15 12.533 4.26 18.53 1.04
0.550 0.58 6.550 1.15 12.550 4.26 18.55 1.04
0.567 0.58 6.567 1.15 12.567 4.26 18.57 1.04
0.583 0.58 6.583 1.15 12.583 4.26 18.58 1.04
0.600 0.58 6.600 1.15 12.600 4.26 18.60 1.04
0.617 0.58 6.617 1.15 12.617 4.26 18.62 1.04
0.633 0.58 6.633 1.15 12.633 4.26 18.63 1.04
0.650 0.58 6.650 1.15 12.650 4.26 18.65 1.04
0.667 0.58 6.667 1.15 12.667 4.26 18.67 1.04
0.683 0.58 6.683 1.15 12.683 4.26 18.68 1.04
0.700 0.58 6.700 1.15 12.700 4.26 18.70 1.04
0.717 0.58 6.717 1.15 12.717 4.26 18.72 1.04
0.733 0.58 6.733 1.15 12.733 4.26 18.73 1.04
0.750 0.58 6.750 1.15 12.750 4.26 18.75 1.04
0.767 0.58 6.767 1.15 12.767 4.26 18.77 1.04
0.783 0.58 6.783 1.15 12.783 4.26 18.78 1.04
0.800 0.58 6.800 1.15 12.800 4.26 18.80 1.04
0.817 0.58 6.817 1.15 12.817 4.26 18.82 1.04
0.833 0.58 6.833 1.15 12.833 4.26 18.83 1.04
0.850 0.58 6.850 1.15 12.850 4.26 18.85 1.04
0.867 0.58 6.867 1.15 12.867 4.26 18.87 1.04
0.883 0.58 6.883 1.15 12.883 4.26 18.88 1.04
0.900 0.58 6.900 1.15 12.900 4.26 18.90 1.04
0.917 0.58 6.917 1.15 12.917 4.26 18.92 1.04
0.933 0.58 6.933 1.15 12.933 4.26 18.93 1.04
0.950 0.58 6.950 1.15 12.950 4.26 18.95 1.04
0.967 0.58 6.967 1.15 12.967 4.26 18.97 1.04
0.983 0.58 6.983 1.15 12.983 4.26 18.98 1.04
1.000 0.58 7.000 1.15 13.000 4.26 19.00 1.04
1.017 0.58 7.017 1.15 13.017 0.81 19.02 1.04
1.033 0.58 7.033 1.15 13.033 0.81 19.03 1.04
1.050 0.58 7.050 1.15 13.050 0.81 19.05 1.04
1.067 0.58 7.067 1.15 13.067 0.81 19.07 1.04
1.083 0.58 7.083 1.15 13.083 0.81 19.08 1.04
1.100 0.58 7.100 1.15 13.100 0.81 19.10 1.04

HRP8-PR_2-100 YEAR.OUT
1.117 0.58 7.117 1.15 13.117 0.81 19.12 1.04
1.133 0.58 7.133 1.15 13.133 0.81 19.13 1.04
1.150 0.58 7.150 1.15 13.150 0.81 19.15 1.04
1.167 0.58 7.167 1.15 13.167 0.81 19.17 1.04
1.183 0.58 7.183 1.15 13.183 0.81 19.18 1.04
1.200 0.58 7.200 1.15 13.200 0.81 19.20 1.04
1.217 0.58 7.217 1.15 13.217 0.81 19.22 1.04
1.233 0.58 7.233 1.15 13.233 0.81 19.23 1.04
1.250 0.58 7.250 1.15 13.250 0.81 19.25 1.04
1.267 0.58 7.267 1.15 13.267 0.81 19.27 1.04
1.283 0.58 7.283 1.15 13.283 0.81 19.28 1.04
1.300 0.58 7.300 1.15 13.300 0.81 19.30 1.04
1.317 0.58 7.317 1.15 13.317 0.81 19.32 1.04
1.333 0.58 7.333 1.15 13.333 0.81 19.33 1.04
1.350 0.58 7.350 1.15 13.350 0.81 19.35 1.04
1.367 0.58 7.367 1.15 13.367 0.81 19.37 1.04
1.383 0.58 7.383 1.15 13.383 0.81 19.38 1.04
1.400 0.58 7.400 1.15 13.400 0.81 19.40 1.04
1.417 0.58 7.417 1.15 13.417 0.81 19.42 1.04
1.433 0.58 7.433 1.15 13.433 0.81 19.43 1.04
1.450 0.58 7.450 1.15 13.450 0.81 19.45 1.04
1.467 0.58 7.467 1.15 13.467 0.81 19.47 1.04
1.483 0.58 7.483 1.15 13.483 0.81 19.48 1.04
1.500 0.58 7.500 1.15 13.500 0.81 19.50 1.04
1.517 0.58 7.517 1.15 13.517 4.72 19.52 1.04
1.533 0.58 7.533 1.15 13.533 4.72 19.53 1.04
1.550 0.58 7.550 1.15 13.550 4.72 19.55 1.04
1.567 0.58 7.567 1.15 13.567 4.72 19.57 1.04
1.583 0.58 7.583 1.15 13.583 4.72 19.58 1.04
1.600 0.58 7.600 1.15 13.600 4.72 19.60 1.04
1.617 0.58 7.617 1.15 13.617 4.72 19.62 1.04
1.633 0.58 7.633 1.15 13.633 4.72 19.63 1.04
1.650 0.58 7.650 1.15 13.650 4.72 19.65 1.04
1.667 0.58 7.667 1.15 13.667 4.72 19.67 1.04
1.683 0.58 7.683 1.15 13.683 4.72 19.68 1.04
1.700 0.58 7.700 1.15 13.700 4.72 19.70 1.04
1.717 0.58 7.717 1.15 13.717 4.72 19.72 1.04
1.733 0.58 7.733 1.15 13.733 4.72 19.73 1.04
1.750 0.58 7.750 1.15 13.750 4.72 19.75 1.04
1.767 0.58 7.767 1.15 13.767 4.72 19.77 1.04
1.783 0.58 7.783 1.15 13.783 4.72 19.78 1.04
1.800 0.58 7.800 1.15 13.800 4.72 19.80 1.04
1.817 0.58 7.817 1.15 13.817 4.72 19.82 1.04
1.833 0.58 7.833 1.15 13.833 4.72 19.83 1.04
1.850 0.58 7.850 1.15 13.850 4.72 19.85 1.04
1.867 0.58 7.867 1.15 13.867 4.72 19.87 1.04
1.883 0.58 7.883 1.15 13.883 4.72 19.88 1.04
1.900 0.58 7.900 1.15 13.900 4.72 19.90 1.04
1.917 0.58 7.917 1.15 13.917 4.72 19.92 1.04
1.933 0.58 7.933 1.15 13.933 4.72 19.93 1.04
1.950 0.58 7.950 1.15 13.950 4.72 19.95 1.04
1.967 0.58 7.967 1.15 13.967 4.72 19.97 1.04
1.983 0.58 7.983 1.15 13.983 4.72 19.98 1.04
2.000 0.58 8.000 1.15 14.000 4.72 20.00 1.04
2.017 0.75 8.017 1.56 14.017 1.73 20.02 0.69
2.033 0.75 8.033 1.56 14.033 1.73 20.03 0.69
2.050 0.75 8.050 1.56 14.050 1.73 20.05 0.69
2.067 0.75 8.067 1.56 14.067 1.73 20.07 0.69
2.083 0.75 8.083 1.56 14.083 1.73 20.08 0.69
2.100 0.75 8.100 1.56 14.100 1.73 20.10 0.69
2.117 0.75 8.117 1.56 14.117 1.73 20.12 0.69
2.133 0.75 8.133 1.56 14.133 1.73 20.13 0.69
2.150 0.75 8.150 1.56 14.150 1.73 20.15 0.69
2.167 0.75 8.167 1.56 14.167 1.73 20.17 0.69
2.183 0.75 8.183 1.56 14.183 1.73 20.18 0.69
2.200 0.75 8.200 1.56 14.200 1.73 20.20 0.69
2.217 0.75 8.217 1.56 14.217 1.73 20.22 0.69
2.233 0.75 8.233 1.56 14.233 1.73 20.23 0.69
2.250 0.75 8.250 1.56 14.250 1.73 20.25 0.69
2.267 0.75 8.267 1.56 14.267 1.73 20.27 0.69
2.283 0.75 8.283 1.56 14.283 1.73 20.28 0.69
2.300 0.75 8.300 1.56 14.300 1.73 20.30 0.69
2.317 0.75 8.317 1.56 14.317 1.73 20.32 0.69
2.333 0.75 8.333 1.56 14.333 1.73 20.33 0.69
2.350 0.75 8.350 1.56 14.350 1.73 20.35 0.69
2.367 0.75 8.367 1.56 14.367 1.73 20.37 0.69
2.383 0.75 8.383 1.56 14.383 1.73 20.38 0.69
2.400 0.75 8.400 1.56 14.400 1.73 20.40 0.69
2.417 0.75 8.417 1.56 14.417 1.73 20.42 0.69
2.433 0.75 8.433 1.56 14.433 1.73 20.43 0.69
2.450 0.75 8.450 1.56 14.450 1.73 20.45 0.69
2.467 0.75 8.467 1.56 14.467 1.73 20.47 0.69
2.483 0.75 8.483 1.56 14.483 1.73 20.48 0.69
2.500 0.75 8.500 1.56 14.500 1.73 20.50 0.69
2.517 0.75 8.517 1.56 14.517 1.73 20.52 0.69
2.533 0.75 8.533 1.56 14.533 1.73 20.53 0.69
2.550 0.75 8.550 1.56 14.550 1.73 20.55 0.69

HRP8-PR_2-100 YEAR.OUT									
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69		
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.617	0.75	8.617	1.56	14.617	1.73	20.62	0.69		
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.683	0.75	8.683	1.56	14.683	1.73	20.68	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.717	0.75	8.717	1.56	14.717	1.73	20.72	0.69		
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69		
2.783	0.75	8.783	1.56	14.783	1.73	20.78	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.817	0.75	8.817	1.56	14.817	1.73	20.82	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69		
2.883	0.75	8.883	1.56	14.883	1.73	20.88	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69		
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69		
2.983	0.75	8.983	1.56	14.983	1.73	20.98	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.017	0.75	9.017	1.84	15.017	1.73	21.02	0.69		
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69		
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69		
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69		
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.117	0.75	9.117	1.84	15.117	1.73	21.12	0.69		
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.183	0.75	9.183	1.84	15.183	1.73	21.18	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.217	0.75	9.217	1.84	15.217	1.73	21.22	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.283	0.75	9.283	1.84	15.283	1.73	21.28	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.317	0.75	9.317	1.84	15.317	1.73	21.32	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.383	0.75	9.383	1.84	15.383	1.73	21.38	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.483	0.75	9.483	1.84	15.483	1.73	21.48	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.517	0.75	9.517	2.07	15.517	1.73	21.52	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.617	0.75	9.617	2.07	15.617	1.73	21.62	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.683	0.75	9.683	2.07	15.683	1.73	21.68	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.717	0.75	9.717	2.07	15.717	1.73	21.72	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.783	0.75	9.783	2.07	15.783	1.73	21.78	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.817	0.75	9.817	2.07	15.817	1.73	21.82	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.883	0.75	9.883	2.07	15.883	1.73	21.88	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
3.983	0.75	9.983	2.07	15.983	1.73	21.98	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		

HRP8-PR_2-100 YEAR.OUT									
4.017	0.92	10.017	2.65	16.017	1.04	22.02	0.69		
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69		
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69		
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69		
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.117	0.92	10.117	2.65	16.117	1.04	22.12	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.183	0.92	10.183	2.65	16.183	1.04	22.18	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.217	0.92	10.217	2.65	16.217	1.04	22.22	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.283	0.92	10.283	2.65	16.283	1.04	22.28	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.317	0.92	10.317	2.65	16.317	1.04	22.32	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.383	0.92	10.383	2.65	16.383	1.04	22.38	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.483	0.92	10.483	2.65	16.483	1.04	22.48	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.517	0.92	10.517	3.57	16.517	1.04	22.52	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.617	0.92	10.617	3.57	16.617	1.04	22.62	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.683	0.92	10.683	3.57	16.683	1.04	22.68	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.717	0.92	10.717	3.57	16.717	1.04	22.72	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		
4.783	0.92	10.783	3.57	16.783	1.04	22.78	0.69		</

HRP8-PR_2-100 YEAR.OUT									
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.483	0.92	11.483	5.53	17.483	1.04	23.48	0.69		
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69		
5.517	0.92	11.517	23.96	17.517	1.04	23.52	0.69		
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.617	0.92	11.617	23.96	17.617	1.04	23.62	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.683	0.92	11.683	23.96	17.683	1.04	23.68	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.717	0.92	11.717	23.96	17.717	1.04	23.72	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69		
5.767	0.92	11.767	63.57	17.767	1.04	23.77	0.69		
5.783	0.92	11.783	63.59	17.783	1.04	23.78	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.817	0.92	11.817	63.59	17.817	1.04	23.82	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.883	0.92	11.883	63.59	17.883	1.04	23.88	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		
5.983	0.92	11.983	63.59	17.983	1.04	23.98	0.69		
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69		

Unit Hyd Qpeak (cms)= 0.515

PEAK FLOW (cms)= 0.098 (i)
TIME TO PEAK (hrs)= 12.033
RUNOFF VOLUME (mm)= 16.363
TOTAL RAINFALL (mm)= 57.681
RUNOFF COEFFICIENT = 0.283

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R. V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0253):	1.51	0.098	12.03	16.30	
+ ID2= 2 (0036):	85.33	1.867	12.97	28.50	
=====					
ID = 3 (0035):	86.84	1.876	12.97	24.31	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A A
VV I SSSS UUUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb48ca06caf\b4661c0c-3d04-4f52-ae32-afc4d7898386\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb48ca06caf\b4661c0c-3d04-4f52-ae32-afc4d7898386\scenar

DATE: 03/24/2023 TIME: 11:11:23

USER:

HRP8-PR_2-100 YEAR.OUT

COMMENTS: _____

** SIMULATION : Run 02 **

| MASS STORM | Filename: C:\Users\AbirA\AppData
| | ata\Local\Temp\
| | 73397fa8-c1c2-418c-b250-352fb19c09d1\fb8e60ca
| Ptotal= 76.00 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.77	6.25	1.54	12.25	11.06	18.25	1.38	
0.50	0.77	6.50	1.54	12.50	11.06	18.50	1.38	
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38	
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38	
1.25	0.77	7.25	1.54	13.25	1.08	19.25	1.38	
1.50	0.77	7.50	1.54	13.50	1.08	19.50	1.38	
1.75	0.77	7.75	1.54	13.75	6.38	19.75	1.38	
2.00	1.38	8.00	1.54	14.00	6.38	20.00	1.38	
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92	
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92	
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92	
3.00	1.00	9.00	2.07	15.00	2.30	21.00	0.92	
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92	
3.50	1.00	9.50	2.46	15.50	2.30	21.50	0.92	
3.75	1.00	9.75	2.76	15.75	2.30	21.75	0.92	
4.00	1.00	10.00	2.76	16.00	2.30	22.00	0.92	
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92	
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92	
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92	
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92	
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92	
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92	
5.75	1.23	11.75	31.95	17.75	1.38	23.75	0.92	
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92	

| CALIB |
| NASHYD (1050) | Area (ha)= 4.49 Curve Number (CN)= 77.0
| ID= 1 DT= 2.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38	
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38	
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38	
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38	
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38	
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38	
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38	
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38	
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38	
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38	
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38	
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38	
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38	
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38	
0.500	0.77	6.500	1.54	12.500	11.05	18.50	1.38	
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38	
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38	
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38	
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38	
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38	
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38	
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38	
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38	
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38	
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38	
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38	
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38	
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38	
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38	

HRP8-PR_2-100 YEAR.OUT						
1.000	0.77	7.000	1.54	13.000	5.67	19.00
1.033	0.77	7.033	1.54	13.033	1.08	19.03
1.067	0.77	7.067	1.54	13.067	1.08	19.07
1.100	0.77	7.100	1.54	13.100	1.08	19.10
1.133	0.77	7.133	1.54	13.133	1.08	19.13
1.167	0.77	7.167	1.54	13.167	1.08	19.17
1.200	0.77	7.200	1.54	13.200	1.08	19.20
1.233	0.77	7.233	1.54	13.233	1.08	19.23
1.267	0.77	7.267	1.54	13.267	1.08	19.27
1.300	0.77	7.300	1.54	13.300	1.08	19.30
1.333	0.77	7.333	1.54	13.333	1.08	19.33
1.367	0.77	7.367	1.54	13.367	1.08	19.37
1.400	0.77	7.400	1.54	13.400	1.08	19.40
1.433	0.77	7.433	1.54	13.433	1.08	19.43
1.467	0.77	7.467	1.54	13.467	1.08	19.47
1.500	0.77	7.500	1.54	13.500	1.09	19.50
1.533	0.77	7.533	1.54	13.533	6.30	19.53
1.567	0.77	7.567	1.54	13.567	6.30	19.57
1.600	0.77	7.600	1.54	13.600	6.30	19.60
1.633	0.77	7.633	1.54	13.633	6.30	19.63
1.667	0.77	7.667	1.54	13.667	6.30	19.67
1.700	0.77	7.700	1.54	13.700	6.30	19.70
1.733	0.77	7.733	1.54	13.733	6.30	19.73
1.767	1.08	7.767	1.54	13.767	6.30	19.77
1.800	1.38	7.800	1.54	13.800	6.30	19.80
1.833	1.38	7.833	1.54	13.833	6.30	19.83
1.867	1.38	7.867	1.54	13.867	6.30	19.87
1.900	1.38	7.900	1.54	13.900	6.30	19.90
1.933	1.38	7.933	1.54	13.933	6.30	19.93
1.967	1.38	7.967	1.54	13.967	6.30	19.97
2.000	1.38	8.000	1.54	14.000	6.29	20.00
2.033	1.00	8.033	2.07	14.033	2.30	20.03
2.067	1.00	8.067	2.07	14.067	2.30	20.07
2.100	1.00	8.100	2.07	14.100	2.30	20.10
2.133	1.00	8.133	2.07	14.133	2.30	20.13
2.167	1.00	8.167	2.07	14.167	2.30	20.17
2.200	1.00	8.200	2.07	14.200	2.30	20.20
2.233	1.00	8.233	2.07	14.233	2.30	20.23
2.267	1.00	8.267	2.07	14.267	2.30	20.27
2.300	1.00	8.300	2.07	14.300	2.30	20.30
2.333	1.00	8.333	2.07	14.333	2.30	20.33
2.367	1.00	8.367	2.07	14.367	2.30	20.37
2.400	1.00	8.400	2.07	14.400	2.30	20.40
2.433	1.00	8.433	2.07	14.433	2.30	20.43
2.467	1.00	8.467	2.07	14.467	2.30	20.47
2.500	1.00	8.500	2.07	14.500	2.30	20.50
2.533	1.00	8.533	2.07	14.533	2.30	20.53
2.567	1.00	8.567	2.07	14.567	2.30	20.57
2.600	1.00	8.600	2.07	14.600	2.30	20.60
2.633	1.00	8.633	2.07	14.633	2.30	20.63
2.667	1.00	8.667	2.07	14.667	2.30	20.67
2.700	1.00	8.700	2.07	14.700	2.30	20.70
2.733	1.00	8.733	2.07	14.733	2.30	20.73
2.767	1.00	8.767	2.07	14.767	2.30	20.77
2.800	1.00	8.800	2.07	14.800	2.30	20.80
2.833	1.00	8.833	2.07	14.833	2.30	20.83
2.867	1.00	8.867	2.07	14.867	2.30	20.87
2.900	1.00	8.900	2.07	14.900	2.30	20.90
2.933	1.00	8.933	2.07	14.933	2.30	20.93
2.967	1.00	8.967	2.07	14.967	2.30	20.97
3.000	1.00	9.000	2.07	15.000	2.30	21.00
3.033	1.00	9.033	2.46	15.033	2.30	21.03
3.067	1.00	9.067	2.46	15.067	2.30	21.07
3.100	1.00	9.100	2.46	15.100	2.30	21.10
3.133	1.00	9.133	2.46	15.133	2.30	21.13
3.167	1.00	9.167	2.46	15.167	2.30	21.17
3.200	1.00	9.200	2.46	15.200	2.30	21.20
3.233	1.00	9.233	2.46	15.233	2.30	21.23
3.267	1.00	9.267	2.46	15.267	2.30	21.27
3.300	1.00	9.300	2.46	15.300	2.30	21.30
3.333	1.00	9.333	2.46	15.333	2.30	21.33
3.367	1.00	9.367	2.46	15.367	2.30	21.37
3.400	1.00	9.400	2.46	15.400	2.30	21.40
3.433	1.00	9.433	2.46	15.433	2.30	21.43
3.467	1.00	9.467	2.46	15.467	2.30	21.47
3.500	1.00	9.500	2.46	15.500	2.30	21.50
3.533	1.00	9.533	2.76	15.533	2.30	21.53
3.567	1.00	9.567	2.76	15.567	2.30	21.57
3.600	1.00	9.600	2.76	15.600	2.30	21.60
3.633	1.00	9.633	2.76	15.633	2.30	21.63
3.667	1.00	9.667	2.76	15.667	2.30	21.67
3.700	1.00	9.700	2.76	15.700	2.30	21.70
3.733	1.00	9.733	2.76	15.733	2.30	21.73
3.767	1.00	9.767	2.76	15.767	2.30	21.77
3.800	1.00	9.800	2.76	15.800	2.30	21.80
3.833	1.00	9.833	2.76	15.833	2.30	21.83
3.867	1.00	9.867	2.76	15.867	2.30	21.87

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3.900	1.00	9.900	2.76	15.900	2.30	21.90
3.933	1.00	9.933	2.76	15.933	2.30	21.93
3.967	1.00	9.967	2.76	15.967	2.30	21.97
4.000	1.00	10.000	2.77	16.000	2.30	22.00
4.033	1.23	10.033	3.53	16.033	1.38	22.03
4.067	1.23	10.067	3.53	16.067	1.38	22.07
4.100	1.23	10.100	3.53	16.100	1.38	22.10
4.133	1.23	10.133	3.53	16.133	1.38	22.13
4.167	1.23	10.167	3.53	16.167	1.38	22.17
4.200	1.23	10.200	3.53	16.200	1.38	22.20
4.233	1.23	10.233	3.53	16.233	1.38	22.23
4.267	1.23	10.267	3.53	16.267	1.38	22.27
4.300	1.23	10.300	3.53	16.300	1.38	22.30
4.333	1.23	10.333	3.53	16.333	1.38	22.33
4.367	1.23	10.367	3.53	16.367	1.38	22.37
4.400	1.23	10.400	3.53	16.400	1.38	22.40
4.433	1.23	10.433	3.53	16.433	1.38	22.43
4.467	1.23	10.467	3.53	16.467	1.38	22.47
4.500	1.23	10.500	3.53	16.500	1.38	22.50
4.533	1.23	10.533	4.76	16.533	1.38	22.53
4.567	1.23	10.567	4.76	16.567	1.38	22.57
4.600	1.23	10.600	4.76	16.600	1.38	22.60
4.633	1.23	10.633	4.76	16.633	1.38	22.63
4.667	1.23	10.667	4.76	16.667	1.38	22.67
4.700	1.23	10.700	4.76	16.700	1.38	22.70
4.733	1.23	10.733	4.76	16.733	1.38	22.73
4.767	1.23	10.767	4.76	16.767	1.38	22.77
4.800	1.23	10.800	4.76	16.800	1.38	22.80
4.833	1.23	10.833	4.76	16.833	1.38	22.83
4.867	1.23	10.867	4.76	16.867	1.38	22.87
4.900	1.23	10.900	4.76	16.900	1.38	22.90
4.933	1.23	10.933	4.76	16.933	1.38	22.93
4.967	1.23	10.967	4.76	16.967	1.38	22.97
5.000	1.23	11.000	4.76	17.000	1.38	23.00
5.033	1.23	11.033	7.37	17.033	1.38	23.03
5.067	1.23	11.067	7.37	17.067	1.38	23.07
5.100	1.23	11.100	7.37	17.100	1.38	23.10
5.133	1.23	11.133	7.37	17.133	1.38	23.13
5.167	1.23	11.167	7.37	17.167	1.38	23.17
5.200	1.23	11.200	7.37	17.200	1.38	23.20
5.233	1.23	11.233	7.37	17.233	1.38	23.23
5.267	1.23	11.267	7.37	17.267	1.38	23.27
5.300	1.23	11.300	7.37	17.300	1.38	23.30
5.333	1.23	11.333	7.37	17.333	1.38	23.33
5.367	1.23	11.367	7.37	17.367	1.38	23.37
5.400	1.23	11.400	7.37	17.400	1.38	23.40
5.433	1.23	11.433	7.37	17.433	1.38	23.43
5.467	1.23	11.467	7.37	17.467	1.38	23.47
5.500	1.23	11.500	7.40	17.500	1.38	23.50
5.533	1.23	11.533	31.95	17.533	1.38	23.53
5.567	1.23	11.567	31.95	17.567	1.38	23.57
5.600	1.23	11.600	31.95	17.600	1.38	23.60
5.633	1.23	11.633	31.95	17.633	1.38	23.63
5.667	1.23	11.667	31.95	17.667	1.38	23.67
5.700	1.23	11.700	31.95	17.700	1.38	23.70
5.733	1.23	11.733	31.95	17.733	1.38	23.73
5.767	1.23	11.767	58.44	17.767	1.38	23.77
5.800	1.23	11.800	84.79	17.800	1.38	23.80
5.833	1.23	11.833	84.79	17.833	1.38	23.83
5.867	1.23	11.867	84.79	17.867	1.38	23.87
5.900	1.23	11.900	84.79	17.900	1.38	23.90
5.933	1.23	11.933	84.79	17.933	1.38	23.93
5.967	1.23	11.967	84.79	17.967	1.38	23.97
6.000	1.23	12.000	84.68	18.000	1.38	24.00

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.424 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 34.907
TOTAL RAINFALL (mm)= 76.799
RUNOFF COEFFICIENT = 0.455

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	4.37	
STANDHYD (0250)	Total Imp(%)=	46.00	Dir. Conn.(%)= 46.00
ID= 1 DT= 2.0 min			

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.01	2.36	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	170.68	40.00	
Mannings n	=	0.013	0.250

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NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38
1.000	0.77	7.000	1.54	13.000	5.67	19.00	1.38
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38
1.500	0.77	7.500	1.54	13.500	1.09	19.50	1.38
1.533	0.77	7.533	1.54	13.533	6.38	19.53	1.38
1.567	0.77	7.567	1.54	13.567	6.38	19.57	1.38
1.600	0.77	7.600	1.54	13.600	6.38	19.60	1.38
1.633	0.77	7.633	1.54	13.633	6.38	19.63	1.38
1.667	0.77	7.667	1.54	13.667	6.38	19.67	1.38
1.700	0.77	7.700	1.54	13.700	6.38	19.70	1.38
1.733	0.77	7.733	1.54	13.733	6.38	19.73	1.38
1.767	1.08	7.767	1.54	13.767	6.38	19.77	1.38
1.800	1.38	7.800	1.54	13.800	6.38	19.80	1.38
1.833	1.38	7.833	1.54	13.833	6.38	19.83	1.38
1.867	1.38	7.867	1.54	13.867	6.38	19.87	1.38
1.900	1.38	7.900	1.54	13.900	6.38	19.90	1.38
1.933	1.38	7.933	1.54	13.933	6.38	19.93	1.38
1.967	1.38	7.967	1.54	13.967	6.38	19.97	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.033	1.08	8.033	2.07	14.033	2.38	20.03	0.92
2.067	1.08	8.067	2.07	14.067	2.38	20.07	0.92
2.100	1.08	8.100	2.07	14.100	2.38	20.10	0.92
2.133	1.08	8.133	2.07	14.133	2.38	20.13	0.92
2.167	1.08	8.167	2.07	14.167	2.38	20.17	0.92
2.200	1.08	8.200	2.07	14.200	2.38	20.20	0.92
2.233	1.08	8.233	2.07	14.233	2.38	20.23	0.92
2.267	1.08	8.267	2.07	14.267	2.38	20.27	0.92
2.300	1.08	8.300	2.07	14.300	2.38	20.30	0.92
2.333	1.08	8.333	2.07	14.333	2.38	20.33	0.92
2.367	1.08	8.367	2.07	14.367	2.38	20.37	0.92
2.400	1.08	8.400	2.07	14.400	2.38	20.40	0.92
2.433	1.08	8.433	2.07	14.433	2.38	20.43	0.92
2.467	1.08	8.467	2.07	14.467	2.38	20.47	0.92
2.500	1.08	8.500	2.07	14.500	2.38	20.50	0.92
2.533	1.08	8.533	2.07	14.533	2.38	20.53	0.92
2.567	1.08	8.567	2.07	14.567	2.38	20.57	0.92
2.600	1.08	8.600	2.07	14.600	2.38	20.60	0.92
2.633	1.08	8.633	2.07	14.633	2.38	20.63	0.92
2.667	1.08	8.667	2.07	14.667	2.38	20.67	0.92

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2.700	1.08	8.700	2.07	14.700	2.38	20.70	0.92
2.733	1.08	8.733	2.07	14.733	2.38	20.73	0.92
2.767	1.08	8.767	2.07	14.767	2.38	20.77	0.92
2.800	1.08	8.800	2.07	14.800	2.38	20.80	0.92
2.833	1.08	8.833	2.07	14.833	2.38	20.83	0.92
2.867	1.08	8.867	2.07	14.867	2.38	20.87	0.92
2.900	1.08	8.900	2.07	14.900	2.38	20.90	0.92
2.933	1.08	8.933	2.07	14.933	2.38	20.93	0.92
2.967	1.08	8.967	2.07	14.967	2.38	20.97	0.92
3.000	1.08	9.000	2.07	15.000	2.38	21.00	0.92
3.033	1.08	9.033	2.46	15.033	2.38	21.03	0.92
3.067	1.08	9.067	2.46	15.067	2.38	21.07	0.92
3.100	1.08	9.100	2.46	15.100	2.38	21.10	0.92
3.133	1.08	9.133	2.46	15.133	2.38	21.13	0.92
3.167	1.08	9.167	2.46	15.167	2.38	21.17	0.92
3.200	1.08	9.200	2.46	15.200	2.38	21.20	0.92
3.233	1.08	9.233	2.46	15.233	2.38	21.23	0.92
3.267	1.08	9.267	2.46	15.267	2.38	21.27	0.92
3.300	1.08	9.300	2.46	15.300	2.38	21.30	0.92
3.333	1.08	9.333	2.46	15.333	2.38	21.33	0.92
3.367	1.08	9.367	2.46	15.367	2.38	21.37	0.92
3.400	1.08	9.400	2.46	15.400	2.38	21.40	0.92
3.433	1.08	9.433	2.46	15.433	2.38	21.43	0.92
3.467	1.08	9.467	2.46	15.467	2.38	21.47	0.92
3.500	1.08	9.500	2.46	15.500	2.38	21.50	0.92
3.533	1.08	9.533	2.76	15.533	2.38	21.53	0.92
3.567	1.08	9.567	2.76	15.567	2.38	21.57	0.92
3.600	1.08	9.600	2.76	15.600	2.38	21.60	0.92
3.633	1.08	9.633	2.76	15.633	2.38	21.63	0.92
3.667	1.08	9.667	2.76	15.667	2.38	21.67	0.92
3.700	1.08	9.700	2.76	15.700	2.38	21.70	0.92
3.733	1.08	9.733	2.76	15.733	2.38	21.73	0.92
3.767	1.08	9.767	2.76	15.767	2.38	21.77	0.92
3.800	1.08	9.800	2.76	15.800	2.38	21.80	0.92
3.833	1.08	9.833	2.76	15.833	2.38	21.83	0.92
3.867	1.08	9.867	2.76	15.867	2.38	21.87	0.92
3.900	1.08	9.900	2.76	15.900	2.38	21.90	0.92
3.933	1.08	9.933	2.76	15.933	2.38	21.93	0.92
3.967	1.08	9.967	2.76	15.967	2.38	21.97	0.92
4.000	1.08	10.000	2.77	16.000	2.38	22.00	0.92
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.500	1.23	11.500	7.40	17.500	1.38	23.50	0.92
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92

HRP8-PR_2-100 YEAR.OUT

5.600	1.23	[11.600	31.95	[17.600	1.38	23.60	0.92
5.633	1.23	[11.633	31.95	[17.633	1.38	23.63	0.92
5.667	1.23	[11.667	31.95	[17.667	1.38	23.67	0.92
5.700	1.23	[11.700	31.95	[17.700	1.38	23.70	0.92
5.733	1.23	[11.733	31.95	[17.733	1.38	23.73	0.92
5.767	1.23	[11.767	58.44	[17.767	1.38	23.77	0.92
5.800	1.23	[11.800	84.79	[17.800	1.38	23.80	0.92
5.833	1.23	[11.833	84.79	[17.833	1.38	23.83	0.92
5.867	1.23	[11.867	84.79	[17.867	1.38	23.87	0.92
5.900	1.23	[11.900	84.79	[17.900	1.38	23.90	0.92
5.933	1.23	[11.933	84.79	[17.933	1.38	23.93	0.92
5.967	1.23	[11.967	84.79	[17.967	1.38	23.97	0.92
6.000	1.23	[12.000	84.68	[18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 52.62
over (min) 5.00 14.00
Storage Coeff. (min)= 3.05 (ii) 12.18 (iii)
Unit Hyd. Tpeak (min)= 4.00 14.00
Unit Hyd. peak (cms)= 0.33 0.09

PEAK FLOW (cms)= 0.47 0.22
TIME TO PEAK (hrs)= 12.00 12.10
RUNOFF VOLUME (mm)= 75.30 39.70
TOTAL RAINFALL (mm)= 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.52

TOTALS
0.656 (iii)
0.73

(i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CW= 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018) |
1 + 2 = 3 |

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1050):	4.49	0.424	12.07	34.91
+ ID2= 2 (0250):	4.37	0.656	12.00	56.07
=====				
ID = 3 (0018):	8.86	1.044	12.00	45.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037) |
IN= 2--> OUT= 1 | Routing time step (min)= 2.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.ft.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.980E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

<---- hydrograph ----> <-pipe / channel->

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)

HRP8-PR_2-100 YEAR.OUT

INFLOW : ID= 2 (0018)	8.86	1.04	12.00	45.35	0.40	1.17
OUTFLOW: ID= 1 (0037)	8.86	0.64	12.10	45.31	0.33	0.99

CALIB (1051) | Area (ha)= 50.34 Curve Number (CN)= 82.0
NASHYD (1051) | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
ID= 1 DT= 8.0 min | U.H. Tp(hrs)= 0.63

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.533	0.77	6.533	1.54	12.533	9.72	18.53	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38
1.067	0.77	7.067	1.54	13.067	3.38	19.07	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38
1.600	0.77	7.600	1.54	13.600	4.99	19.60	1.38
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38
1.867	1.31	7.867	1.54	13.867	6.30	19.87	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92
3.067	1.00	9.067	2.27	15.067	2.30	21.07	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92
3.600	1.00	9.600	2.69	15.600	2.30	21.60	0.92
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.533	1.23	10.533	3.84	16.533	1.38	22.53	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
5.067	1.23	11.067	6.07	17.067	1.38	23.07	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.600	1.23	11.600	25.80	17.600	1.38	23.60	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.867	1.23	11.867	78.18	17.867	1.38	23.87	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 2.325 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 40.410
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.526

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0020) |

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1051):	50.34	2.325	12.53	40.41
+ ID2= 2 (0037):	8.86	0.643	12.10	45.31
=====				
ID = 3 (0020):	59.20	2.778	12.40	41.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP8-PR_2-100 YEAR.OUT

 CALIB
 STANDHYD (0251)
 ID= 1 DT= 3.0 min

Area (ha)= 10.65
 Total Imp(%)= 37.00 Dir. Conn.(%)= 37.00

IMPERVIOUS PERVIOUS (i)
 Surface Area (ha)= 3.94 6.71
 Dep. Storage (mm)= 1.50 1.50
 Average Slope (%)= 2.00 2.00
 Length (m)= 266.46 220.00
 Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92

HRP8-PR_2-100 YEAR.OUT

3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 22.76
 over (min) 6.00 42.00
 Storage Coeff. (min)= 3.99 (ii) 39.47 (iii)
 Unit Hyd. Tpeak (min)= 6.00 42.00
 Unit Hyd. peak (cms)= 0.24 0.03
 TOTALS
 PEAK FLOW (cms)= 0.91 0.25 0.997 (iii)
 TIME TO PEAK (hrs)= 12.00 12.55 12.00
 RUNOFF VOLUME (mm)= 75.30 32.57 48.38
 TOTAL RAINFALL (mm)= 76.80 76.80 76.80
 RUNOFF COEFFICIENT = 0.98 0.42 0.63

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 72.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ADD HYD (0031)
 1 + 2 = 3
 AREA QPEAK TPEAK R.V.
 (ha) (cms) (hrs) (mm)
 ID1= 1 (0251): 10.65 0.997 12.00 48.38
 + ID2= 2 (0029): 59.20 2.778 12.40 41.14
 =====
 ID = 3 (0031): 69.85 3.123 12.40 42.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 ROUTE CHN(0030)
 IN= 2----> OUT= 1 Routing time step (min)'= 2.00

HRP8-PR_2-100 YEAR.OUT

2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Max. Eff. Inten. (mm/hr) =	84.79	30.77	
over (min)	5.08	25.08	
Storage Coeff. (min) =	4.66 (ii)	24.66 (ii)	
Unit Hyd. Tpeak (min) =	5.08	25.08	
Unit Hyd. peak (cms) =	0.23	0.05	
			TOTALS
PEAK FLOW (cms) =	1.68	0.40	1.848 (iii)
TIME TO PEAK (hrs) =	12.08	12.25	12.08
RUNOFF VOLUME (mm) =	76.80	29.30	58.35
TOTAL RAINFALL (mm) =	76.80	76.80	76.80
RUNOFF COEFFICIENT =	0.98	0.39	0.66

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
```

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD ( 0933 ) |
| 1 + 2 = 3 |
|-----|
| ID1= 1 ( 0252 ):   15.48   1.848   12.00   50.35 |
| + ID2= 2 ( 0039 ):   69.85   3.040   12.53   42.24 |
|-----|
| ID = 3 ( 0033 ):   85.33   3.820   12.00   43.72 |
|-----|
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
|-----|
| ROUTE CHN( 0040 ) |
| IN= 2--> OUT= 1 |
|-----|
Routing time step (min)'= 2.00

<----- DATA FOR SECTION ( 1.1) ----->
Distance      Elevation      Manning

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HRP8-PR_2-100 YEAR.OUT

0.00	101.00	0.0500
1.00	100.67	0.0500
2.00	100.33	0.0500 /0.0300
3.00	100.00	0.0300
4.00	100.00	0.0300
5.00	100.33	0.0300 /0.0500
6.00	100.67	0.0500
7.00	101.00	0.0500

HRP8-PR_2-100 YEAR.OUT

0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.183	0.77	6.183	1.54	12.183	11.06	18.18	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.217	0.77	6.217	1.54	12.217	11.06	18.22	1.38
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.283	0.77	6.283	1.54	12.283	11.06	18.28	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.317	0.77	6.317	1.54	12.317	11.06	18.32	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38
0.383	0.77	6.383	1.54	12.383	11.06	18.38	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38
0.483	0.77	6.483	1.54	12.483	11.06	18.48	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.517	0.77	6.517	1.54	12.517	5.69	18.52	1.38
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.617	0.77	6.617	1.54	12.617	5.68	18.62	1.38
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.683	0.77	6.683	1.54	12.683	5.68	18.68	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.717	0.77	6.717	1.54	12.717	5.68	18.72	1.38
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38
0.783	0.77	6.783	1.54	12.783	5.68	18.78	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.817	0.77	6.817	1.54	12.817	5.68	18.82	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38
0.883	0.77	6.883	1.54	12.883	5.68	18.88	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38
0.983	0.77	6.983	1.54	12.983	5.68	18.98	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.017	0.77	7.017	1.54	13.017	1.08	19.02	1.38
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.117	0.77	7.117	1.54	13.117	1.08	19.12	1.38
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.183	0.77	7.183	1.54	13.183	1.08	19.18	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.217	0.77	7.217	1.54	13.217	1.08	19.22	1.38
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38
1.283	0.77	7.283	1.54	13.283	1.08	19.28	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.317	0.77	7.317	1.54	13.317	1.08	19.32	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38
1.383	0.77	7.383	1.54	13.383	1.08	19.38	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38
1.483	0.77	7.483	1.54	13.483	1.08	19.48	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.517	0.77	7.517	1.54	13.517	6.29	19.52	1.38
1.533	0.77	7.533	1.54	13.533	6.30	19.53	1.38
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38
1.567	0.77	7.567	1.54	13.567	6.30	19.57	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38

----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.155E+02	0.0	0.18	26.00
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.296E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53
0.72	100.72	.655E+03	2.1	0.90	5.32
0.78	100.78	.743E+03	2.4	0.93	5.14
0.83	100.83	.836E+03	2.8	0.96	4.98
0.89	100.89	.934E+03	3.2	0.99	4.84
0.94	100.94	.104E+04	3.7	1.01	4.72
1.00	101.00	.115E+04	4.1	1.04	4.61

<---- hydrograph ---->

<-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0033)	85.33	3.82	12.00	43.72	0.96	1.02
OUTFLOW: ID= 1 (0040)	85.33	3.54	12.50	43.72	0.93	1.00

RESERVOIR(0036)	OVERFLOW IS OFF
IN= 2----> OUT= 1	
DT= 4.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	1.5621	0.7845
0.0206	0.1029	3.2275	0.8811
0.0461	0.1764	5.2638	0.9799
0.0618	0.2539	7.6097	1.0811
0.0743	0.3353	10.2263	1.1844
0.0850	0.4205	13.0858	1.2900
0.0945	0.5081	16.1669	1.3979
0.1031	0.5980	19.5735	1.5062
0.1071	0.6438	23.5541	1.6210
0.3892	0.6901	35.0828	1.9135

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0040)	85.330	3.538	12.50	43.72
OUTFLOW: ID= 1 (0036)	85.330	3.350	12.70	43.38

PEAK FLOW REDUCTION [Qout/Qin](%)= 94.68

TIME SHIFT OF PEAK FLOW (min)= 12.00

MAXIMUM STORAGE USED (ha.m.)= 0.8870

CALIB	Area (ha)=	1.51	Curve Number (CN)=	75.0
NASHYD (0253)	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 1.0 min	U.H. Tp(hrs)=	0.11		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.77	6.017	1.54	12.017	11.11	18.02	1.38
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38
0.083	0.77	6.083	1.54	12.083	11.06	18.08	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.117	0.77	6.117	1.54	12.117	11.06	18.12	1.38
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38

HRP8-PR_2-100 YEAR.OUT									
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38		
1.617	0.77	7.617	1.54	13.617	6.30	19.62	1.38		
1.633	0.77	7.633	1.54	13.633	6.30	19.63	1.38		
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38		
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38		
1.683	0.77	7.683	1.54	13.683	6.30	19.68	1.38		
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38		
1.717	0.77	7.717	1.54	13.717	6.30	19.72	1.38		
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38		
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38		
1.767	1.38	7.767	1.54	13.767	6.30	19.77	1.38		
1.783	1.38	7.783	1.54	13.783	6.30	19.78	1.38		
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38		
1.817	1.38	7.817	1.54	13.817	6.30	19.82	1.38		
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38		
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38		
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38		
1.883	1.38	7.883	1.54	13.883	6.30	19.88	1.38		
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38		
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38		
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38		
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38		
1.967	1.38	7.967	1.54	13.967	6.30	19.97	1.38		
1.983	1.38	7.983	1.54	13.983	6.30	19.98	1.38		
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38		
2.017	1.00	8.017	2.07	14.017	2.31	20.02	0.93		
2.033	1.00	8.033	2.07	14.033	2.30	20.03	0.92		
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92		
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92		
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92		
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92		
2.117	1.00	8.117	2.07	14.117	2.30	20.12	0.92		
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92		
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92		
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92		
2.183	1.00	8.183	2.07	14.183	2.30	20.18	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.217	1.00	8.217	2.07	14.217	2.30	20.22	0.92		
2.233	1.00	8.233	2.07	14.233	2.30	20.23	0.92		
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92		
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92		
2.283	1.00	8.283	2.07	14.283	2.30	20.28	0.92		
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92		
2.317	1.00	8.317	2.07	14.317	2.30	20.32	0.92		
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92		
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92		
2.367	1.00	8.367	2.07	14.367	2.30	20.37	0.92		
2.383	1.00	8.383	2.07	14.383	2.30	20.38	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92		
2.433	1.00	8.433	2.07	14.433	2.30	20.43	0.92		
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92		
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92		
2.483	1.00	8.483	2.07	14.483	2.30	20.48	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.517	1.00	8.517	2.07	14.517	2.30	20.52	0.92		
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92		
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92		
2.567	1.00	8.567	2.07	14.567	2.30	20.57	0.92		
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92		
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92		
2.617	1.00	8.617	2.07	14.617	2.30	20.62	0.92		
2.633	1.00	8.633	2.07	14.633	2.30	20.63	0.92		
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92		
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92		
2.683	1.00	8.683	2.07	14.683	2.30	20.68	0.92		
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92		
2.717	1.00	8.717	2.07	14.717	2.30	20.72	0.92		
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92		
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92		
2.767	1.00	8.767	2.07	14.767	2.30	20.77	0.92		
2.783	1.00	8.783	2.07	14.783	2.30	20.78	0.92		
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92		
2.817	1.00	8.817	2.07	14.817	2.30	20.82	0.92		
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92		
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92		
2.867	1.00	8.867	2.07	14.867	2.30	20.87	0.92		
2.883	1.00	8.883	2.07	14.883	2.30	20.88	0.92		
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92		
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92		
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92		
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92		
2.967	1.00	8.967	2.07	14.967	2.30	20.97	0.92		
2.983	1.00	8.983	2.07	14.983	2.30	20.98	0.92		
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92		
3.017	1.00	9.017	2.46	15.017	2.30	21.02	0.92		
3.033	1.00	9.033	2.46	15.033	2.30	21.03	0.92		

HRP8-PR_2-100 YEAR.OUT							
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.067	1.00	9.067	2.46	15.067	2.30	21.07	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.117	1.00	9.117	2.46	15.117	2.30	21.12	0.92
3.133	1.00	9.133	2.46	15.133	2.30	21.13	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.183	1.00	9.183	2.46	15.183	2.30	21.18	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.217	1.00	9.217	2.46	15.217	2.30	21.22	0.92
3.233	1.00	9.233	2.46	15.233	2.30	21.23	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.267	1.00	9.267	2.46	15.267	2.30	21.27	0.92
3.283	1.00	9.283	2.46	15.283	2.30	21.28	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.317	1.00	9.317	2.46	15.317	2.30	21.32	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.367	1.00	9.367	2.46	15.367	2.30	21.37	0.92
3.383	1.00	9.383	2.46	15.383	2.30	21.38	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.433	1.00	9.433	2.46	15.433	2.30	21.43	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92
3.483	1.00	9.483	2.46	15.483	2.30	21.48	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.517	1.00	9.517	2.76	15.517	2.30	21.52	0.92
3.533	1.00	9.533	2.76	15.533	2.30	21.53	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.567	1.00	9.567	2.76	15.567	2.30	21.57	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.617	1.00	9.617	2.76	15.617	2.30	21.62	0.92
3.633	1.00	9.633	2.76	15.633	2.30	21.63	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.683	1.00	9.683	2.76	15.683	2.30	21.68	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.717	1.00	9.717	2.76	15.717	2.30	21.72	0.92
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.767	1.00	9.767	2.76	15.767	2.30	21.77	0.92
3.783	1.00	9.783	2.76	15.783	2.30	21.78	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.817	1.00	9.817	2.76	15.817	2.30	21.82	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92
3.883	1.00	9.883	2.76	15.883	2.30	21.88	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
3.967	1.00	9.967	2.76	15.967	2.30	21.97	0.92
3.983	1.00	9.983	2.76	15.983	2.30	21.98	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.017	1.23	10.017	3.53	16.017	1.38	22.02	0.92
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.117	1.23	10.117	3.53	16.117	1.38	22.12	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.183	1.23	10.183	3.53	16.183	1.38	22.18	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.217	1.23	10.217	3.53	16.217	1.38	22.22	0.92
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.283	1.23	10.283	3.53	16.283	1.38	22.28	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.317	1.23	10.317	3.53	16.317	1.38	22.32	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92
4.383	1.23	10.383	3.53	16.383	1.38	22.38	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92
4.483	1.23	10.483	3.53	16.483	1.38	22.48	0.92

HRP8-PR_2-100 YEAR.OUT

4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.517	1.23	10.517	4.76	16.517	1.38	22.52	0.92
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.617	1.23	10.617	4.76	16.617	1.38	22.62	0.92
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.683	1.23	10.683	4.76	16.683	1.38	22.68	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.717	1.23	10.717	4.76	16.717	1.38	22.72	0.92
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92
4.783	1.23	10.783	4.76	16.783	1.38	22.78	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.817	1.23	10.817	4.76	16.817	1.38	22.82	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92
4.883	1.23	10.883	4.76	16.883	1.38	22.88	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92
4.983	1.23	10.983	4.76	16.983	1.38	22.98	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.017	1.23	11.017	7.37	17.017	1.38	23.02	0.92
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.117	1.23	11.117	7.37	17.117	1.38	23.12	0.92
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.183	1.23	11.183	7.37	17.183	1.38	23.18	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.217	1.23	11.217	7.37	17.217	1.38	23.22	0.92
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92
5.283	1.23	11.283	7.37	17.283	1.38	23.28	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.317	1.23	11.317	7.37	17.317	1.38	23.32	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92
5.383	1.23	11.383	7.37	17.383	1.38	23.38	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.483	1.23	11.483	7.37	17.483	1.38	23.48	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.517	1.23	11.517	31.94	17.517	1.38	23.52	0.92
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.617	1.23	11.617	31.95	17.617	1.38	23.62	0.92
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.683	1.23	11.683	31.95	17.683	1.38	23.68	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.717	1.23	11.717	31.95	17.717	1.38	23.72	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.767	1.23	11.767	84.76	17.767	1.38	23.77	0.92
5.783	1.23	11.783	84.79	17.783	1.38	23.78	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.817	1.23	11.817	84.79	17.817	1.38	23.82	0.92
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92
5.883	1.23	11.883	84.79	17.883	1.38	23.88	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92

HRP8-PR_2-100 YEAR.OUT

5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92
5.983	1.23	11.983	84.79	17.983	1.38	23.98	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.515

PEAK FLOW (cms)= 0.161 (i)
TIME TO PEAK (hrs)= 12.033
RUNOFF VOLUME (mm)= 27.046
TOTAL RAINFALL (mm)= 76.801
RUNOFF COEFFICIENT = 0.352

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0035) |
| 1 + 2 = 3 |

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0253):	1.51	0.161	12.03
+ ID2= 2 (0036):	85.33	3.350	12.70
=====			
ID = 3 (0035):	86.84	3.368	12.70
=====			

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

=====

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A L
V V I SS U U A A L
V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Clivica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4c7a1161-d9de-4daa-afe8-d6c73ffd6633\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Clivica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\4c7a1161-d9de-4daa-afe8-d6c73ffd6633\scenar

DATE: 03/24/2023 TIME: 11:11:22

USER:

COMMENTS: _____

** SIMULATION : Run 03 **

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\73397f8f-c1c2-418c-b250-352fb19c09d1\1913d010
| Ptotal= 88.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60

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1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07

| CALIB |
| NASHYD (1050) | Area (ha)= 4.49 Curve Number (CN)= 77.0
| ID= 1 DT= 2.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60	
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60	
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60	
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60	
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60	
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60	
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60	
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60	
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60	
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60	
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60	
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60	
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60	
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60	
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60	
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60	
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60	
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60	
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60	
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60	
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60	
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60	
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60	
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60	
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60	
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60	
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60	
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60	
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60	
1.000	0.89	7.000	1.78	13.000	6.50	19.00	1.60	
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60	
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60	
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60	
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60	
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60	
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60	
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60	
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60	
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60	
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60	
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60	
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60	
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60	
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60	
1.500	0.89	7.500	1.78	13.500	1.26	19.50	1.60	
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60	
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60	
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60	
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60	
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60	
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60	
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60	
1.767	1.24	7.767	1.78	13.767	7.28	19.77	1.60	
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60	

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1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60
2.000	1.60	8.000	1.78	14.000	7.27	20.00	1.60
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07

HRP8-PR_2-100 YEAR.OUT

4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.033	1.42	11.033	5.52	17.033	1.60	23.03	1.07
5.067	1.42	11.067	5.52	17.067	1.60	23.07	1.07
5.100	1.42	11.100	5.52	17.100	1.60	23.10	1.07
5.133	1.42	11.133	5.52	17.133	1.60	23.13	1.07
5.167	1.42	11.167	5.52	17.167	1.60	23.17	1.07
5.200	1.42	11.200	5.52	17.200	1.60	23.20	1.07
5.233	1.42	11.233	5.52	17.233	1.60	23.23	1.07
5.267	1.42	11.267	5.52	17.267	1.60	23.27	1.07
5.300	1.42	11.300	5.52	17.300	1.60	23.30	1.07
5.333	1.42	11.333	5.52	17.333	1.60	23.33	1.07
5.367	1.42	11.367	5.52	17.367	1.60	23.37	1.07
5.400	1.42	11.400	5.52	17.400	1.60	23.40	1.07
5.433	1.42	11.433	5.52	17.433	1.60	23.43	1.07
5.467	1.42	11.467	5.52	17.467	1.60	23.47	1.07
5.500	1.42	11.500	5.56	17.500	1.60	23.50	1.07
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07
5.767	1.42	11.767	67.57	17.767	1.60	23.77	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07
5.967	1.42	11.967	98.04	17.967	1.60	23.97	1.07
6.000	1.42	12.000	97.92	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.536 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 43.976
TOTAL RAINFALL (mm)= 88.799
RUNOFF COEFFICIENT = 0.495

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (0250)	Area (ha)=	4.37		
ID= 1 DT= 2.0 min	Total Imp(%)=	46.00	Dir. Conn.(%)=	46.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	2.01	2.36		
Dep. Storage (mm)=	1.50	1.50		
Average Slope (%)=	2.00	2.00		
Length (m)=	170.68	40.00		
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60

HRP8-PR_2-100 YEAR.OUT

0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60
1.000	0.89	7.000	1.78	13.000	6.56	19.00	1.60
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60
1.500	0.89	7.500	1.78	13.500	1.26	19.50	1.60
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60
1.767	1.24	7.767	1.78	13.767	7.28	19.77	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60
2.000	1.60	8.000	1.78	14.000	7.27	20.00	1.60
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07

HRP8-PR_2-100 YEAR.OUT

3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.367	1.42	11.367	8.52	17.367	1.60	23.37	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07
5.500	1.42	11.500	8.56	17.500	1.60	23.50	1.07
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07
5.767	1.42	11.767	67.57	17.767	1.60	23.77	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07
5.967	1.42	11.967	98.04	17.967	1.60	23.97	1.07
6.000	1.42	12.000	97.92	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 65.06
over (min) 5.00 12.00
Storage Coeff. (min)= 2.88 (ii) 10.47 (iii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.34 0.10

PEAK FLOW (cms)= 0.54 0.30 0.813 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 87.30 49.22 66.74
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.55 0.75

HRP8-PR_2-100 YEAR.OUT

(i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN= 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1050):	4.49	0.536	12.07	43.98
+ ID2= 2 (0250):	4.37	0.813	12.00	66.74
ID = 3 (0018):	8.86	1.305	12.00	55.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)
IN= 2--> OUT= 1

Routing time step (min)!= 2.00

Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.ft.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.980E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

hydrograph

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
8.86	1.31	12.00	55.20	0.44	1.27
8.86	0.84	12.10	55.16	0.36	1.08

INFLOW : ID= 2 (0018)
OUTFLOW: ID= 1 (0037)

U.H. Tp(hrs)= 0.63

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.533	0.89	6.533	1.78	12.533	11.23	18.53	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60

HRP8-PR_2-100 YEAR.OUT

1.067	0.89	7.067	1.78	13.067	3.91	19.07	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60
1.600	0.89	7.600	1.78	13.600	5.77	19.60	1.60
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60
1.867	1.51	7.867	1.78	13.867	7.28	19.87	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07
3.067	1.15	9.067	2.62	15.067	2.66	21.07	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07
3.600	1.15	9.600	3.11	15.600	2.66	21.60	1.07
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.533	1.42	10.533	4.44	16.533	1.60	22.53	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07
5.067	1.42	11.067	7.02	17.067	1.60	23.07	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07
5.600	1.42	11.600	29.84	17.600	1.60	23.60	1.07
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07
5.867	1.42	11.867	90.40	17.867	1.60	23.87	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 2.906 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 50.313
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1051):	50.34	2.906	12.53	50.31
+ ID2= 2 (0037):	8.06	0.839	12.10	55.16
ID = 3 (0029):	59.20	3.458	12.40	51.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)= 10.65
STANDHYD (0251)	Total Imp(%)= 37.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)= 37.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.94	6.71
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	266.46	220.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60

HRP8-PR_2-100 YEAR.OUT

0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07

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4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 30.73
over (min) 6.00 36.00
Storage Coeff. (min)= 3.77 (ii) 35.23 (iii)
Unit Hyd. Tpeak (min)= 6.00 36.00
Unit Hyd. peak (cms)= 0.24 0.03

TOTALS

PEAK FLOW (cms)= 1.05 0.34 1.196 (iii)
TIME TO PEAK (hrs)= 12.00 12.45 12.00
RUNOFF VOLUME (mm)= 87.30 40.95 58.10
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.65

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0251):	10.65	1.196	12.00	58.10
+ ID2= 2 (0029):	59.20	3.458	12.40	51.04
=====				
ID = 3 (0031):	69.85	3.933	12.40	52.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0039)|
| IN= 2--> OUT= 1 |

Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.990E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22

HRP8-PR_2-100 YEAR.OUT

0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.120E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (ft) (m/s)
INFLOW : ID= 2 (0031) 69.85 3.93 12.40 52.11 0.97 1.03
OUTFLOW: ID= 1 (0039) 69.85 3.82 12.53 52.11 0.96 1.02

CALIB
STANDHYD (0252) | Area (ha)= 15.48
ID= 1 DT= 5.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.97 8.51
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 321.25 100.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	0.89	0.003	1.78	12.003	12.00	18.00	1.60		
0.167	0.89	0.167	1.78	12.167	12.79	18.17	1.60		
0.250	0.89	0.250	1.78	12.250	12.79	18.25	1.60		
0.333	0.89	0.333	1.78	12.333	12.79	18.33	1.60		
0.417	0.89	0.417	1.78	12.417	12.79	18.42	1.60		
0.500	0.89	0.500	1.78	12.500	12.79	18.50	1.60		
0.583	0.89	0.583	1.78	12.583	6.57	18.58	1.60		
0.667	0.89	0.667	1.78	12.667	6.57	18.67	1.60		
0.750	0.89	0.750	1.78	12.750	6.57	18.75	1.60		
0.833	0.89	0.833	1.78	12.833	6.57	18.83	1.60		
0.917	0.89	0.917	1.78	12.917	6.57	18.92	1.60		
1.000	0.89	1.000	1.78	13.000	6.57	19.00	1.60		
1.083	0.89	1.083	1.78	13.083	1.24	19.08	1.60		
1.167	0.89	1.167	1.78	13.167	1.24	19.17	1.60		
1.250	0.89	1.250	1.78	13.250	1.24	19.25	1.60		
1.333	0.89	1.333	1.78	13.333	1.24	19.33	1.60		
1.417	0.89	1.417	1.78	13.417	1.24	19.42	1.60		
1.500	0.89	1.500	1.78	13.500	1.24	19.50	1.60		
1.583	0.89	1.583	1.78	13.583	7.28	19.58	1.60		
1.667	0.89	1.667	1.78	13.667	7.28	19.67	1.60		
1.750	0.89	1.750	1.78	13.750	7.28	19.75	1.60		
1.833	1.60	1.833	1.78	13.833	7.28	19.83	1.60		
1.917	1.60	1.917	1.78	13.917	7.28	19.92	1.60		
2.000	1.60	2.000	1.78	14.000	7.28	20.00	1.60		
2.083	1.15	2.083	2.40	14.083	2.66	20.08	1.07		
2.167	1.15	2.167	2.40	14.167	2.66	20.17	1.07		
2.250	1.15	2.250	2.40	14.250	2.66	20.25	1.07		
2.333	1.15	2.333	2.40	14.333	2.66	20.33	1.07		
2.417	1.15	2.417	2.40	14.417	2.66	20.42	1.07		
2.500	1.15	2.500	2.40	14.500	2.66	20.50	1.07		
2.583	1.15	2.583	2.40	14.583	2.66	20.58	1.07		
2.667	1.15	2.667	2.40	14.667	2.66	20.67	1.07		
2.750	1.15	2.750	2.40	14.750	2.66	20.75	1.07		
2.833	1.15	2.833	2.40	14.833	2.66	20.83	1.07		
2.917	1.15	2.917	2.40	14.917	2.66	20.92	1.07		
3.000	1.15	3.000	2.40	15.000	2.66	21.00	1.07		
3.083	1.15	3.083	2.84	15.083	2.66	21.08	1.07		
3.167	1.15	3.167	2.84	15.167	2.66	21.17	1.07		
3.250	1.15	3.250	2.84	15.250	2.66	21.25	1.07		
3.333	1.15	3.333	2.84	15.333	2.66	21.33	1.07		
3.417	1.15	3.417	2.84	15.417	2.66	21.42	1.07		
3.500	1.15	3.500	2.84	15.500	2.66	21.50	1.07		
3.583	1.15	3.583	3.20	15.583	2.66	21.58	1.07		
3.667	1.15	3.667	3.20	15.667	2.66	21.67	1.07		
3.750	1.15	3.750	3.20	15.750	2.66	21.75	1.07		
3.833	1.15	3.833	3.20	15.833	2.66	21.83	1.07		
3.917	1.15	3.917	3.20	15.917	2.66	21.92	1.07		
4.000	1.15	4.000	3.20	16.000	2.66	22.00	1.07		
4.083	1.42	4.083	4.08	16.083	1.60	22.08	1.07		
4.167	1.42	4.167	4.08	16.167	1.60	22.17	1.07		

HRP8-PR_2-100 YEAR.OUT

4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 39.09
over (min) 5.00 25.00
Storage Coeff. (min)= 4.21 (ii) 22.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.24 0.05

TOTALS
PEAK FLOW (cms)= 1.06 0.53 2.101 (iii)
TIME TO PEAK (hrs)= 12.00 12.25 12.00
RUNOFF VOLUME (mm)= 87.30 37.84 60.10
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.43 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0252):	15.48	2.191	12.00	60.10
+ ID2= 2 (0039):	69.85	3.820	12.53	52.11
=====				
ID = 3 (0033):	85.33	4.686	12.00	53.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)
IN= 2---> OUT= 1

Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.296E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53

HRP8-PR_2-100 YEAR.OUT

0.72	100.72	.655E+03	2.1	0.90	5.32
0.78	100.78	.743E+03	2.4	0.93	5.14
0.83	100.83	.836E+03	2.8	0.96	4.98
0.89	100.89	.934E+03	3.2	0.99	4.84
0.94	100.94	.104E+04	3.7	1.01	4.72
1.00	101.00	.115E+04	4.1	1.04	4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0033)	85.33	4.69	12.00	53.57	1.00	1.04
OUTFLOW: ID= 1 (0040)	85.33	4.45	12.50	53.57	1.00	1.04

RESERVOIR(0036)
IN= 2---> OUT= 1
DT= 4.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	1.5621	0.7845
0.0206	0.1029	3.2275	0.8811
0.0461	0.1764	5.2638	0.9799
0.0618	0.2539	7.6097	1.0811
0.0743	0.3353	10.2263	1.1844
0.0850	0.4205	13.0858	1.2900
0.0945	0.5081	16.1669	1.3979
0.1031	0.5980	19.5735	1.5082
0.1071	0.6438	23.5541	1.6210
0.3892	0.6901	35.0828	1.9135

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0040)	85.330	4.454	12.50	53.57
OUTFLOW: ID= 1 (0036)	85.330	4.328	12.63	53.22

PEAK FLOW REDUCTION [Qout/Qin](%)= 97.18
TIME SHIFT OF PEAK FLOW (min)= 8.00
MAXIMUM STORAGE USED (ha.m.)= 0.9346

CALIB
NASHYD (0253)
ID= 1 DT= 1.0 min

Area (ha)=	1.51	Curve Number (CN)=	75.0
Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.11		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.89	6.017	1.78	12.017	12.85	18.02	1.60
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60
0.083	0.89	6.083	1.78	12.083	12.79	18.08	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.117	0.89	6.117	1.78	12.117	12.79	18.12	1.60
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.183	0.89	6.183	1.78	12.183	12.79	18.18	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.217	0.89	6.217	1.78	12.217	12.79	18.22	1.60
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60
0.283	0.89	6.283	1.78	12.283	12.79	18.28	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.317	0.89	6.317	1.78	12.317	12.79	18.32	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60
0.383	0.89	6.383	1.78	12.383	12.79	18.38	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60
0.483	0.89	6.483	1.78	12.483	12.79	18.48	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.517	0.89	6.517	1.78	12.517	6.50	18.52	1.60
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60

HRP8-PR_2-100 YEAR.OUT									
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60		
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.617	0.89	6.617	1.78	12.617	6.57	18.62	1.60		
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.683	0.89	6.683	1.78	12.683	6.57	18.68	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.717	0.89	6.717	1.78	12.717	6.57	18.72	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60		
0.783	0.89	6.783	1.78	12.783	6.57	18.78	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.817	0.89	6.817	1.78	12.817	6.57	18.82	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.883	0.89	6.883	1.78	12.883	6.57	18.88	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60		
0.983	0.89	6.983	1.78	12.983	6.57	18.98	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.017	0.89	7.017	1.78	13.017	1.25	19.02	1.60		
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.117	0.89	7.117	1.78	13.117	1.24	19.12	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.183	0.89	7.183	1.78	13.183	1.24	19.18	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.217	0.89	7.217	1.78	13.217	1.24	19.22	1.60		
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.283	0.89	7.283	1.78	13.283	1.24	19.28	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.317	0.89	7.317	1.78	13.317	1.24	19.32	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60		
1.383	0.89	7.383	1.78	13.383	1.24	19.38	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60		
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.483	0.89	7.483	1.78	13.483	1.24	19.48	1.60		
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60		
1.517	0.89	7.517	1.78	13.517	7.27	19.52	1.60		
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60		
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.617	0.89	7.617	1.78	13.617	7.28	19.62	1.60		
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.683	0.89	7.683	1.78	13.683	7.28	19.68	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.717	0.89	7.717	1.78	13.717	7.28	19.72	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.767	1.60	7.767	1.78	13.767	7.28	19.77	1.60		
1.783	1.60	7.783	1.78	13.783	7.28	19.78	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.817	1.60	7.817	1.78	13.817	7.28	19.82	1.60		
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.883	1.60	7.883	1.78	13.883	7.28	19.88	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60		
1.983	1.60	7.983	1.78	13.983	7.28	19.98	1.60		

HRP8-PR_2-100 YEAR.OUT									
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.017	1.15	8.017	2.40	14.017	2.68	20.02	1.07		
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.117	1.15	8.117	2.40	14.117	2.66	20.12	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.183	1.15	8.183	2.40	14.183	2.66	20.18	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.217	1.15	8.217	2.40	14.217	2.66	20.22	1.07		
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.283	1.15	8.283	2.40	14.283	2.66	20.28	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.317	1.15	8.317	2.40	14.317	2.66	20.32	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07		
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07		
2.383	1.15	8.383	2.40	14.383	2.66	20.38	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07		
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07		
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.483	1.15	8.483	2.40	14.483	2.66	20.48	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.517	1.15	8.517	2.40	14.517	2.66	20.52	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07		
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07		
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.617	1.15	8.617	2.40	14.617	2.66	20.62	1.07		
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07		
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.683	1.15	8.683	2.40	14.683	2.66	20.68	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.717	1.15	8.717	2.40	14.717	2.66	20.72	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07		
2.783	1.15	8.783	2.40	14.783	2.66	20.78	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.817	1.15	8.817	2.40	14.817	2.66	20.82	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07		
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.883	1.15	8.883	2.40	14.883	2.66	20.88	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07		
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07		
2.983	1.15	8.983	2.40	14.983	2.66	20.98	1.07		
2.999	1.15	8.999	2.40	15.000	2.66	20.99	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.017	1.15	9.017	2.40	15.017	2.66	21.02	1.07		
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07		
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.117	1.15	9.117	2.84	15.117	2.66	21.12	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07		
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07		
3.183	1.15	9.183	2.84	15.183	2.66	21.18	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.217	1.15	9.217	2.84	15.217	2.66	21.22	1.07		
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.283	1.15	9.283	2.84	15.283	2.66	21.28	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.317	1.15	9.317	2.84	15.317	2.66	21.32	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07		
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07		
3.383	1.15	9.383	2.84	15.383	2.66	21.38	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07		
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07		

HRP8-PR_2-100 YEAR.OUT									
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07		
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07		
3.483	1.15	9.483	2.84	15.483	2.66	21.48	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.517	1.15	9.517	3.20	15.517	2.66	21.52	1.07		
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07		
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07		
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07		
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.617	1.15	9.617	3.20	15.617	2.66	21.62	1.07		
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07		
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.683	1.15	9.683	3.20	15.683	2.66	21.68	1.07		
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07		
3.717	1.15	9.717	3.20	15.717	2.66	21.72	1.07		
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07		
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07		
3.783	1.15	9.783	3.20	15.783	2.66	21.78	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.817	1.15	9.817	3.20	15.817	2.66	21.82	1.07		
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07		
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07		
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07		
3.883	1.15	9.883	3.20	15.883	2.66	21.88	1.07		
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07		
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07		
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07		
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07		
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07		
3.983	1.15	9.983	3.20	15.983	2.66	21.98	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.017	1.42	10.017	4.08	16.017	1.60	22.02	1.07		
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07		
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07		
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07		
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07		
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07		
4.117	1.42	10.117	4.08	16.117	1.60	22.12	1.07		
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07		
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07		
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07		
4.183	1.42	10.183	4.08	16.183	1.60	22.18	1.07		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07		
4.217	1.42	10.217	4.08	16.217	1.60	22.22	1.07		
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07		
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07		
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07		
4.283	1.42	10.283	4.08	16.283	1.60	22.28	1.07		
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07		
4.317	1.42	10.317	4.08	16.317	1.60	22.32	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07		
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07		
4.383	1.42	10.383	4.08	16.383	1.60	22.38	1.07		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07		
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07		
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07		
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07		
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07		
4.483	1.42	10.483	4.08	16.483	1.60	22.48	1.07		
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07		
4.517	1.42	10.517	5.51	16.517	1.60	22.52	1.07		
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07		
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07		
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07		
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07		
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07		
4.617	1.42	10.617	5.51	16.617	1.60	22.62	1.07		
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07		
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07		
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07		
4.683	1.42	10.683	5.51	16.683	1.60	22.68	1.07		
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07		
4.717	1.42	10.717	5.51	16.717	1.60	22.72	1.07		
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07		
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07		
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07		
4.783	1.42	10.783	5.51	16.783	1.60	22.78	1.07		
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07		
4.817	1.42	10.817	5.51	16.817	1.60	22.82	1.07		
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07		
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07		
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07		
4.883	1.42	10.883	5.51	16.883	1.60	22.88	1.07		

HRP8-PR_2-100 YEAR.OUT							
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07
4.983	1.42	10.983	5.51	16.983	1.60	22.98	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.017	1.42	11.017	8.52	17.017	1.60	23.02	1.07
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.117	1.42	11.117	8.52	17.117	1.60	23.12	1.07
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.183	1.42	11.183	8.52	17.183	1.60	23.18	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.217	1.42	11.217	8.52	17.217	1.60	23.22	1.07
5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07
5.283	1.42	11.283	8.52	17.283	1.60	23.28	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.317	1.42	11.317	8.52	17.317	1.60	23.32	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.367	1.42	11.367	8.52	17.367	1.60	23.37	1.07
5.383	1.42	11.383	8.52	17.383	1.60	23.38	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07
5.483	1.42	11.483	8.52	17.483	1.60	23.48	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.517	1.42	11.517	36.93	17.517	1.60	23.52	1.07
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.617	1.42	11.617	36.94	17.617	1.60	23.62	1.07
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.683	1.42	11.683	36.94	17.683	1.60	23.68	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.717	1.42	11.717	36.94	17.717	1.60	23.72	1.07
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.767	1.42	11.767	98.01	17.767	1.60	23.77	1.07
5.783	1.42	11.783	98.01	17.783	1.60	23.78	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.817	1.42	11.817	98.04	17.817	1.60	23.82	1.07
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07
5.883	1.42	11.883	98.04	17.883	1.60	23.88	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
5.967	1.42	11.967	98.04	17.967	1.60	23.97	1.07
5.983	1.42	11.983	98.04	17.983	1.60	23.98	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

ID = 3 (0035): 86.84 4.356 12.63 48.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL
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000 TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voindat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\267560d8-1e1e-4fc6-8150-bc1de64163bb\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\267560d8-1e1e-4fc6-8150-bc1de64163bb\scenar

DATE: 03/24/2023 TIME: 11:11:21

USER:

COMMENTS: _____

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*****
** SIMULATION : Run 04 **
*****
```

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\73397f0f-c1c2-418c-b258-352fb19c09d1\codb3d47
Ptotal=103.20 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86
2.00	1.86	8.00	2.06	14.00	8.46	20.00	1.86
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24

CALIB	Area	(ha)=	4.49	Curve Number	(CN)=	77.0
NASHYD (1050)	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00	
ID= 1 DT= 2.0 min	U.H. Tp(hrs)=	0.17				

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86
0.500	1.03	6.500	2.06	12.500	14.85	18.50	1.86
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24

HRP8-PR_2-100 YEAR.OUT									
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24		
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24		
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24		
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24		
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24		
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24		
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24		
5.500	1.65	11.500	9.95	17.500	1.86	23.50	1.24		
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24		
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24		

HRP8-PR_2-100 YEAR.OUT									
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24		
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24		
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24		
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24		

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.676 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 55.392
TOTAL RAINFALL (mm)= 103.199
RUNOFF COEFFICIENT = 0.537

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (0250)		Area	(ha)=	4.37
ID= 1 DT= 2.0 min		Total	Imp(%)=	46.00
		Dir. Conn.(%)=		46.00
		IMPERVIOUS		PERVIOUS (i)
Surface Area	(ha)=	2.81	2.36	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	170.68	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86		
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.500	1.03	6.500	2.06	12.500	14.85	18.50	1.86		
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86		
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86		
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86		
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86		
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86		
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86		
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86		

[illegible]

HRP8-PR_2-100 YEAR.OUT

1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0018)	8.86	1.62	12.00	67.42	0.49
OUTFLOW: ID= 1 (0037)	8.86	1.08	12.10	67.38	0.40

CALIB					
NASHYD (1051)					
ID= 1 DT= 8.0 min	Area	(ha)=	50.34	Curve Number	(CN)= 82.0
	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=		0.63		

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	1.03	6.133	2.06	12.133	14.87	18.13	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.533	1.03	6.533	2.06	12.533	13.06	18.53	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
1.067	1.03	7.067	2.06	13.067	4.54	19.07	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86		
1.600	1.03	7.600	2.06	13.600	6.71	19.60	1.86		
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86		
1.867	1.75	7.867	2.06	13.867	8.46	19.87	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
3.067	1.34	9.067	3.04	15.067	3.10	21.07	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.600	1.34	9.600	3.61	15.600	3.10	21.60	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.533	1.65	10.533	5.16	16.533	1.86	22.53	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		

HRP8-PR_2-100 YEAR.OUT

4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
5.067	1.65	11.067	8.15	17.067	1.86	23.07	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24
5.600	1.65	11.600	34.67	17.600	1.86	23.60	1.24
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24
5.867	1.65	11.867	105.05	17.867	1.86	23.87	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 3.626 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 62.628
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.607

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (1051):	50.34	3.626	12.53	62.63	
+ ID2= 2 (0037):	8.86	1.083	12.10	67.38	
=====					
ID = 3 (0029):	59.20	4.298	12.40	63.34	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (0251)					
ID= 1 DT= 3.0 min	Area	(ha)=	10.65	Total Imp(%)=	37.00
				Dir. Conn.(%)=	37.00
IMPERVIOUS					
PERVIOUS (i)					
Surface Area	(ha)=	3.94	6.71		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	266.46	220.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		

HRP8-PR_2-100 YEAR.OUT									
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)= 113.93 41.92

HRP8-PR_2-100 YEAR.OUT			
over (min)	6.00	33.00	
Storage Coeff. (min)=	3.55 (ii)	31.34 (ii)	
Unit Hyd. Tpeak (min)=	6.00	33.00	
Unit Hyd. peak (cms)=	0.25	0.64	
PEAK FLOW (cms)=	1.23	0.46	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.40	1.442 (iii)
RUNOFF VOLUME (mm)=	101.70	51.59	12.00
TOTAL RAINFALL (mm)=	103.20	103.20	70.13
RUNOFF COEFFICIENT =	0.99	0.50	103.20
			0.68

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0251):	10.65	1.442	12.00	70.13
+ ID2= 2 (0029):	59.20	4.298	12.40	63.34
ID = 3 (0031):	69.85	4.926	12.40	64.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0039)						
IN= 2---> OUT= 1						
Routing time step (min)'= 2.00						
<----- DATA FOR SECTION (1.1) ----->						
Distance	Elevation	Manning				
0.00	101.00	0.0500				
1.00	100.67	0.0500				
2.00	100.33	0.0500 / 0.0300	Main Channel			
3.00	100.00	0.0300	Main Channel			
4.00	100.00	0.0300	Main Channel			
5.00	100.33	0.0300 / 0.0500	Main Channel			
6.00	100.67	0.0500				
7.00	101.00	0.0500				
<----- TRAVEL TIME TABLE ----->						
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)	
0.05	100.05	.266E+02	0.0	0.18	46.14	
0.09	100.09	.599E+02	0.0	0.27	30.87	
0.14	100.14	.998E+02	0.1	0.33	24.63	
0.19	100.19	.146E+03	0.1	0.39	21.04	
0.24	100.24	.200E+03	0.2	0.44	18.63	
0.28	100.28	.259E+03	0.3	0.49	16.87	
0.33	100.33	.326E+03	0.4	0.53	15.51	
0.39	100.39	.413E+03	0.5	0.61	13.47	
0.44	100.44	.510E+03	0.7	0.68	12.15	
0.50	100.50	.615E+03	0.9	0.73	11.22	
0.55	100.55	.729E+03	1.2	0.78	10.52	
0.61	100.61	.853E+03	1.4	0.83	9.97	
0.66	100.66	.985E+03	1.7	0.86	9.53	
0.72	100.72	.113E+04	2.1	0.90	9.10	
0.78	100.78	.128E+04	2.4	0.93	8.84	
0.83	100.83	.144E+04	2.8	0.96	8.57	
0.89	100.89	.161E+04	3.2	0.99	8.34	
0.94	100.94	.179E+04	3.7	1.01	8.13	
1.00	101.00	.198E+04	4.1	1.04	7.94	

**** WARNING: TRAVEL TIME TABLE EXCEEDED						
<----- hydrograph ----->						
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)	
INFLOW : ID= 2 (0031)	69.85	4.93	12.40	64.37	0.99	1.03
OUTFLOW: ID= 1 (0039)	69.85	4.80	12.50	64.37	1.00	1.04

CALIB			
STANDHYD (0252)	Area (ha)=	15.48	
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	6.97	8.51
Dep. Storage	(mm)=	1.50	1.50

Average Slope (%)= 2.00
Length (m)= 321.25
Mannings n = 0.013

HRP8-PR_2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86		
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86		
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86		
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24		
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24		
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24		
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)= 113.93
over (min) 5.00
Storage Coeff. (min)= 3.97 (ii)
Unit Hyd. Tpeak (min)= 5.00

Unit Hyd. peak (cms)= 0.24
PEAK FLOW (cms)= 2.17
TIME TO PEAK (hrs)= 12.00
RUNOFF VOLUME (mm)= 101.70
TOTAL RAINFALL (mm)= 103.20
RUNOFF COEFFICIENT = 0.99

HRP8-PR_2-100 YEAR.OUT

TOTALS

2.718 (iii)

12.00

72.12

103.20

0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0252): 15.48 2.718 12.00 72.12
+ ID2= 2 (0039): 69.85 4.798 12.50 64.37
ID = 3 (0033): 85.33 5.828 12.00 65.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)
IN= 2---> OUT= 1 | Routing time step (min)!= 2.00

DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0500
1.00 100.67 0.0500
2.00 100.33 0.0500 / 0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel
5.00 100.33 0.0300 / 0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

TRAVEL TIME TABLE
DEPTH (m) ELEV (m) VOLUME (cu.m.) FLOW RATE (cms) VELOCITY (m/s) TRAV.TIME (min)
0.05 100.05 .155E+02 0.0 0.18 26.80
0.09 100.09 .348E+02 0.0 0.27 17.93
0.14 100.14 .580E+02 0.1 0.33 14.31
0.19 100.19 .850E+02 0.1 0.39 12.22
0.24 100.24 .116E+03 0.2 0.44 10.83
0.28 100.28 .151E+03 0.3 0.49 9.80
0.33 100.33 .189E+03 0.4 0.53 9.01
0.39 100.39 .240E+03 0.5 0.61 7.82
0.44 100.44 .296E+03 0.7 0.68 7.06
0.50 100.50 .357E+03 0.9 0.73 6.52
0.55 100.55 .424E+03 1.2 0.78 6.11
0.61 100.61 .496E+03 1.4 0.83 5.79
0.66 100.66 .573E+03 1.7 0.86 5.53
0.72 100.72 .655E+03 2.1 0.90 5.32
0.78 100.78 .743E+03 2.4 0.93 5.14
0.83 100.83 .836E+03 2.8 0.96 4.98
0.89 100.89 .934E+03 3.2 0.99 4.84
0.94 100.94 .104E+04 3.7 1.01 4.72
1.00 101.00 .115E+04 4.1 1.04 4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED

hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0033) 85.33 5.83 12.00 65.79 0.99 1.03
OUTFLOW: ID= 1 (0040) 85.33 5.54 12.50 65.78 1.00 1.04

RESERVOIR(0036)
IN= 2---> OUT= 1 |
DT= 4.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 1.5621 0.7845
0.0206 0.1029 | 3.2275 0.8811
0.0461 0.1764 | 5.2638 0.9799
0.0618 0.2539 | 7.6097 1.0811
0.0743 0.3353 | 10.2263 1.1844

HRP8-PR_2-100 YEAR.OUT

0.0850	0.4205	13.0858	1.2900
0.0945	0.5081	16.1669	1.3979
0.1031	0.5980	19.5735	1.5082
0.1071	0.6438	23.5541	1.6218
0.3892	0.6981	35.0828	1.9135

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	85.330	5.536	12.50
OUTFLOW: ID= 1 (0036)	85.330	5.451	12.60
			65.78
			65.44

PEAK FLOW REDUCTION [Qout/Qin](%)= 98.46
TIME SHIFT OF PEAK FLOW (min)= 6.00
MAXIMUM STORAGE USED (ha.m.)= 0.9881

| CALIB |
| NASHYD (0253) |
ID= 1 DT= 1.0 min
U.H. Tp(hrs)= 0.11

Area (ha)= 1.51
Ia (mm)= 5.00
Curve Number (CN)= 75.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	mm/hr	
0.017	1.03	6.017	2.06	12.017	14.93	18.02	1.86		
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86		
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86		
0.083	1.03	6.083	2.06	12.083	14.86	18.08	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.117	1.03	6.117	2.06	12.117	14.86	18.12	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.183	1.03	6.183	2.06	12.183	14.86	18.18	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.217	1.03	6.217	2.06	12.217	14.86	18.22	1.86		
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.283	1.03	6.283	2.06	12.283	14.86	18.28	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.317	1.03	6.317	2.06	12.317	14.86	18.32	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86		
0.383	1.03	6.383	2.06	12.383	14.86	18.38	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86		
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.483	1.03	6.483	2.06	12.483	14.86	18.48	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.517	1.03	6.517	2.06	12.517	7.64	18.52	1.86		
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.617	1.03	6.617	2.06	12.617	7.64	18.62	1.86		
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.683	1.03	6.683	2.06	12.683	7.64	18.68	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.717	1.03	6.717	2.06	12.717	7.64	18.72	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86		
0.783	1.03	6.783	2.06	12.783	7.64	18.78	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.817	1.03	6.817	2.06	12.817	7.64	18.82	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.883	1.03	6.883	2.06	12.883	7.64	18.88	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86		
0.983	1.03	6.983	2.06	12.983	7.64	18.98	1.86		

HRP8-PR_2-100 YEAR.OUT									
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.017	1.03	7.017	2.06	13.017	1.45	19.02	1.86		
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86		
1.083	1.03	7.083	2.06	13.083	1.44	19.08	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.117	1.03	7.117	2.06	13.117	1.44	19.12	1.86		
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.183	1.03	7.183	2.06	13.183	1.44	19.18	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.217	1.03	7.217	2.06	13.217	1.44	19.22	1.86		
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86		
1.283	1.03	7.283	2.06	13.283	1.44	19.28	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.317	1.03	7.317	2.06	13.317	1.44	19.32	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86		
1.383	1.03	7.383	2.06	13.383	1.44	19.38	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86		
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86		
1.483	1.03	7.483	2.06	13.483	1.44	19.48	1.86		
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86		
1.517	1.03	7.517	2.06	13.517	8.45	19.52	1.86		
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86		
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.617	1.03	7.617	2.06	13.617	8.46	19.62	1.86		
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.683	1.03	7.683	2.06	13.683	8.46	19.68	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.717	1.03	7.717	2.06	13.717	8.46	19.72	1.86		
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.767	1.06	7.767	2.06	13.767	8.46	19.77	1.86		
1.783	1.06	7.783	2.06	13.783	8.46	19.78	1.86		
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86		
1.817	1.06	7.817	2.06	13.817	8.46	19.82	1.86		
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86		
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86		
1.867	1.06	7.867	2.06	13.867	8.46	19.87	1.86		
1.883	1.06	7.883	2.06	13.883	8.46	19.88	1.86		
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86		
1.917	1.06	7.917	2.06	13.917	8.46	19.92	1.86		
1.933	1.06	7.933	2.06	13.933	8.46	19.93	1.86		
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86		
1.967	1.06	7.967	2.06	13.967	8.46	19.97	1.86		
1.983	1.06	7.983	2.06	13.983	8.46	19.98	1.86		
2.000	1.06	8.000	2.07	14.000	8.46	20.00	1.86		
2.017	1.34	8.017	2.79	14.017	3.11	20.02	1.24		
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24		
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.117	1.34	8.117	2.79	14.117	3.10	20.12	1.24		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.183	1.34	8.183	2.79	14.183	3.10	20.18	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.217	1.34	8.217	2.79	14.217	3.10	20.22	1.24		
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		
2.283	1.34	8.283	2.79	14.283	3.10	20.28	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.317	1.34	8.317	2.79	14.317	3.10	20.32	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24		
2.383	1.34	8.383	2.79	14.383	3.10	20.38	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24		
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24		

HRP8-PR_2-100 YEAR.OUT									
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24		
2.483	1.34	8.483	2.79	14.483	3.10	20.48	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.517	1.34	8.517	2.79	14.517	3.10	20.52	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24		
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.617	1.34	8.617	2.79	14.617	3.10	20.62	1.24		
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.683	1.34	8.683	2.79	14.683	3.10	20.68	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.717	1.34	8.717	2.79	14.717	3.10	20.72	1.24		
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24		
2.783	1.34	8.783	2.79	14.783	3.10	20.78	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.817	1.34	8.817	2.79	14.817	3.10	20.82	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.883	1.34	8.883	2.79	14.883	3.10	20.88	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24		
2.983	1.34	8.983	2.79	14.983	3.10	20.98	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.017	1.34	9.017	3.30	15.017	3.10	21.02	1.24		
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.117	1.34	9.117	3.30	15.117	3.10	21.12	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.183	1.34	9.183	3.30	15.183	3.10	21.18	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.217	1.34	9.217	3.30	15.217	3.10	21.22	1.24		
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.283	1.34	9.283	3.30	15.283	3.10	21.28	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.317	1.34	9.317	3.30	15.317	3.10	21.32	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.383	1.34	9.383	3.30	15.383	3.10	21.38	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.483	1.34	9.483	3.30	15.483	3.10	21.48	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.517	1.34	9.517	3.72	15.517	3.10	21.52	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.617	1.34	9.617	3.72	15.617	3.10	21.62	1.24		
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.683	1.34	9.683	3.72	15.683	3.10	21.68	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.717	1.34	9.717	3.72	15.717	3.10	21.72	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.783	1.34	9.783	3.72	15.783	3.10	21.78	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.817	1.34	9.817	3.72	15.817	3.10	21.82	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.883	1.34	9.883	3.72	15.883	3.10	21.88	1.24		

HRP8-PR_2-100 YEAR.OUT									
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
3.983	1.34	9.983	3.72	15.983	3.10	21.98	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.017	1.65	10.017	4.75	16.017	1.86	22.02	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.117	1.65	10.117	4.75	16.117	1.86	22.12	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.183	1.65	10.183	4.75	16.183	1.86	22.18	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.217	1.65	10.217	4.75	16.217	1.86	22.22	1.24		
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.283	1.65	10.283	4.75	16.283	1.86	22.28	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.317	1.65	10.317	4.75	16.317	1.86	22.32	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24		
4.383	1.65	10.383	4.75	16.383	1.86	22.38	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24		
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24		
4.483	1.65	10.483	4.75	16.483	1.86	22.48	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.517	1.65	10.517	6.40	16.517	1.86	22.52	1.24		
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24		
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.617	1.65	10.617	6.40	16.617	1.86	22.62	1.24		
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.683	1.65	10.683	6.40	16.683	1.86	22.68	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.717	1.65	10.717	6.40	16.717	1.86	22.72	1.24		
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24		
4.783	1.65	10.783	6.40	16.783	1.86	22.78	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.817	1.65	10.817	6.40	16.817	1.86	22.82	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24		
4.883	1.65	10.883	6.40	16.883	1.86	22.88	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.917	1.65	10.917	9.91	17.917	1.86	22.92	1.24		
4.933	1.65	10.933	9.91	17.933	1.86	22.93	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24		
4.983	1.65	10.983	6.40	16.983	1.86	22.98	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.017	1.65	11.017	9.91	17.017	1.86	23.02	1.24		
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24		
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.117	1.65	11.117	9.91	17.117	1.86	23.12	1.24		
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.183	1.65	11.183	9.91	17.183	1.86	23.18	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.217	1.65	11.217	9.91	17.217	1.86	23.22	1.24		
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.283	1.65	11.283	9.91	17.283	1.86	23.28	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.317	1.65	11.317	9.91	17.317	1.86	23.32	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		

HRP8-PR_2-100 YEAR.OUT									
5.350	1.65	[11.350	9.91	[17.350	1.86		23.35	1.24	
5.367	1.65	[11.367	9.91	[17.367	1.86		23.37	1.24	
5.383	1.65	[11.383	9.91	[17.383	1.86		23.38	1.24	
5.400	1.65	[11.400	9.91	[17.400	1.86		23.40	1.24	
5.417	1.65	[11.417	9.91	[17.417	1.86		23.42	1.24	
5.433	1.65	[11.433	9.91	[17.433	1.86		23.43	1.24	
5.450	1.65	[11.450	9.91	[17.450	1.86		23.45	1.24	
5.467	1.65	[11.467	9.91	[17.467	1.86		23.47	1.24	
5.483	1.65	[11.483	9.91	[17.483	1.86		23.48	1.24	
5.500	1.65	[11.500	9.91	[17.500	1.86		23.50	1.24	
5.517	1.65	[11.517	42.92	[17.517	1.86		23.52	1.24	
5.533	1.65	[11.533	42.93	[17.533	1.86		23.53	1.24	
5.550	1.65	[11.550	42.93	[17.550	1.86		23.55	1.24	
5.567	1.65	[11.567	42.93	[17.567	1.86		23.57	1.24	
5.583	1.65	[11.583	42.93	[17.583	1.86		23.58	1.24	
5.600	1.65	[11.600	42.93	[17.600	1.86		23.60	1.24	
5.617	1.65	[11.617	42.93	[17.617	1.86		23.62	1.24	
5.633	1.65	[11.633	42.93	[17.633	1.86		23.63	1.24	
5.650	1.65	[11.650	42.93	[17.650	1.86		23.65	1.24	
5.667	1.65	[11.667	42.93	[17.667	1.86		23.67	1.24	
5.683	1.65	[11.683	42.93	[17.683	1.86		23.68	1.24	
5.700	1.65	[11.700	42.93	[17.700	1.86		23.70	1.24	
5.717	1.65	[11.717	42.93	[17.717	1.86		23.72	1.24	
5.733	1.65	[11.733	42.93	[17.733	1.86		23.73	1.24	
5.750	1.65	[11.750	42.93	[17.750	1.86		23.75	1.24	
5.767	1.65	[11.767	113.90	[17.767	1.86		23.77	1.24	
5.783	1.65	[11.783	113.93	[17.783	1.86		23.78	1.24	
5.800	1.65	[11.800	113.93	[17.800	1.86		23.80	1.24	
5.817	1.65	[11.817	113.93	[17.817	1.86		23.82	1.24	
5.833	1.65	[11.833	113.93	[17.833	1.86		23.83	1.24	
5.850	1.65	[11.850	113.93	[17.850	1.86		23.85	1.24	
5.867	1.65	[11.867	113.93	[17.867	1.86		23.87	1.24	
5.883	1.65	[11.883	113.93	[17.883	1.86		23.88	1.24	
5.900	1.65	[11.900	113.93	[17.900	1.86		23.90	1.24	
5.917	1.65	[11.917	113.93	[17.917	1.86		23.92	1.24	
5.933	1.65	[11.933	113.93	[17.933	1.86		23.93	1.24	
5.950	1.65	[11.950	113.93	[17.950	1.86		23.95	1.24	
5.967	1.65	[11.967	113.93	[17.967	1.86		23.97	1.24	
5.983	1.65	[11.983	113.93	[17.983	1.86		23.98	1.24	
6.000	1.65	[12.000	113.93	[18.000	1.86		24.00	1.24	

Unit Hyd Qpeak (cms)= 0.515

PEAK FLOW (cms)= 0.259 (i)
TIME TO PEAK (hrs)= 12.033
RUNOFF VOLUME (mm)= 43.672
TOTAL RAINFALL (mm)= 163.201
RUNOFF COEFFICIENT = 0.425

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)					
1	2	3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)
ID1= 1 (0253):			1.51	0.259	12.03
+ ID2= 2 (0036):			85.33	5.451	12.60
ID = 3 (0035):			86.84	5.489	12.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\vo1n.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\280cd5bf-e782-43d5-a006-59c5611544a1\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\280cd5bf-e782-43d5-a006-59c5611544a1\scenar

HRP8-PR_2-100 YEAR.OUT

DATE: 03/24/2023 TIME: 11:11:21

USER:

COMMENTS: _____

** SIMULATION : Run 05 **

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\73397f8f-c1c2-418c-b258-352fb19c09d1\95accb52
Ptotal=115.20 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07	
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07	
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07	
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07	
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07	
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07	
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07	
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07	
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38	
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38	
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38	
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38	
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38	
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38	
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38	
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38	
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38	
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38	
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38	
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38	
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38	
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38	
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38	
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07	
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07	
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07	
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07	
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07	
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07	
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07	
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07	
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07	
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07	
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07	
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07	
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07	
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07	
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07	
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07	
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07	
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07	
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07	
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07	
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07	
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07	

HRP8-PR_2-100 YEAR.OUT									
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07		
1.000	1.15	7.000	2.30	13.000	8.51	19.00	2.07		
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07		
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07		
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07		
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07		
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.767	1.61	7.767	2.30	13.767	9.45	19.77	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38		
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38		

HRP8-PR_2-100 YEAR.OUT									
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38		
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38		
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38		
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38		
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38		
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38		
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38		
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38		
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38		
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38		
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38		
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		

HRP8-PR_2-100 YEAR.OUT

Surface Area	(ha)=	2.01	2.36
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	170.68	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

HRP8-PR_2-100 YEAR.OUT

2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07
1.000	1.15	7.000	2.30	13.000	8.51	19.00	2.07
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07
1.767	1.61	7.767	2.30	13.767	9.45	19.77	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07
2.033	1.50	8.033	1.11	14.033	3.46	20.03	1.38
2.067	1.50	8.067	1.11	14.067	3.46	20.07	1.38
2.100	1.50	8.100	1.11	14.100	3.46	20.10	1.38
2.133	1.50	8.133	1.11	14.133	3.46	20.13	1.38
2.167	1.50	8.167	1.11	14.167	3.46	20.17	1.38
2.200	1.50	8.200	1.11	14.200	3.46	20.20	1.38
2.233	1.50	8.233	1.11	14.233	3.46	20.23	1.38
2.267	1.50	8.267	1.11	14.267	3.46	20.27	1.38
2.300	1.50	8.300	1.11	14.300	3.46	20.30	1.38
2.333	1.50	8.333	1.11	14.333	3.46	20.33	1.38
2.367	1.50	8.367	1.11	14.367	3.46	20.37	1.38
2.400	1.50	8.400	1.11	14.400	3.46	20.40	1.38
2.433	1.50	8.433	1.11	14.433	3.46	20.43	1.38

HRP8-PR_2-100 YEAR.OUT										
5.367	1.84	[11.367	11.06	[17.367	2.07	[23.37	1.38			
5.400	1.84	[11.400	11.06	[17.400	2.07	[23.40	1.38			
5.433	1.84	[11.433	11.06	[17.433	2.07	[23.43	1.38			
5.467	1.84	[11.467	11.06	[17.467	2.07	[23.47	1.38			
5.500	1.84	[11.500	11.10	[17.500	2.07	[23.50	1.38			
5.533	1.84	[11.533	47.92	[17.533	2.07	[23.53	1.38			
5.567	1.84	[11.567	47.92	[17.567	2.07	[23.57	1.38			
5.600	1.84	[11.600	47.92	[17.600	2.07	[23.60	1.38			
5.633	1.84	[11.633	47.92	[17.633	2.07	[23.63	1.38			
5.667	1.84	[11.667	47.92	[17.667	2.07	[23.67	1.38			
5.700	1.84	[11.700	47.92	[17.700	2.07	[23.70	1.38			
5.733	1.84	[11.733	47.92	[17.733	2.07	[23.73	1.38			
5.767	1.84	[11.767	87.66	[17.767	2.07	[23.77	1.38			
5.800	1.84	[11.800	127.18	[17.800	2.07	[23.80	1.38			
5.833	1.84	[11.833	127.18	[17.833	2.07	[23.83	1.38			
5.867	1.84	[11.867	127.18	[17.867	2.07	[23.87	1.38			
5.900	1.84	[11.900	127.18	[17.900	2.07	[23.90	1.38			
5.933	1.84	[11.933	127.18	[17.933	2.07	[23.93	1.38			
5.967	1.84	[11.967	127.18	[17.967	2.07	[23.97	1.38			
6.000	1.84	[12.000	127.03	[18.000	2.07	[24.00	1.38			

Max.Eff.Inten.(mm/hr)=	127.18	93.56
over (min)	5.00	10.00
Storage Coeff. (min)=	2.60 (ii)	9.43 (ii)
Unit Hyd. Tpeak (min)=	4.00	10.00
Unit Hyd. peak (cms)=	0.36	0.12
TOTALS		
PEAK FLOW (cms)=	0.71	0.46
TIME TO PEAK (hrs)=	12.00	12.03
RUNOFF VOLUME (mm)=	113.70	71.33
TOTAL RAINFALL (mm)=	115.20	115.20
RUNOFF COEFFICIENT =	0.99	0.70

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1050):	4.49	0.797	12.07	95.26
+ ID2= 2 (0250):	4.37	1.144	12.00	90.82
=====				
ID = 3 (0018):	8.86	1.882	12.00	77.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)	
IN= 2--> OUT= 1	

Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.630E+02	0.0	0.33	59.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96

HRP8-PR_2-100 YEAR.OUT					
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

<---- hydrograph ---->					
AREA		QPEAK		TPEAK	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0018)	8.86	1.88	12.00	77.87	0.52
OUTFLOW: ID= 1 (0037)	8.86	1.28	12.10	77.83	0.44

CALIB		Area (ha)=	50.34	Curve Number (CN)=	82.0
NASHYD (1051)		Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 8.0 min		U.H. Tp(hrs)=	0.63		

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07		
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.533	1.15	6.533	2.30	12.533	14.57	18.53	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
1.067	1.15	7.067	2.30	13.067	5.07	19.07	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.600	1.15	7.600	2.30	13.600	7.49	19.60	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.867	1.96	7.867	2.30	13.867	9.45	19.87	2.07		
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
3.067	1.50	9.067	3.40	15.067	3.46	21.07	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.600	1.50	9.600	4.03	15.600	3.46	21.60	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.533	1.84	10.533	5.76	16.533	2.07	22.53	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
5.067	1.84	11.067	9.10	17.067	2.07	23.07	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38		
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38		
5.600	1.84	11.600	38.71	17.600	2.07	23.60	1.38		
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38		
5.867	1.84	11.867	117.27	17.867	2.07	23.87	1.38		
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38		

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)=	4.241 (i)
TIME TO PEAK (hrs)=	12.533
RUNOFF VOLUME (mm)=	73.166
TOTAL RAINFALL (mm)=	115.200
RUNOFF COEFFICIENT =	0.635

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)

HRP8-PR_2-100 YEAR.OUT
ID1= 1 (1051): 50.34 4.241 12.53 73.17
+ ID2= 2 (0037): 8.86 1.283 12.10 77.83
=====

ID = 3 (0029): 59.20 5.020 12.40 73.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0251):
ID= 1 DT= 3.0 min

Area (ha)= 10.65
Total Imp(%)= 37.00 Dir. Conn.(%)= 37.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.94 6.71
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 266.46 220.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.050 1.15 | 6.050 2.30 | 12.050 16.59 | 18.05 2.07
0.100 1.15 | 6.100 2.30 | 12.100 16.59 | 18.10 2.07
0.150 1.15 | 6.150 2.30 | 12.150 16.59 | 18.15 2.07
0.200 1.15 | 6.200 2.30 | 12.200 16.59 | 18.20 2.07
0.250 1.15 | 6.250 2.30 | 12.250 16.59 | 18.25 2.07
0.300 1.15 | 6.300 2.30 | 12.300 16.59 | 18.30 2.07
0.350 1.15 | 6.350 2.30 | 12.350 16.59 | 18.35 2.07
0.400 1.15 | 6.400 2.30 | 12.400 16.59 | 18.40 2.07
0.450 1.15 | 6.450 2.30 | 12.450 16.59 | 18.45 2.07
0.500 1.15 | 6.500 2.30 | 12.500 16.58 | 18.50 2.07
0.550 1.15 | 6.550 2.30 | 12.550 8.52 | 18.55 2.07
0.600 1.15 | 6.600 2.30 | 12.600 8.52 | 18.60 2.07
0.650 1.15 | 6.650 2.30 | 12.650 8.52 | 18.65 2.07
0.700 1.15 | 6.700 2.30 | 12.700 8.52 | 18.70 2.07
0.750 1.15 | 6.750 2.30 | 12.750 8.52 | 18.75 2.07
0.800 1.15 | 6.800 2.30 | 12.800 8.52 | 18.80 2.07
0.850 1.15 | 6.850 2.30 | 12.850 8.52 | 18.85 2.07
0.900 1.15 | 6.900 2.30 | 12.900 8.52 | 18.90 2.07
0.950 1.15 | 6.950 2.30 | 12.950 8.52 | 18.95 2.07
1.000 1.15 | 7.000 2.30 | 13.000 8.52 | 19.00 2.07
1.050 1.15 | 7.050 2.30 | 13.050 1.61 | 19.05 2.07
1.100 1.15 | 7.100 2.30 | 13.100 1.61 | 19.10 2.07
1.150 1.15 | 7.150 2.30 | 13.150 1.61 | 19.15 2.07
1.200 1.15 | 7.200 2.30 | 13.200 1.61 | 19.20 2.07
1.250 1.15 | 7.250 2.30 | 13.250 1.61 | 19.25 2.07
1.300 1.15 | 7.300 2.30 | 13.300 1.61 | 19.30 2.07
1.350 1.15 | 7.350 2.30 | 13.350 1.61 | 19.35 2.07
1.400 1.15 | 7.400 2.30 | 13.400 1.61 | 19.40 2.07
1.450 1.15 | 7.450 2.30 | 13.450 1.61 | 19.45 2.07
1.500 1.15 | 7.500 2.30 | 13.500 1.62 | 19.50 2.07
1.550 1.15 | 7.550 2.30 | 13.550 9.45 | 19.55 2.07
1.600 1.15 | 7.600 2.30 | 13.600 9.45 | 19.60 2.07
1.650 1.15 | 7.650 2.30 | 13.650 9.45 | 19.65 2.07
1.700 1.15 | 7.700 2.30 | 13.700 9.45 | 19.70 2.07
1.750 1.15 | 7.750 2.30 | 13.750 9.45 | 19.75 2.07
1.800 2.07 | 7.800 2.30 | 13.800 9.45 | 19.80 2.07
1.850 2.07 | 7.850 2.30 | 13.850 9.45 | 19.85 2.07
1.900 2.07 | 7.900 2.30 | 13.900 9.45 | 19.90 2.07
1.950 2.07 | 7.950 2.30 | 13.950 9.45 | 19.95 2.07
2.000 2.07 | 8.000 2.30 | 14.000 9.44 | 20.00 2.07
2.050 1.50 | 8.050 3.11 | 14.050 3.46 | 20.05 1.38
2.100 1.50 | 8.100 3.11 | 14.100 3.46 | 20.10 1.38
2.150 1.50 | 8.150 3.11 | 14.150 3.46 | 20.15 1.38
2.200 1.50 | 8.200 3.11 | 14.200 3.46 | 20.20 1.38
2.250 1.50 | 8.250 3.11 | 14.250 3.46 | 20.25 1.38
2.300 1.50 | 8.300 3.11 | 14.300 3.46 | 20.30 1.38
2.350 1.50 | 8.350 3.11 | 14.350 3.46 | 20.35 1.38
2.400 1.50 | 8.400 3.11 | 14.400 3.46 | 20.40 1.38
2.450 1.50 | 8.450 3.11 | 14.450 3.46 | 20.45 1.38
2.500 1.50 | 8.500 3.11 | 14.500 3.46 | 20.50 1.38
2.550 1.50 | 8.550 3.11 | 14.550 3.46 | 20.55 1.38
2.600 1.50 | 8.600 3.11 | 14.600 3.46 | 20.60 1.38
2.650 1.50 | 8.650 3.11 | 14.650 3.46 | 20.65 1.38
2.700 1.50 | 8.700 3.11 | 14.700 3.46 | 20.70 1.38
2.750 1.50 | 8.750 3.11 | 14.750 3.46 | 20.75 1.38
2.800 1.50 | 8.800 3.11 | 14.800 3.46 | 20.80 1.38
2.850 1.50 | 8.850 3.11 | 14.850 3.46 | 20.85 1.38
2.900 1.50 | 8.900 3.11 | 14.900 3.46 | 20.90 1.38
2.950 1.50 | 8.950 3.11 | 14.950 3.46 | 20.95 1.38
3.000 1.50 | 9.000 3.11 | 15.000 3.46 | 21.00 1.38
3.050 1.50 | 9.050 3.69 | 15.050 3.46 | 21.05 1.38
3.100 1.50 | 9.100 3.69 | 15.100 3.46 | 21.10 1.38

HRP8-PR_2-100 YEAR.OUT
3.150 1.50 | 9.150 3.69 | 15.150 3.46 | 21.15 1.38
3.200 1.50 | 9.200 3.69 | 15.200 3.46 | 21.20 1.38
3.250 1.50 | 9.250 3.69 | 15.250 3.46 | 21.25 1.38
3.300 1.50 | 9.300 3.69 | 15.300 3.46 | 21.30 1.38
3.350 1.50 | 9.350 3.69 | 15.350 3.46 | 21.35 1.38
3.400 1.50 | 9.400 3.69 | 15.400 3.46 | 21.40 1.38
3.450 1.50 | 9.450 3.69 | 15.450 3.46 | 21.45 1.38
3.500 1.50 | 9.500 3.69 | 15.500 3.46 | 21.50 1.38
3.550 1.50 | 9.550 4.15 | 15.550 3.46 | 21.55 1.38
3.600 1.50 | 9.600 4.15 | 15.600 3.46 | 21.60 1.38
3.650 1.50 | 9.650 4.15 | 15.650 3.46 | 21.65 1.38
3.700 1.50 | 9.700 4.15 | 15.700 3.46 | 21.70 1.38
3.750 1.50 | 9.750 4.15 | 15.750 3.46 | 21.75 1.38
3.800 1.50 | 9.800 4.15 | 15.800 3.46 | 21.80 1.38
3.850 1.50 | 9.850 4.15 | 15.850 3.46 | 21.85 1.38
3.900 1.50 | 9.900 4.15 | 15.900 3.46 | 21.90 1.38
3.950 1.50 | 9.950 4.15 | 15.950 3.46 | 21.95 1.38
4.000 1.50 | 10.000 4.15 | 16.000 3.45 | 22.00 1.38
4.050 1.84 | 10.050 5.30 | 16.050 2.07 | 22.05 1.38
4.100 1.84 | 10.100 5.30 | 16.100 2.07 | 22.10 1.38
4.150 1.84 | 10.150 5.30 | 16.150 2.07 | 22.15 1.38
4.200 1.84 | 10.200 5.30 | 16.200 2.07 | 22.20 1.38
4.250 1.84 | 10.250 5.30 | 16.250 2.07 | 22.25 1.38
4.300 1.84 | 10.300 5.30 | 16.300 2.07 | 22.30 1.38
4.350 1.84 | 10.350 5.30 | 16.350 2.07 | 22.35 1.38
4.400 1.84 | 10.400 5.30 | 16.400 2.07 | 22.40 1.38
4.450 1.84 | 10.450 5.30 | 16.450 2.07 | 22.45 1.38
4.500 1.84 | 10.500 5.30 | 16.500 2.07 | 22.50 1.38
4.550 1.84 | 10.550 7.14 | 16.550 2.07 | 22.55 1.38
4.600 1.84 | 10.600 7.14 | 16.600 2.07 | 22.60 1.38
4.650 1.84 | 10.650 7.14 | 16.650 2.07 | 22.65 1.38
4.700 1.84 | 10.700 7.14 | 16.700 2.07 | 22.70 1.38
4.750 1.84 | 10.750 7.14 | 16.750 2.07 | 22.75 1.38
4.800 1.84 | 10.800 7.14 | 16.800 2.07 | 22.80 1.38
4.850 1.84 | 10.850 7.14 | 16.850 2.07 | 22.85 1.38
4.900 1.84 | 10.900 7.14 | 16.900 2.07 | 22.90 1.38
4.950 1.84 | 10.950 7.14 | 16.950 2.07 | 22.95 1.38
5.000 1.84 | 11.000 7.14 | 17.000 2.07 | 23.00 1.38
5.050 1.84 | 11.050 11.06 | 17.050 2.07 | 23.05 1.38
5.100 1.84 | 11.100 11.06 | 17.100 2.07 | 23.10 1.38
5.150 1.84 | 11.150 11.06 | 17.150 2.07 | 23.15 1.38
5.200 1.84 | 11.200 11.06 | 17.200 2.07 | 23.20 1.38
5.250 1.84 | 11.250 11.06 | 17.250 2.07 | 23.25 1.38
5.300 1.84 | 11.300 11.06 | 17.300 2.07 | 23.30 1.38
5.350 1.84 | 11.350 11.06 | 17.350 2.07 | 23.35 1.38
5.400 1.84 | 11.400 11.06 | 17.400 2.07 | 23.40 1.38
5.450 1.84 | 11.450 11.06 | 17.450 2.07 | 23.45 1.38
5.500 1.84 | 11.500 11.08 | 17.500 2.07 | 23.50 1.38
5.550 1.84 | 11.550 47.92 | 17.550 2.07 | 23.55 1.38
5.600 1.84 | 11.600 47.92 | 17.600 2.07 | 23.60 1.38
5.650 1.84 | 11.650 47.92 | 17.650 2.07 | 23.65 1.38
5.700 1.84 | 11.700 47.92 | 17.700 2.07 | 23.70 1.38
5.750 1.84 | 11.750 47.97 | 17.750 2.07 | 23.75 1.38
5.800 1.84 | 11.800 127.18 | 17.800 2.07 | 23.80 1.38
5.850 1.84 | 11.850 127.18 | 17.850 2.07 | 23.85 1.38
5.900 1.84 | 11.900 127.18 | 17.900 2.07 | 23.90 1.38
5.950 1.84 | 11.950 127.18 | 17.950 2.07 | 23.95 1.38
6.000 1.84 | 12.000 127.12 | 18.000 2.07 | 24.00 1.38

Max.Eff.Inten.(mm/hr)= 127.18 52.89
over (min) 6.00 30.00
Storage Coeff. (min)= 3.39 (ii) 28.72 (iii)
Unit Hyd. Tpeak (min)= 6.00 30.00
Unit Hyd. peak (cms)= 0.26 0.64

TOTALS
PEAK FLOW (cms)= 1.37 0.58 1.671 (iii)
TIME TO PEAK (hrs)= 12.00 12.35 12.00
RUNOFF VOLUME (mm)= 113.70 60.84 80.40
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53 0.70

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

[ADD HYD (0031)]
1 + 2 = 3
ID1= 1 (0251): 10.65 1.671 12.00 80.40
+ ID2= 2 (0029): 59.20 5.020 12.40 73.86

HRP8-PR_2-100 YEAR.OUT

ID = 3 (0031): 69.85 5.781 12.40 74.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0039)			Routing time step (min)'= 2.00	
<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 /0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 /0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.998E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ---->						<-pipe / channel->	
						MAX DEPTH	MAX VEL
						(m)	(m/s)
INFLOW : ID= 2 (0031)	69.85	5.78	12.40	74.86	0.99		
OUTFLOW: ID= 1 (0039)	69.85	5.63	12.50	74.85	1.00	1.04	

CALIB			
STANDHYD (0252)			
ID= 1 DT= 5.0 min		Area (ha)= 15.48	Total Imp(%)= 45.00
		Dir. Conn.(%)= 45.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)= 6.97	8.51	
Dep. Storage	(mm)= 1.50	1.50	
Average Slope	(%)= 2.00	2.00	
Length	(m)= 321.25	100.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	1.15	6.083	2.30	12.083	16.00	18.00	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07

HRP8-PR_2-100 YEAR.OUT							
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)=	127.18	71.43
over (min)	5.00	20.00
Storage Coeff. (min)=	3.80 (ii)	17.79 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.25	0.06

PEAK FLOW	(cms)= 2.43	0.92	*TOTALS*
TIME TO PEAK	(hrs)= 12.00	12.17	12.00
RUNOFF VOLUME	(mm)= 113.70	56.75	82.37
TOTAL RAINFALL	(mm)= 115.20	115.20	115.20
RUNOFF COEFFICIENT	= 0.99	0.49	0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 ha = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)				
1 + 2 = 3				
ID1= 1 (0252):	15.48	3.104	12.00	82.37
+ ID2= 2 (0039):	69.85	5.627	12.50	74.85
=====				
ID = 3 (0033):	85.33	6.683	12.00	76.23

HRP8-PR_2-100 YEAR.OUT

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)			
IN= 2--> OUT= 1			
Routing time step (min)'= 2.00			
<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 /0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 /0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.340E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.110E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.290E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53
0.72	100.72	.655E+03	2.1	0.90	5.32
0.78	100.78	.743E+03	2.4	0.93	5.14
0.83	100.83	.836E+03	2.8	0.96	4.98
0.89	100.89	.934E+03	3.2	0.99	4.84
0.94	100.94	.104E+04	3.7	1.01	4.72
1.00	101.00	.115E+04	4.1	1.04	4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0033)	85.33	6.08	12.00	76.23	0.99
OUTFLOW: ID= 1 (0040)	85.33	6.49	12.47	76.23	1.00

RESERVOIR(0036)			
IN= 2--> OUT= 1			
DT= 4.0 min			
OVERFLOW IS OFF			
OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	1.5621	0.7845
0.0206	0.1029	3.2275	0.8811
0.0461	0.1764	5.2638	0.9799
0.0618	0.2539	7.6097	1.0811
0.0743	0.3353	10.2263	1.1844
0.0850	0.4205	13.0858	1.2900
0.0945	0.5081	16.1669	1.3979
0.1031	0.5980	19.5735	1.5082
0.1071	0.6438	23.5541	1.6210
0.3892	0.6901	35.0828	1.9135
AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	85.330	6.493	12.47
OUTFLOW: ID= 1 (0036)	85.330	6.408	12.57
PEAK FLOW REDUCTION [Qout/Qin](%)= 98.70			
TIME SHIFT OF PEAK FLOW (min)= 6.00			
MAXIMUM STORAGE USED (ha.m.)= 1.0294			

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---					
TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.017	1.15	6.017	2.30	12.017	16.66	18.02	2.07	
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07	
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07	
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07	
0.083	1.15	6.083	2.30	12.083	16.59	18.08	2.07	
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07	
0.117	1.15	6.117	2.30	12.117	16.59	18.12	2.07	
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07	
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07	
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07	
0.183	1.15	6.183	2.30	12.183	16.59	18.18	2.07	
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07	
0.217	1.15	6.217	2.30	12.217	16.59	18.22	2.07	
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07	
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07	
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07	
0.283	1.15	6.283	2.30	12.283	16.59	18.28	2.07	
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07	
0.317	1.15	6.317	2.30	12.317	16.59	18.32	2.07	
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07	
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07	
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07	
0.383	1.15	6.383	2.30	12.383	16.59	18.38	2.07	
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07	
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07	
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07	
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07	
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07	
0.483	1.15	6.483	2.30	12.483	16.59	18.48	2.07	
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07	
0.517	1.15	6.517	2.30	12.517	8.53	18.52	2.07	
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07	
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07	
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07	
0.583	1.15	6.583	2.30	12.583	8.52	18.58	2.07	
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07	
0.617	1.15	6.617	2.30	12.617	8.52	18.62	2.07	
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07	
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07	
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07	
0.683	1.15	6.683	2.30	12.683	8.52	18.68	2.07	
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07	
0.717	1.15	6.717	2.30	12.717	8.52	18.72	2.07	
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07	
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07	
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07	
0.783	1.15	6.783	2.30	12.783	8.52	18.78	2.07	
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07	
0.817	1.15	6.817	2.30	12.817	8.52	18.82	2.07	
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07	
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07	
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07	
0.883	1.15	6.883	2.30	12.883	8.52	18.88	2.07	
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07	
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07	
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07	
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07	
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07	
0.983	1.15	6.983	2.30	12.983	8.52	18.98	2.07	
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07	
1.017	1.15	7.017	2.30	13.017	1.62	19.02	2.07	
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07	
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07	
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07	
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07	
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07	
1.117	1.15	7.117	2.30	13.117	1.61	19.12	2.07	
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07	
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07	
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07	
1.183	1.15	7.183	2.30	13.183	1.61	19.18	2.07	
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07	
1.217	1.15	7.217	2.30	13.217	1.61	19.22	2.07	
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07	
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07	
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07	
1.283	1.15	7.283	2.30	13.283	1.61	19.28	2.07	
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07	
1.317	1.15	7.317	2.30	13.317	1.61	19.32	2.07	
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07	
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07	
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07	
1.383	1.15	7.383	2.30	13.383	1.61	19.38	2.07	
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07	
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07	
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07	

HRP8-PR_2-100 YEAR.OUT									
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.483	1.15	7.483	2.30	13.483	1.61	19.48	2.07		
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07		
1.517	1.15	7.517	2.30	13.517	9.43	19.52	2.07		
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07		
1.583	1.15	7.583	2.30	13.583	9.45	19.58	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.617	1.15	7.617	2.30	13.617	9.45	19.62	2.07		
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.683	1.15	7.683	2.30	13.683	9.45	19.68	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.717	1.15	7.717	2.30	13.717	9.45	19.72	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.767	2.07	7.767	2.30	13.767	9.45	19.77	2.07		
1.783	2.07	7.783	2.30	13.783	9.45	19.78	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.817	2.07	7.817	2.30	13.817	9.45	19.82	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.883	2.07	7.883	2.30	13.883	9.45	19.88	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
1.983	2.07	7.983	2.30	13.983	9.45	19.98	2.07		
2.000	2.07	8.000	2.31	14.000	9.45	20.00	2.07		
2.017	1.50	8.017	3.11	14.017	3.47	20.02	1.39		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.117	1.50	8.117	3.11	14.117	3.46	20.12	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.183	1.50	8.183	3.11	14.183	3.46	20.18	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.217	1.50	8.217	3.11	14.217	3.46	20.22	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.283	1.50	8.283	3.11	14.283	3.46	20.28	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.317	1.50	8.317	3.11	14.317	3.46	20.32	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.383	1.50	8.383	3.11	14.383	3.46	20.38	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.483	1.50	8.483	3.11	14.483	3.46	20.48	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.517	1.50	8.517	3.11	14.517	3.46	20.52	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.617	1.50	8.617	3.11	14.617	3.46	20.62	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.683	1.50	8.683	3.11	14.683	3.46	20.68	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.717	1.50	8.717	3.11	14.717	3.46	20.72	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.783	1.50	8.783	3.11	14.783	3.46	20.78	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.817	1.50	8.817	3.11	14.817	3.46	20.82	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.883	1.50	8.883	3.11	14.883	3.46	20.88	1.38		

HRP8-PR_2-100 YEAR.OUT							
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38
2.983	1.50	8.983	3.11	14.983	3.46	20.98	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.017	1.50	9.017	3.69	15.017	3.46	21.02	1.38
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.117	1.50	9.117	3.69	15.117	3.46	21.12	1.38
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.183	1.50	9.183	3.69	15.183	3.46	21.18	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.217	1.50	9.217	3.69	15.217	3.46	21.22	1.38
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38
3.283	1.50	9.283	3.69	15.283	3.46	21.28	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.317	1.50	9.317	3.69	15.317	3.46	21.32	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38
3.383	1.50	9.383	3.69	15.383	3.46	21.38	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.483	1.50	9.483	3.69	15.483	3.46	21.48	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.517	1.50	9.517	4.15	15.517	3.46	21.52	1.38
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.617	1.50	9.617	4.15	15.617	3.46	21.62	1.38
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.683	1.50	9.683	4.15	15.683	3.46	21.68	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.717	1.50	9.717	4.15	15.717	3.46	21.72	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38
3.783	1.50	9.783	4.15	15.783	3.46	21.78	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.817	1.50	9.817	4.15	15.817	3.46	21.82	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.883	1.50	9.883	4.15	15.883	3.46	21.88	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38
3.983	1.50	9.983	4.15	15.983	3.46	21.98	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.017	1.84	10.017	5.30	16.017	2.67	22.02	1.38
4.033	1.84	10.033	5.30	16.033	2.67	22.03	1.38
4.050	1.84	10.050	5.30	16.050	2.67	22.05	1.38
4.067	1.84	10.067	5.30	16.067	2.67	22.07	1.38
4.083	1.84	10.083	5.30	16.083	2.67	22.08	1.38
4.100	1.84	10.100	5.30	16.100	2.67	22.10	1.38
4.117	1.84	10.117	5.30	16.117	2.67	22.12	1.38
4.133	1.84	10.133	5.30	16.133	2.67	22.13	1.38
4.150	1.84	10.150	5.30	16.150	2.67	22.15	1.38
4.167	1.84	10.167	5.30	16.167	2.67	22.17	1.38
4.183	1.84	10.183	5.30	16.183	2.67	22.18	1.38
4.200	1.84	10.200	5.30	16.200	2.67	22.20	1.38
4.217	1.84	10.217	5.30	16.217	2.67	22.22	1.38
4.233	1.84	10.233	5.30	16.233	2.67	22.23	1.38
4.250	1.84	10.250	5.30	16.250	2.67	22.25	1.38
4.267	1.84	10.267	5.30	16.267	2.67	22.27	1.38
4.283	1.84	10.283	5.30	16.283	2.67	22.28	1.38
4.300	1.84	10.300	5.30	16.300	2.67	22.30	1.38
4.317	1.84	10.317	5.30	16.317	2.67	22.32	1.38
4.333	1.84	10.333	5.30	16.333	2.67	22.33	1.38

HRP8-PR, 2-100 YEAR, OUT						
5.890	1.84	11.890	127.18	17.890	2.67	23.80 1.38
5.817	1.84	11.817	127.18	17.817	2.67	23.82 1.38
5.833	1.84	11.833	127.18	17.833	2.67	23.83 1.38
5.850	1.84	11.850	127.18	17.850	2.67	23.85 1.38
5.867	1.84	11.867	127.18	17.867	2.67	23.87 1.38
5.883	1.84	11.883	127.18	17.883	2.67	23.88 1.38
5.900	1.84	11.900	127.18	17.900	2.67	23.90 1.38
5.917	1.84	11.917	127.18	17.917	2.67	23.92 1.38
5.933	1.84	11.933	127.18	17.933	2.67	23.93 1.38
5.950	1.84	11.950	127.18	17.950	2.67	23.95 1.38
5.967	1.84	11.967	127.18	17.967	2.67	23.97 1.38
5.983	1.84	11.983	127.18	17.983	2.67	23.98 1.38
6.000	1.84	12.000	127.18	18.000	2.67	24.00 1.38

PEAK FLOW	(cms)=	0.305 (i)
TIME TO PEAK	(hrs)=	12.017
RUNOFF VOLUME	(mm)=	52.086
TOTAL RAINFALL	(mm)=	115.201
RUNOFF COEFFICIENT	=	0.452

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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***** DETAILED OUTPUT *****

DATE: 03/24/2023 TIME: 11:11:22

USER:

COMMENTS: _____

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** SIMULATION : Run 06                               **
*****

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MASS STORM	Filename: C:\Users\AbirA\AppData Local\Temp\7397f8f-c1c2-418c-b258-352fb19c99d1\2985551a
Total=127.20 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

HRP8-PR_2-100 YEAR.OUT											
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29				
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29				
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29				
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29				
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29				
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29				
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29				
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29				
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53				
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53				
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53				
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53				
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53				
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53				
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53				
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53				
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53				
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53				
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53				
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53				
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53				
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53				
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53				
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53				

CALIB
NASHYD (1050)
[ID= 1 DT= 2.0 min]

Area (ha)= 4.49
Curve Number (CN)= 77.0
U.H. Tp(hrs)= 0.17
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29				
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29				
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29				
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29				
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29				
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29				
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29				
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29				
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29				
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29				
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29				
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29				
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29				
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29				
0.500	1.27	6.500	2.54	12.500	18.30	18.50	2.29				
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29				
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29				
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29				
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29				
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29				
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29				
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29				
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29				
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29				
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29				
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29				
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29				
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29				
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29				
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29				
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29				
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29				
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29				
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29				
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29				
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29				
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29				
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29				
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29				
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29				
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29				
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29				
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29				
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29				
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29				
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29				
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29				
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29				
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29				

HRP8-PR_2-100 YEAR.OUT											
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29				
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29				
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29				
1.767	1.78	7.767	2.54	13.767	10.43	19.77	2.29				
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29				
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29				
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29				
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29				
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29				
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29				
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29				
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53				
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53				
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53				
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53				
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53				
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53				
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53				
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53				
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53				
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53				
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53				
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53				
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53				
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53				
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53				
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53				
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53				
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53				
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53				
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53				
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53				
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53				
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53				
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53				
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53				
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53				
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53				
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53				
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53				
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53				
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53				
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53				
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53				
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53				
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53				
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53				
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53				
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53				
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53				
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53				
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53				
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53				
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53				
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53				
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53				
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53				
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53				
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53				
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53				
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53				
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53				
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53				
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53				
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53				
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53				
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53				
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53				
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53				
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53				
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53				
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53				
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53				
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53				
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53				
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53				
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53				
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53				
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53				
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53				
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53				
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53				
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53				
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53				
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53				
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53				
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53				

HRP8-PR_2-100 YEAR.OUT

4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.921 (1)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 75.383
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.593

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0250)	Area (ha)= 4.37
ID= 1 DT= 2.0 min	Total Imp(%)= 46.00 Dir. Conn.(%)= 46.00

Surface Area	(ha)=	IMPERVIOUS	PERVIOUS (1)
Dep. Storage	(mm)=	2.01	2.36
Average Slope	(%)=	1.50	1.50
Length	(m)=	2.00	2.00
Mannings n	=	170.68	40.00
		0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29

HRP8-PR_2-100 YEAR.OUT

0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29
0.500	1.27	6.500	2.54	12.500	18.30	18.50	2.29
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.767	1.78	7.767	2.54	13.767	10.43	19.77	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53

HRP8-PR_2-100 YEAR.OUT									
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53		
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53		
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53		
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53		
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53		
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53		
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53		
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53		
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53		
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53		
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53		
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53		
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53		
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53		
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53		
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53		
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53		
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53		
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53		
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53		
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53		
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53		
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53		
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53		
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53		
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53		
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53		
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53		
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53		
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53		
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53		
TOTALS									

Max.Eff.Inten.(mm/hr)= 140.43 106.86
over (min) 5.00 10.00
Storage Coeff. (min)= 2.50 (ii) 9.07 (ii)
Unit Hyd. Tpeak (min)= 4.00 10.00
Unit Hyd. peak (cms)= 0.37 0.12

HRP8-PR_2-100 YEAR.OUT			
PEAK FLOW (cms)=	0.78	0.53	1.290 (iii)
TIME TO PEAK (hrs)=	12.00	12.03	12.00
RUNOFF VOLUME (mm)=	125.70	81.77	101.98
TOTAL RAINFALL (mm)=	127.20	127.20	127.20
RUNOFF COEFFICIENT =	0.99	0.64	0.80

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1050):	4.49	0.921	12.07	75.38
+ ID2= 2 (0250):	4.37	1.290	12.00	101.98
=====				
ID = 3 (0018):	8.86	2.145	12.00	88.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)					
IN= 2----> OUT= 1	Routing time step (min)'= 2.00				
<----- DATA FOR SECTION (1.1) ----->					
Distance	Elevation	Manning			
0.00	101.00	0.0500			
1.00	100.67	0.0500			
2.00	100.33	0.0500 / 0.0300	Main Channel		
3.00	100.00	0.0300	Main Channel		
4.00	100.00	0.0300	Main Channel		
5.00	100.33	0.0300 / 0.0500	Main Channel		
6.00	100.67	0.0500			
7.00	101.00	0.0500			
<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV TIME
(m)	(m)	(cu. m.)	(cms)	(m/s)	(min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

	<---- hydrograph ---->				<-pipe / channel-->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0018)	8.86	2.15	12.00	88.50	0.55	1.46
OUTFLOW: ID= 1 (0037)	8.86	1.48	12.10	88.46	0.47	1.31

CALIB				
NASHYD (1051)	Area (ha)=	Curve Number (CN)=		
ID= 1 DT= 8.0 min	Ia (mm)=	# of Linear Res.(N)=		
	U.H. Tp(hrs)=	0.63		

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29		
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29		

HRP8-PR_2-100 YEAR.OUT

0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.533	1.27	6.533	2.54	12.533	16.09	18.53	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29
1.067	1.27	7.067	2.54	13.067	5.60	19.07	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29
1.600	1.27	7.600	2.54	13.600	8.27	19.60	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.867	2.16	7.867	2.54	13.867	10.43	19.87	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
3.067	1.65	9.067	3.75	15.067	3.82	21.07	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53
3.600	1.65	9.600	4.45	15.600	3.82	21.60	1.53
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.533	2.04	10.533	6.36	16.533	2.29	22.53	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
5.067	2.04	11.067	10.05	17.067	2.29	23.07	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.600	2.04	11.600	42.74	17.600	2.29	23.60	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.867	2.04	11.867	129.49	17.867	2.29	23.87	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 4.864 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 83.982
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.660

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP8-PR_2-100 YEAR.OUT

0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29

HRP8-PR_2-100 YEAR.OUT

4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 65.89
over (min) 6.00 27.00
Storage Coeff. (min)= 3.26 (ii) 26.45 (ii)
Unit Hyd. Tpeak (min)= 6.00 27.00
Unit Hyd. peak (cms)= 0.26 0.04

TOTALS
PEAK FLOW (cms)= 1.52 0.71 1.920 (iii)
TIME TO PEAK (hrs)= 12.00 12.30 12.00
RUNOFF VOLUME (mm)= 125.70 70.38 90.85
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.55 0.71

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0251):	10.65	1.920	12.00	90.85
+ ID2= 2 (0029):	59.20	5.754	12.40	84.58
ID = 3 (0031):	69.85	6.641	12.40	85.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0039)
IN= 2--> OUT= 1 Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.998E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.208E+03	0.2	0.44	18.63

HRP8-PR_2-100 YEAR.OUT

0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.518E+03	0.7	0.68	12.15
0.50	100.50	.656E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.178E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m) (m/s)
INFLOW : ID= 2 (0031)	69.85	6.64	12.40	85.54	0.99 1.03
OUTFLOW: ID= 1 (0039)	69.85	6.48	12.47	85.53	1.00 1.04

CALIB				
STANDHYD (0252)				
ID= 1 DT= 5.0 min	Area	(ha)= 15.48		
	Total Imp(%)= 45.00	Dir. Conn.(%)= 45.00		
IMPERVIOUS				
PERVIOUS (i)				
Surface Area	(ha)= 6.97	8.51		
Dep. Storage	(mm)= 1.50	1.50		
Average Slope	(%)= 2.00	2.00		
Length	(m)= 321.25	100.00		
Mannings n	= 0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		

HRP8-PR_2-100 YEAR.OUT									
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53		
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53		
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53		
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53		
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53		
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53		
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53		
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53		

Max.Eff.Inten.(mm/hr)=	140.43	83.05
over (min)	5.00	20.00
Storage Coeff. (min)=	3.65 (ii)	16.82 (iii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.25	0.06
TOTALS		
PEAK FLOW (cms)=	2.69	1.10
TIME TO PEAK (hrs)=	12.00	12.17
RUNOFF VOLUME (mm)=	125.70	65.89
TOTAL RAINFALL (mm)=	127.20	127.20
RUNOFF COEFFICIENT =	0.99	0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0252):	15.48	3.498	12.00	92.80
+ ID2= 2 (0039):	69.85	6.476	12.47	85.53
=====				
ID = 3 (0033):	85.33	7.616	12.00	86.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)				
IN= 2----> OUT= 1				
Routing time step (min)'= 2.00				
<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.155E+02	0.0	0.18	26.00
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01

HRP8-PR_2-100 YEAR.OUT						
0.39	100.39	.240E+03	0.5	0.61	7.82	
0.44	100.44	.296E+03	0.7	0.68	7.06	
0.50	100.50	.357E+03	0.9	0.73	6.52	
0.55	100.55	.424E+03	1.2	0.78	6.11	
0.61	100.61	.490E+03	1.4	0.83	5.79	
0.66	100.66	.573E+03	1.7	0.86	5.53	
0.72	100.72	.655E+03	2.1	0.90	5.32	
0.78	100.78	.743E+03	2.4	0.93	5.14	
0.83	100.83	.836E+03	2.8	0.96	4.98	
0.89	100.89	.934E+03	3.2	0.99	4.84	
0.94	100.94	.104E+04	3.7	1.01	4.72	
1.00	101.00	.115E+04	4.1	1.04	4.61	

**** WARNING: TRAVEL TIME TABLE EXCEEDED						
<---- hydrograph ----> <-pipe / channel-->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0033)	85.33	7.62	12.00	86.87	0.99	1.04
OUTFLOW: ID= 1 (0040)	85.33	7.49	12.47	86.86	1.00	1.04

RESERVOIR(0030)				
IN= 2----> OUT= 1				
DT= 4.0 min				
OVERFLOW IS OFF				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	1.5621	0.7845
	0.0206	0.1029	3.2275	0.8011
	0.0461	0.1764	5.2638	0.9799
	0.0618	0.2539	7.6097	1.0811
	0.0743	0.3353	10.2263	1.1844
	0.0850	0.4205	13.0858	1.2900
	0.0945	0.5081	16.1669	1.3979
	0.1031	0.5980	19.5735	1.5082
	0.1071	0.6438	23.5541	1.6210
	0.3892	0.6901	35.0828	1.9135

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	85.330	7.490	12.47	86.86
OUTFLOW: ID= 1 (0036)	85.330	7.394	12.57	86.51

PEAK FLOW REDUCTION [Qout/Qin](%)= 98.71
TIME SHIFT OF PEAK FLOW (min)= 6.00
MAXIMUM STORAGE USED (ha.m.)= 1.0719

CALIB				
NASHYD (0253)				
ID= 1 DT= 1.0 min				
	Area	(ha)=	1.51	Curve Number (CN)= 75.0
	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.11		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.017	1.27	6.017	2.54	12.017	18.40	18.02	2.29		
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29		
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29		
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29		
0.083	1.27	6.083	2.54	12.083	18.32	18.08	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.117	1.27	6.117	2.54	12.117	18.32	18.12	2.29		
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.183	1.27	6.183	2.54	12.183	18.32	18.18	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.217	1.27	6.217	2.54	12.217	18.32	18.22	2.29		
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29		
0.283	1.27	6.283	2.54	12.283	18.32	18.28	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.317	1.27	6.317	2.54	12.317	18.32	18.32	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29		
0.383	1.27	6.383	2.54	12.383	18.32	18.38	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29		

HRP8-PR_2-100 YEAR.OUT											
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29				
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29				
0.483	1.27	6.483	2.54	12.483	18.32	18.48	2.29				
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29				
0.517	1.27	6.517	2.54	12.517	9.42	18.52	2.29				
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29				
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29				
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29				
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29				
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29				
0.617	1.27	6.617	2.54	12.617	9.41	18.62	2.29				
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29				
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29				
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29				
0.683	1.27	6.683	2.54	12.683	9.41	18.68	2.29				
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29				
0.717	1.27	6.717	2.54	12.717	9.41	18.72	2.29				
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29				
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29				
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29				
0.783	1.27	6.783	2.54	12.783	9.41	18.78	2.29				
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29				
0.817	1.27	6.817	2.54	12.817	9.41	18.82	2.29				
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29				
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29				
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29				
0.883	1.27	6.883	2.54	12.883	9.41	18.88	2.29				
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29				
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29				
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29				
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29				
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29				
0.983	1.27	6.983	2.54	12.983	9.41	18.98	2.29				
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29				
1.017	1.27	7.017	2.54	13.017	1.79	19.02	2.29				
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29				
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29				
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29				
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29				
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29				
1.117	1.27	7.117	2.54	13.117	1.78	19.12	2.29				
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29				
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29				
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29				
1.183	1.27	7.183	2.54	13.183	1.78	19.18	2.29				
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29				
1.217	1.27	7.217	2.54	13.217	1.78	19.22	2.29				
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29				
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29				
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29				
1.283	1.27	7.283	2.54	13.283	1.78	19.28	2.29				
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29				
1.317	1.27	7.317	2.54	13.317	1.78	19.32	2.29				
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29				
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29				
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29				
1.383	1.27	7.383	2.54	13.383	1.78	19.38	2.29				
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29				
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29				
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29				
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29				
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29				
1.483	1.27	7.483	2.54	13.483	1.78	19.48	2.29				
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29				
1.517	1.27	7.517	2.54	13.517	18.41	19.52	2.29				
1.533	1.27	7.533	2.54	13.533	18.43	19.53	2.29				
1.550	1.27	7.550	2.54	13.550	18.43	19.55	2.29				
1.567	1.27	7.567	2.54	13.567	18.43	19.57	2.29				
1.583	1.27	7.583	2.54	13.583	18.43	19.58	2.29				
1.600	1.27	7.600	2.54	13.600	18.43	19.60	2.29				
1.617	1.27	7.617	2.54	13.617	18.43	19.62	2.29				
1.633	1.27	7.633	2.54	13.633	18.43	19.63	2.29				
1.650	1.27	7.650	2.54	13.650	18.43	19.65	2.29				
1.667	1.27	7.667	2.54	13.667	18.43	19.67	2.29				
1.683	1.27	7.683	2.54	13.683	18.43	19.68	2.29				
1.700	1.27	7.700	2.54	13.700	18.43	19.70	2.29				
1.717	1.27	7.717	2.54	13.717	18.43	19.72	2.29				
1.733	1.27	7.733	2.54	13.733	18.43	19.73	2.29				
1.750	1.27	7.750	2.54	13.750	18.43	19.75	2.29				
1.767	2.29	7.767	2.54	13.767	18.43	19.77	2.29				
1.783	2.29	7.783	2.54	13.783	18.43	19.78	2.29				
1.800	2.29	7.800	2.54	13.800	18.43	19.80	2.29				
1.817	2.29	7.817	2.54	13.817	18.43	19.82	2.29				
1.833	2.29	7.833	2.54	13.833	18.43	19.83	2.29				
1.850	2.29	7.850	2.54	13.850	18.43	19.85	2.29				
1.867	2.29	7.867	2.54	13.867	18.43	19.87	2.29				
1.883	2.29	7.883	2.54	13.883	18.43	19.88	2.29				

HRP8-PR_2-100 YEAR.OUT											
1.900	2.29	7.900	2.54	13.900	18.43	19.90	2.29				
1.917	2.29	7.917	2.54	13.917	18.43	19.92	2.29				
1.933	2.29	7.933	2.54	13.933	18.43	19.93	2.29				
1.950	2.29	7.950	2.54	13.950	18.43	19.95	2.29				
1.967	2.29	7.967	2.54	13.967	18.43	19.97	2.29				
1.983	2.29	7.983	2.54	13.983	18.43	19.98	2.29				
2.000	2.29	8.000	2.55	14.000	18.43	20.00	2.29				
2.017	1.65	8.017	3.43	14.017	3.83	20.02	1.53				
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53				
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53				
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53				
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53				
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53				
2.117	1.65	8.117	3.43	14.117	3.82	20.12	1.53				
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53				
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53				
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53				
2.183	1.65	8.183	3.43	14.183	3.82	20.18	1.53				
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53				
2.217	1.65	8.217	3.43	14.217	3.82	20.22	1.53				
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53				
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53				
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53				
2.283	1.65	8.283	3.43	14.283	3.82	20.28	1.53				
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53				
2.317	1.65	8.317	3.43	14.317	3.82	20.32	1.53				
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53				
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53				
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53				
2.383	1.65	8.383	3.43	14.383	3.82	20.38	1.53				
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53				
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53				
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53				
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53				
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53				
2.483	1.65	8.483	3.43	14.483	3.82	20.48	1.53				
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53				
2.517	1.65	8.517	3.43	14.517	3.82	20.52	1.53				
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53				
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53				
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53				
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53				
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53				
2.617	1.65	8.617	3.43	14.617	3.82	20.62	1.53				
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53				
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53				
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53				
2.683	1.65	8.683	3.43	14.683	3.82	20.68	1.53				
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53				
2.717	1.65	8.717	3.43	14.717	3.82	20.72	1.53				
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53				
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53				
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53				
2.783	1.65	8.783	3.43	14.783	3.82	20.78	1.53				
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53				
2.817	1.65	8.817	3.43	14.817	3.82	20.82	1.53				
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53				
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53				
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53				
2.883	1.65	8.883	3.43	14.883	3.82	20.88	1.53				
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53				
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53				
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53				
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53				
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53				
2.983	1.65	8.983	3.43	14.983	3.82	20.98	1.53				
3.000	1.65	9.000	3.44	15.000	3.82	21.00	1.53				
3.017	1.65	9.017	4.07	15.017	3.82	21.02	1.53				
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53				
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53				
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53				
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53				
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53				
3.117	1.65	9.117	4.07	15.117	3.82	21.12	1.53				
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53				
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53				
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53				
3.183	1.65	9.183	4.07	15.183	3.82	21.18	1.53				
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53				
3.217	1.65	9.217	4.07	15.217	3.82	21.22	1.53				
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53				
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53				
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53				
3.283	1.65	9.283	4.07	15.283	3.82	21.28	1.53				
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53				
3.317	1.65	9.317	4.07	15.317	3.82	21.32	1.53				
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53				

HRP8-PR_2-100 YEAR.OUT									
3.350	1.65		9.350	4.07	15.350	3.82		21.35	1.53
3.367	1.65		9.367	4.07	15.367	3.82		21.37	1.53
3.383	1.65		9.383	4.07	15.383	3.82		21.38	1.53
3.400	1.65		9.400	4.07	15.400	3.82		21.40	1.53
3.417	1.65		9.417	4.07	15.417	3.82		21.42	1.53
3.433	1.65		9.433	4.07	15.433	3.82		21.43	1.53
3.450	1.65		9.450	4.07	15.450	3.82		21.45	1.53
3.467	1.65		9.467	4.07	15.467	3.82		21.47	1.53
3.483	1.65		9.483	4.07	15.483	3.82		21.48	1.53
3.500	1.65		9.500	4.07	15.500	3.82		21.50	1.53
3.517	1.65		9.517	4.58	15.517	3.82		21.52	1.53
3.533	1.65		9.533	4.58	15.533	3.82		21.53	1.53
3.550	1.65		9.550	4.58	15.550	3.82		21.55	1.53
3.567	1.65		9.567	4.58	15.567	3.82		21.57	1.53
3.583	1.65		9.583	4.58	15.583	3.82		21.58	1.53
3.600	1.65		9.600	4.58	15.600	3.82		21.60	1.53
3.617	1.65		9.617	4.58	15.617	3.82		21.62	1.53
3.633	1.65		9.633	4.58	15.633	3.82		21.63	1.53
3.650	1.65		9.650	4.58	15.650	3.82		21.65	1.53
3.667	1.65		9.667	4.58	15.667	3.82		21.67	1.53
3.683	1.65		9.683	4.58	15.683	3.82		21.68	1.53
3.700	1.65		9.700	4.58	15.700	3.82		21.70	1.53
3.717	1.65		9.717	4.58	15.717	3.82		21.72	1.53
3.733	1.65		9.733	4.58	15.733	3.82		21.73	1.53
3.750	1.65		9.750	4.58	15.750	3.82		21.75	1.53
3.767	1.65		9.767	4.58	15.767	3.82		21.77	1.53
3.783	1.65		9.783	4.58	15.783	3.82		21.78	1.53
3.800	1.65		9.800	4.58	15.800	3.82		21.80	1.53
3.817	1.65		9.817	4.58	15.817	3.82		21.82	1.53
3.833	1.65		9.833	4.58	15.833	3.82		21.83	1.53
3.850	1.65		9.850	4.58	15.850	3.82		21.85	1.53
3.867	1.65		9.867	4.58	15.867	3.82		21.87	1.53
3.883	1.65		9.883	4.58	15.883	3.82		21.88	1.53
3.900	1.65		9.900	4.58	15.900	3.82		21.90	1.53
3.917	1.65		9.917	4.58	15.917	3.82		21.92	1.53
3.933	1.65		9.933	4.58	15.933	3.82		21.93	1.53
3.950	1.65		9.950	4.58	15.950	3.82		21.95	1.53
3.967	1.65		9.967	4.58	15.967	3.82		21.97	1.53
3.983	1.65		9.983	4.58	15.983	3.82		21.98	1.53
4.000	1.65		10.000	4.58	16.000	3.82		22.00	1.53
4.017	2.04		10.017	5.85	16.017	2.30		22.02	1.53
4.033	2.04		10.033	5.85	16.033	2.29		22.03	1.53
4.050	2.04		10.050	5.85	16.050	2.29		22.05	1.53
4.067	2.04		10.067	5.85	16.067	2.29		22.07	1.53
4.083	2.04		10.083	5.85	16.083	2.29		22.08	1.53
4.100	2.04		10.100	5.85	16.100	2.29		22.10	1.53
4.117	2.04		10.117	5.85	16.117	2.29		22.12	1.53
4.133	2.04		10.133	5.85	16.133	2.29		22.13	1.53
4.150	2.04		10.150	5.85	16.150	2.29		22.15	1.53
4.167	2.04		10.167	5.85	16.167	2.29		22.17	1.53
4.183	2.04		10.183	5.85	16.183	2.29		22.18	1.53
4.200	2.04		10.200	5.85	16.200	2.29		22.20	1.53
4.217	2.04		10.217	5.85	16.217	2.29		22.22	1.53
4.233	2.04		10.233	5.85	16.233	2.29		22.23	1.53
4.250	2.04		10.250	5.85	16.250	2.29		22.25	1.53
4.267	2.04		10.267	5.85	16.267	2.29		22.27	1.53
4.283	2.04		10.283	5.85	16.283	2.29		22.28	1.53
4.300	2.04		10.300	5.85	16.300	2.29		22.30	1.53
4.317	2.04		10.317	5.85	16.317	2.29		22.32	1.53
4.333	2.04		10.333	5.85	16.333	2.29		22.33	1.53
4.350	2.04		10.350	5.85	16.350	2.29		22.35	1.53
4.367	2.04		10.367	5.85	16.367	2.29		22.37	1.53
4.383	2.04		10.383	5.85	16.383	2.29		22.38	1.53
4.400	2.04		10.400	5.85	16.400	2.29		22.40	1.53
4.417	2.04		10.417	5.85	16.417	2.29		22.42	1.53
4.433	2.04		10.433	5.85	16.433	2.29		22.43	1.53
4.450	2.04		10.450	5.85	16.450	2.29		22.45	1.53
4.467	2.04		10.467	5.85	16.467	2.29		22.47	1.53
4.483	2.04		10.483	5.85	16.483	2.29		22.48	1.53
4.500	2.04		10.500	5.85	16.500	2.29		22.50	1.53
4.517	2.04		10.517	7.89	16.517	2.29		22.52	1.53
4.533	2.04		10.533	7.89	16.533	2.29		22.53	1.53
4.550	2.04		10.550	7.89	16.550	2.29		22.55	1.53
4.567	2.04		10.567	7.89	16.567	2.29		22.57	1.53
4.583	2.04		10.583	7.89	16.583	2.29		22.58	1.53
4.600	2.04		10.600	7.89	16.600	2.29		22.60	1.53
4.617	2.04		10.617	7.89	16.617	2.29		22.62	1.53
4.633	2.04		10.633	7.89	16.633	2.29		22.63	1.53
4.650	2.04		10.650	7.89	16.650	2.29		22.65	1.53
4.667	2.04		10.667	7.89	16.667	2.29		22.67	1.53
4.683	2.04		10.683	7.89	16.683	2.29		22.68	1.53
4.700	2.04		10.700	7.89	16.700	2.29		22.70	1.53
4.717	2.04		10.717	7.89	16.717	2.29		22.72	1.53
4.733	2.04		10.733	7.89	16.733	2.29		22.73	1.53
4.750	2.04		10.750	7.89	16.750	2.29		22.75	1.53
4.767	2.04		10.767	7.89	16.767	2.29		22.77	1.53
4.783	2.04		10.783	7.89	16.783	2.29		22.78	1.53

HRP8-PR_2-100 YEAR.OUT									
4.800	2.04		10.800	7.89	16.800	2.29		22.80	1.53
4.817	2.04		10.817	7.89	16.817	2.29		22.82	1.53
4.833	2.04		10.833	7.89	16.833	2.29		22.83	1.53
4.850	2.04		10.850	7.89	16.850	2.29		22.85	1.53
4.867	2.04		10.867	7.89	16.867	2.29		22.87	1.53
4.883	2.04		10.883	7.89	16.883	2.29		22.88	1.53
4.900	2.04		10.900	7.89	16.900	2.29		22.90	1.53
4.917	2.04		10.917	7.89	16.917	2.29		22.92	1.53
4.933	2.04		10.933	7.89	16.933	2.29		22.93	1.53
4.950	2.04		10.950	7.89	16.950	2.29		22.95	1.53
4.967	2.04		10.967	7.89	16.967	2.29		22.97	1.53
4.983	2.04		10.983	7.89	16.983	2.29		22.98	1.53
5.000	2.04		11.000	7.89	17.000	2.29		23.00	1.53
5.017	2.04		11.017	12.21	17.017	2.29		23.02	1.53
5.033	2.04		11.033	12.21	17.033	2.29		23.03	1.53
5.050	2.04		11.050	12.21	17.050	2.29		23.05	1.53
5.067	2.04		11.067	12.21	17.067	2.29		23.07	1.53
5.083	2.04		11.083	12.21	17.083	2.29		23.08	1.53
5.100	2.04		11.100	12.21	17.100	2.29		23.10	1.53
5.117	2.04		11.117	12.21	17.117	2.29		23.12	1.53
5.133	2.04		11.133	12.21	17.133	2.29		23.13	1.53
5.150	2.04		11.150	12.21	17.150	2.29		23.15	1.53
5.167	2.04		11.167	12.21	17.167	2.29		23.17	1.53
5.183	2.04		11.183	12.21	17.183	2.29		23.18	1.53
5.200	2.04		11.200	12.21	17.200	2.29		23.20	1.53
5.217	2.04		11.217	12.21	17.217	2.29		23.22	1.53
5.233	2.04		11.233	12.21	17.233	2.29		23.23	1.53
5.250	2.04		11.250	12.21	17.250	2.29		23.25	1.53
5.267	2.04		11.267	12.21	17.267	2.29		23.27	1.53
5.283	2.04		11.283	12.21	17.283	2.29		23.28	1.53
5.300	2.04		11.300	12.21	17.300	2.29		23.30	1.53
5.317	2.04		11.317	12.21	17.317	2.29		23.32	1.53
5.333	2.04		11.333	12.21	17.333	2.29		23.33	1.53
5.350	2.04		11.350	12.21	17.350	2.29		23.35	1.53
5.367	2.04		11.367	12.21	17.367	2.29		23.37	1.53
5.383	2.04		11.383	12.21	17.383	2.29		23.38	1.53
5.400	2.04		11.400	12.21	17.400	2.29		23.40	1.53
5.417	2.04		11.417	12.21	17.417	2.29		23.42	1.53
5.433	2.04		11.433	12.21	17.433	2.29		23.43	1.53
5.450	2.04		11.450	12.21	17.450	2.29		23.45	1.53
5.467	2.04		11.467	12.21	17.467	2.29		23.47	1.53
5.483	2.04		11.483	12.21	17.483	2.29		23.48	1.53
5.500	2.04		11.500	12.21	17.500	2.29		23.50	1.53
5.517	2.04		11.517	52.91	17.517	2.29		23.52	1.53
5.533	2.04		11.533	52.92	17.533	2.29		23.53	1.53
5.550	2.04		11.550	52.92	17.550	2.29		23.55	1.53
5.567	2.04		11.567	52.92	17.567	2.29		23.57	1.53
5.583	2.04		11.583	52.92	17.583	2.29		23.58	1.53
5.600	2.04		11.600	52.92	17.600	2.29		23.60	1.53
5.617	2.04		11.617	52.92	17.617	2.29		23.62	1.53
5.633	2.04		11.633	52.92	17.633	2.29		23.63	1.53
5.650	2.04		11.650	52.92	17.650	2.29		23.65	1.53
5.667	2.04		11.667	52.92	17.667	2.29		23.67	1.53
5.683	2.04		11.683	52.92	17.683	2.29		23.68	1.53
5.700	2.04		11.700	52.92	17.700	2.29		23.70	1.53
5.717	2.04		11.717	52.92	17.717	2.29		23.72	1.53
5.733	2.04		11.733	52.92	17.733	2.29		23.73	1.53
5.750	2.04		11.750	52.92	17.750	2.29		23.75	1.53
5.767	2.04		11.767	140.39	17.767	2.29		23.77	1.53
5.783	2.04		11.783	140.43	17.783	2.29		23.78	1.53
5.800	2.04		11.800	140.43	17.800	2.29		23.80	1.53
5.817	2.04		11.817	140.43	17.817	2.29		23.82	1.53
5.833	2.04		11.833	140.43	17.833	2.29		23.83	1.53
5.850	2.04		11.850	140.43	17.850	2.29		23.85	1.53
5.867	2.04		11.867	140.43	17.867	2.29		23.87	1.53
5.883	2.04		11.883	140.43	17.883	2.29		23.88	1.53
5.900	2.04		11.900	140.43	17.900	2.29		23.90	1.53
5.917	2.04		11.917	140.43	17.917	2.29		23.92	1.53
5.933	2.04		11.933	140.43	17.933	2.29		23.93	1.53
5.950	2.04		11.950	140.43	17.950	2.29		23.95	1.53
5.967	2.04		11.967	140.43	17.967	2.29		23.97	1.53
5.983	2.04		11.983	140.43	17.983	2.29		23.98	1.53
6.000	2.04		12.000	140.43	18.000	2.29		24.00	1.53

ADD HYD (0035)				
1 + 2 = 3				

		AREA	QPEAK	TPEAK
		(ha)	(cms)	(hrs)
				R.V.
				(mm)
ID1= 1 (0253):		1.51	0.353	12.02
+ ID2= 2 (0036):		85.33	7.394	12.57
		=====		
ID = 3 (0035):		86.84	7.448	12.55
				82.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP9-PR_2-100 YEAR.OUT

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL
000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y M M O O
O O T T H H Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\69c18cca-d97a-46d0-b724-33c5166d3edc\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\69c18cca-d97a-46d0-b724-33c5166d3edc\scenar

DATE: 03/24/2023 TIME: 11:22:46

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\ b2065965-de5e-425b-8e40-fa97018006d7\571fbdef
Ptotal= 57.60 mm Comments: Mass 24-Hour SCS Type-II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04	
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04	
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04	
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04	
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04	
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04	
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04	
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04	
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04	
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04	
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04	
1.800	0.81	7.800	1.15	13.800	4.72	19.80	1.04	
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69	
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69	
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69	
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69	
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69	
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69	
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69	
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69	
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69	
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69	
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69	
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69	
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69	
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69	
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69	
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69	
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69	
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69	
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69	
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69	
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69	
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69	
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69	
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69	
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69	
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69	
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69	
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69	
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69	
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69	
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69	
5.800	0.92	11.800	43.78	17.800	1.04	23.80	0.69	
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69	
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69	

Unit Hyd Ppeak (cms)= 4.149

PEAK FLOW (cms)= 1.812 (i)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 25.531
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.443

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0260) | Area (ha)= 9.02
ID= 1 DT= 3.0 min | Total Imp(%)= 55.00 Dir. Conn.(%)= 55.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.96
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 245.22 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP9-PR_2-100 YEAR.OUT

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69

HRP9-PR_2-100 YEAR.OUT

4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 19.73
over (min) 6.00 15.00
Storage Coeff. (min)= 4.26 (ii) 12.07 (iii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.23 0.09

TOTALS

PEAK FLOW (cms)= 0.85 0.14 0.962 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 56.10 15.00 37.64
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.26 0.65

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	51.71	1.812	12.30	25.53
ID1= 1 (1060):	0.02	0.962	12.00	37.64
+ ID2= 2 (0260):				
ID = 3 (0003):	60.73	2.101	12.05	27.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0009)	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
IN= 2--> OUT= 1				
DT= 5.0 min				
	0.0000	0.0000	0.4500	0.5700
	0.0200	0.0400	0.9300	0.5750
	0.0350	0.1540	1.5000	0.6500
	0.0450	0.2340	2.0000	0.7300
	0.0540	0.3160	5.2000	1.0200
	0.0610	0.4000	7.7000	1.2000
	0.0680	0.5000	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0003)	60.730	2.101	12.05	27.33
OUTFLOW: ID= 1 (0009)	60.730	1.340	12.80	27.32

HRP9-PR_2-100 YEAR.OUT

PEAK FLOW REDUCTION [Qout/qin](%)= 63.81
TIME SHIFT OF PEAK FLOW (min)= 45.00
MAXIMUM STORAGE USED (ha.m.)= 0.6293

CALIB	
STANDHYD (0261)	
ID= 1 DT= 2.0 min	

Area	(ha)=	2.94
Total Imp(%)=	41.00	
Dir. Conn.(%)=	41.00	
IMPERVIOUS		
PERVIOUS (i)		
Surface Area	(ha)=	1.21
Dep. Storage	(mm)=	1.50
Average Slope	(%)=	2.00
Length	(m)=	140.00
Mannings n	=	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04		
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04		
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04		
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04		
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04		
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04		
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04		
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04		
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04		
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04		
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04		
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04		
1.767	0.81	7.767	1.15	13.767	4.72	19.77	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04		
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04		
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69		
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		

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2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69

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5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 23.45
over (min) 5.00 16.00
Storage Coeff. (min)= 3.04 (ii) 15.65 (ii)
Unit Hyd. Tpeak (min)= 4.00 16.00
Unit Hyd. peak (cms)= 0.33 0.07

PEAK FLOW (cms)= 0.21 0.07 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.17 0.259 (iii)
RUNOFF VOLUME (mm)= 56.10 18.28 33.78
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.32 0.59

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN= 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0261):	2.94	0.259	12.00	33.78	
+ ID2= 2 (0009):	60.73	1.340	12.00	27.32	
ID = 3 (0005):	63.67	1.374	12.00	27.56	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0262)	Area	(ha)=	1.61	Curve Number	(CN)= 75.0
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=		0.40		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04

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1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 0.155

PEAK FLOW (cms)= 0.050 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 20.153
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.350

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0262):	1.61	0.050	12.25	20.15	
+ ID2= 2 (0005):	63.67	1.374	12.00	27.56	
ID = 3 (0007):	65.28	1.402	12.00	27.38	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)

HRP9-PR_2-100 YEAR.OUT

V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voim.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ae5871c-6333-4c96-b891-3a7525710796\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ae5871c-6333-4c96-b891-3a7525710796\scenar

DATE: 03/24/2023 TIME: 11:22:46

USER:

COMMENTS: _____

** SIMULATION : Run 02 **

MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\ata\LocalTemp\ b2865965-de5e-425b-8e40-fa97018006d7\571fbdef
| Ptotal= 57.60 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	'	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

CALIB
NASHYD (1060) | Area (ha)= 51.71 Curve Number (CN)= 82.0
ID= 1 DT= 6.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.48

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.100 0.58 | 6.100 1.15 | 12.100 8.29 | 18.10 1.04
0.200 0.58 | 6.200 1.15 | 12.200 8.29 | 18.20 1.04

HRP9-PR_2-100 YEAR.OUT

0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.800	0.81	7.800	1.15	13.800	4.72	19.80	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.800	0.92	11.800	43.78	17.800	1.04	23.80	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 1.812 (i)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 25.531
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.443

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0260) | Area (ha)= 9.02
ID= 1 DT= 3.0 min | Total Imp(%)= 55.00 Dir. Conn.(%)= 55.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.96	4.06
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	245.22	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

HRP9-PR_2-100 YEAR.OUT							
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69

HRP9-PR_2-100 YEAR.OUT							
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69
Max.Eff.Inten.(mm/hr)=			63.59	19.73			
over (min)			6.00	15.00			
Storage Coeff. (min)=			4.26 (ii)	12.07 (ii)			
Unit Hyd. Tpeak (min)=			6.00	15.00			
Unit Hyd. peak (cms)=			0.23	0.09			
					TOTALS		
PEAK FLOW (cms)=			0.85	0.14	0.962 (iii)		
TIME TO PEAK (hrs)=			12.00	12.10	12.00		
RUNOFF VOLUME (mm)=			56.10	15.08	37.64		
TOTAL RAINFALL (mm)=			57.60	57.60	57.60		
RUNOFF COEFFICIENT =			0.97	0.26	0.65		
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:							
CN* = 66.0 Ia = Dep. Storage (Above)							
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL							
THAN THE STORAGE COEFFICIENT.							
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

ADD HYD (0003)							
1 + 2 = 3							

			AREA	QPEAK	TPEAK	R.V.	
			(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (1060):			51.71	1.812	12.30	25.53	
+ ID2= 2 (0260):			9.02	0.962	12.00	37.64	
=====							
ID = 3 (0003):			60.73	2.101	12.05	27.33	
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.							

RESERVOIR(0009)							
IN= 2 --> OUT= 1							
DT= 5.0 min							

OVERFLOW IS OFF							
OUTFLOW		STORAGE	OUTFLOW		STORAGE		
(cms)		(ha.m.)	(cms)		(ha.m.)		
0.0000		0.0000	0.4500		0.5700		
0.0200		0.0400	0.9300		0.5750		
0.0350		0.1540	1.5000		0.6500		
0.0450		0.2340	2.0000		0.7300		
0.0540		0.3100	2.2000		1.0200		
0.0610		0.4000	2.7000		1.2000		
0.0680		0.5000	0.0000		0.0000		
=====							
			AREA	QPEAK	TPEAK	R.V.	
			(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0003)			60.730	2.101	12.05	27.33	
OUTFLOW: ID= 1 (0009)			60.730	1.340	12.00	27.32	
=====							
PEAK FLOW REDUCTION [Qout/Qin](%)=			63.81				
TIME SHIFT OF PEAK FLOW (min)=			45.00				

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MAXIMUM STORAGE USED (ha.m.)= 0.6293

CALIB
STANDHYD (0261) | Area (ha)= 2.94
ID= 1 DT= 2.0 min | Total Imp(%)= 41.00 Dir. Conn.(%)= 41.00

IMPERVIOUS PERVIOUS (I)
Surface Area (ha)= 1.21 1.73
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 140.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
mm/hr hrs mm/hr hrs mm/hr hrs mm/hr hrs
0.033 0.58 | 6.933 1.15 | 12.033 8.29 | 18.03 1.04
0.067 0.58 | 6.967 1.15 | 12.067 8.29 | 18.07 1.04
0.100 0.58 | 6.100 1.15 | 12.100 8.29 | 18.10 1.04
0.133 0.58 | 6.133 1.15 | 12.133 8.29 | 18.13 1.04
0.167 0.58 | 6.167 1.15 | 12.167 8.29 | 18.17 1.04
0.200 0.58 | 6.200 1.15 | 12.200 8.29 | 18.20 1.04
0.233 0.58 | 6.233 1.15 | 12.233 8.29 | 18.23 1.04
0.267 0.58 | 6.267 1.15 | 12.267 8.29 | 18.27 1.04
0.300 0.58 | 6.300 1.15 | 12.300 8.29 | 18.30 1.04
0.333 0.58 | 6.333 1.15 | 12.333 8.29 | 18.33 1.04
0.367 0.58 | 6.367 1.15 | 12.367 8.29 | 18.37 1.04
0.400 0.58 | 6.400 1.15 | 12.400 8.29 | 18.40 1.04
0.433 0.58 | 6.433 1.15 | 12.433 8.29 | 18.43 1.04
0.467 0.58 | 6.467 1.15 | 12.467 8.29 | 18.47 1.04
0.500 0.58 | 6.500 1.15 | 12.500 8.29 | 18.50 1.04
0.533 0.58 | 6.533 1.15 | 12.533 4.26 | 18.53 1.04
0.567 0.58 | 6.567 1.15 | 12.567 4.26 | 18.57 1.04
0.600 0.58 | 6.600 1.15 | 12.600 4.26 | 18.60 1.04
0.633 0.58 | 6.633 1.15 | 12.633 4.26 | 18.63 1.04
0.667 0.58 | 6.667 1.15 | 12.667 4.26 | 18.67 1.04
0.700 0.58 | 6.700 1.15 | 12.700 4.26 | 18.70 1.04
0.733 0.58 | 6.733 1.15 | 12.733 4.26 | 18.73 1.04
0.767 0.58 | 6.767 1.15 | 12.767 4.26 | 18.77 1.04
0.800 0.58 | 6.800 1.15 | 12.800 4.26 | 18.80 1.04
0.833 0.58 | 6.833 1.15 | 12.833 4.26 | 18.83 1.04
0.867 0.58 | 6.867 1.15 | 12.867 4.26 | 18.87 1.04
0.900 0.58 | 6.900 1.15 | 12.900 4.26 | 18.90 1.04
0.933 0.58 | 6.933 1.15 | 12.933 4.26 | 18.93 1.04
0.967 0.58 | 6.967 1.15 | 12.967 4.26 | 18.97 1.04
1.000 0.58 | 7.000 1.15 | 13.000 4.26 | 19.00 1.04
1.033 0.58 | 7.033 1.15 | 13.033 0.81 | 19.03 1.04
1.067 0.58 | 7.067 1.15 | 13.067 0.81 | 19.07 1.04
1.100 0.58 | 7.100 1.15 | 13.100 0.81 | 19.10 1.04
1.133 0.58 | 7.133 1.15 | 13.133 0.81 | 19.13 1.04
1.167 0.58 | 7.167 1.15 | 13.167 0.81 | 19.17 1.04
1.200 0.58 | 7.200 1.15 | 13.200 0.81 | 19.20 1.04
1.233 0.58 | 7.233 1.15 | 13.233 0.81 | 19.23 1.04
1.267 0.58 | 7.267 1.15 | 13.267 0.81 | 19.27 1.04
1.300 0.58 | 7.300 1.15 | 13.300 0.81 | 19.30 1.04
1.333 0.58 | 7.333 1.15 | 13.333 0.81 | 19.33 1.04
1.367 0.58 | 7.367 1.15 | 13.367 0.81 | 19.37 1.04
1.400 0.58 | 7.400 1.15 | 13.400 0.81 | 19.40 1.04
1.433 0.58 | 7.433 1.15 | 13.433 0.81 | 19.43 1.04
1.467 0.58 | 7.467 1.15 | 13.467 0.81 | 19.47 1.04
1.500 0.58 | 7.500 1.15 | 13.500 0.81 | 19.50 1.04
1.533 0.58 | 7.533 1.15 | 13.533 4.72 | 19.53 1.04
1.567 0.58 | 7.567 1.15 | 13.567 4.72 | 19.57 1.04
1.600 0.58 | 7.600 1.15 | 13.600 4.72 | 19.60 1.04
1.633 0.58 | 7.633 1.15 | 13.633 4.72 | 19.63 1.04
1.667 0.58 | 7.667 1.15 | 13.667 4.72 | 19.67 1.04
1.700 0.58 | 7.700 1.15 | 13.700 4.72 | 19.70 1.04
1.733 0.58 | 7.733 1.15 | 13.733 4.72 | 19.73 1.04
1.767 0.81 | 7.767 1.15 | 13.767 4.72 | 19.77 1.04
1.800 1.04 | 7.800 1.15 | 13.800 4.72 | 19.80 1.04
1.833 1.04 | 7.833 1.15 | 13.833 4.72 | 19.83 1.04
1.867 1.04 | 7.867 1.15 | 13.867 4.72 | 19.87 1.04
1.900 1.04 | 7.900 1.15 | 13.900 4.72 | 19.90 1.04
1.933 1.04 | 7.933 1.15 | 13.933 4.72 | 19.93 1.04
1.967 1.04 | 7.967 1.15 | 13.967 4.72 | 19.97 1.04
2.000 1.04 | 8.000 1.15 | 14.000 4.72 | 20.00 1.04
2.033 0.75 | 8.033 1.56 | 14.033 1.73 | 20.03 0.69
2.067 0.75 | 8.067 1.56 | 14.067 1.73 | 20.07 0.69
2.100 0.75 | 8.100 1.56 | 14.100 1.73 | 20.10 0.69
2.133 0.75 | 8.133 1.56 | 14.133 1.73 | 20.13 0.69
2.167 0.75 | 8.167 1.56 | 14.167 1.73 | 20.17 0.69
2.200 0.75 | 8.200 1.56 | 14.200 1.73 | 20.20 0.69

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2.233 0.75 | 8.233 1.56 | 14.233 1.73 | 20.23 0.69
2.267 0.75 | 8.267 1.56 | 14.267 1.73 | 20.27 0.69
2.300 0.75 | 8.300 1.56 | 14.300 1.73 | 20.30 0.69
2.333 0.75 | 8.333 1.56 | 14.333 1.73 | 20.33 0.69
2.367 0.75 | 8.367 1.56 | 14.367 1.73 | 20.37 0.69
2.400 0.75 | 8.400 1.56 | 14.400 1.73 | 20.40 0.69
2.433 0.75 | 8.433 1.56 | 14.433 1.73 | 20.43 0.69
2.467 0.75 | 8.467 1.56 | 14.467 1.73 | 20.47 0.69
2.500 0.75 | 8.500 1.56 | 14.500 1.73 | 20.50 0.69
2.533 0.75 | 8.533 1.56 | 14.533 1.73 | 20.53 0.69
2.567 0.75 | 8.567 1.56 | 14.567 1.73 | 20.57 0.69
2.600 0.75 | 8.600 1.56 | 14.600 1.73 | 20.60 0.69
2.633 0.75 | 8.633 1.56 | 14.633 1.73 | 20.63 0.69
2.667 0.75 | 8.667 1.56 | 14.667 1.73 | 20.67 0.69
2.700 0.75 | 8.700 1.56 | 14.700 1.73 | 20.70 0.69
2.733 0.75 | 8.733 1.56 | 14.733 1.73 | 20.73 0.69
2.767 0.75 | 8.767 1.56 | 14.767 1.73 | 20.77 0.69
2.800 0.75 | 8.800 1.56 | 14.800 1.73 | 20.80 0.69
2.833 0.75 | 8.833 1.56 | 14.833 1.73 | 20.83 0.69
2.867 0.75 | 8.867 1.56 | 14.867 1.73 | 20.87 0.69
2.900 0.75 | 8.900 1.56 | 14.900 1.73 | 20.90 0.69
2.933 0.75 | 8.933 1.56 | 14.933 1.73 | 20.93 0.69
2.967 0.75 | 8.967 1.56 | 14.967 1.73 | 20.97 0.69
3.000 0.75 | 9.000 1.56 | 15.000 1.73 | 21.00 0.69
3.033 0.75 | 9.033 1.84 | 15.033 1.73 | 21.03 0.69
3.067 0.75 | 9.067 1.84 | 15.067 1.73 | 21.07 0.69
3.100 0.75 | 9.100 1.84 | 15.100 1.73 | 21.10 0.69
3.133 0.75 | 9.133 1.84 | 15.133 1.73 | 21.13 0.69
3.167 0.75 | 9.167 1.84 | 15.167 1.73 | 21.17 0.69
3.200 0.75 | 9.200 1.84 | 15.200 1.73 | 21.20 0.69
3.233 0.75 | 9.233 1.84 | 15.233 1.73 | 21.23 0.69
3.267 0.75 | 9.267 1.84 | 15.267 1.73 | 21.27 0.69
3.300 0.75 | 9.300 1.84 | 15.300 1.73 | 21.30 0.69
3.333 0.75 | 9.333 1.84 | 15.333 1.73 | 21.33 0.69
3.367 0.75 | 9.367 1.84 | 15.367 1.73 | 21.37 0.69
3.400 0.75 | 9.400 1.84 | 15.400 1.73 | 21.40 0.69
3.433 0.75 | 9.433 1.84 | 15.433 1.73 | 21.43 0.69
3.467 0.75 | 9.467 1.84 | 15.467 1.73 | 21.47 0.69
3.500 0.75 | 9.500 1.84 | 15.500 1.73 | 21.50 0.69
3.533 0.75 | 9.533 2.07 | 15.533 1.73 | 21.53 0.69
3.567 0.75 | 9.567 2.07 | 15.567 1.73 | 21.57 0.69
3.600 0.75 | 9.600 2.07 | 15.600 1.73 | 21.60 0.69
3.633 0.75 | 9.633 2.07 | 15.633 1.73 | 21.63 0.69
3.667 0.75 | 9.667 2.07 | 15.667 1.73 | 21.67 0.69
3.700 0.75 | 9.700 2.07 | 15.700 1.73 | 21.70 0.69
3.733 0.75 | 9.733 2.07 | 15.733 1.73 | 21.73 0.69
3.767 0.75 | 9.767 2.07 | 15.767 1.73 | 21.77 0.69
3.800 0.75 | 9.800 2.07 | 15.800 1.73 | 21.80 0.69
3.833 0.75 | 9.833 2.07 | 15.833 1.73 | 21.83 0.69
3.867 0.75 | 9.867 2.07 | 15.867 1.73 | 21.87 0.69
3.900 0.75 | 9.900 2.07 | 15.900 1.73 | 21.90 0.69
3.933 0.75 | 9.933 2.07 | 15.933 1.73 | 21.93 0.69
3.967 0.75 | 9.967 2.07 | 15.967 1.73 | 21.97 0.69
4.000 0.75 | 10.000 2.07 | 16.000 1.73 | 22.00 0.69
4.033 0.92 | 10.033 2.65 | 16.033 1.04 | 22.03 0.69
4.067 0.92 | 10.067 2.65 | 16.067 1.04 | 22.07 0.69
4.100 0.92 | 10.100 2.65 | 16.100 1.04 | 22.10 0.69
4.133 0.92 | 10.133 2.65 | 16.133 1.04 | 22.13 0.69
4.167 0.92 | 10.167 2.65 | 16.167 1.04 | 22.17 0.69
4.200 0.92 | 10.200 2.65 | 16.200 1.04 | 22.20 0.69
4.233 0.92 | 10.233 2.65 | 16.233 1.04 | 22.23 0.69
4.267 0.92 | 10.267 2.65 | 16.267 1.04 | 22.27 0.69
4.300 0.92 | 10.300 2.65 | 16.300 1.04 | 22.30 0.69
4.333 0.92 | 10.333 2.65 | 16.333 1.04 | 22.33 0.69
4.367 0.92 | 10.367 2.65 | 16.367 1.04 | 22.37 0.69
4.400 0.92 | 10.400 2.65 | 16.400 1.04 | 22.40 0.69
4.433 0.92 | 10.433 2.65 | 16.433 1.04 | 22.43 0.69
4.467 0.92 | 10.467 2.65 | 16.467 1.04 | 22.47 0.69
4.500 0.92 | 10.500 2.65 | 16.500 1.04 | 22.50 0.69
4.533 0.92 | 10.533 3.57 | 16.533 1.04 | 22.53 0.69
4.567 0.92 | 10.567 3.57 | 16.567 1.04 | 22.57 0.69
4.600 0.92 | 10.600 3.57 | 16.600 1.04 | 22.60 0.69
4.633 0.92 | 10.633 3.57 | 16.633 1.04 | 22.63 0.69
4.667 0.92 | 10.667 3.57 | 16.667 1.04 | 22.67 0.69
4.700 0.92 | 10.700 3.57 | 16.700 1.04 | 22.70 0.69
4.733 0.92 | 10.733 3.57 | 16.733 1.04 | 22.73 0.69
4.767 0.92 | 10.767 3.57 | 16.767 1.04 | 22.77 0.69
4.800 0.92 | 10.800 3.57 | 16.800 1.04 | 22.80 0.69
4.833 0.92 | 10.833 3.57 | 16.833 1.04 | 22.83 0.69
4.867 0.92 | 10.867 3.57 | 16.867 1.04 | 22.87 0.69
4.900 0.92 | 10.900 3.57 | 16.900 1.04 | 22.90 0.69
4.933 0.92 | 10.933 3.57 | 16.933 1.04 | 22.93 0.69
4.967 0.92 | 10.967 3.57 | 16.967 1.04 | 22.97 0.69
5.000 0.92 | 11.000 3.57 | 17.000 1.04 | 23.00 0.69
5.033 0.92 | 11.033 5.53 | 17.033 1.04 | 23.03 0.69
5.067 0.92 | 11.067 5.53 | 17.067 1.04 | 23.07 0.69
5.100 0.92 | 11.100 5.53 | 17.100 1.04 | 23.10 0.69

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5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 23.45
over (min)= 5.00 16.00
Storage Coeff. (min)= 3.04 (ii) 15.65 (iii)
Unit Hyd. Tpeak (min)= 4.00 16.00
Unit Hyd. peak (cms)= 0.33 0.07

TOTALS

PEAK FLOW (cms)= 0.21 0.07 0.259 (iii)
TIME TO PEAK (hrs)= 12.00 12.17 12.00
RUNOFF VOLUME (mm)= 56.10 18.28 33.78
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.32 0.59

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0005)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0261): 2.94 0.259 12.00 33.78
+ ID2= 2 (0009): 60.73 1.340 12.00 27.32
=====

ID = 3 (0005): 63.67 1.374 12.00 27.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| NASHYD (0262)| Area (ha)= 1.61 Curve Number (CN)= 75.0
|ID= 1 DT= 5.0 min| Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----
U.H. Tp(hrs)= 0.40

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr
0.083 0.58 | 6.083 1.15 | 12.083 8.39 | 18.08 1.04
0.167 0.58 | 6.167 1.15 | 12.167 8.29 | 18.17 1.04
0.250 0.58 | 6.250 1.15 | 12.250 8.29 | 18.25 1.04
0.333 0.58 | 6.333 1.15 | 12.333 8.29 | 18.33 1.04
0.417 0.58 | 6.417 1.15 | 12.417 8.29 | 18.42 1.04
0.500 0.58 | 6.500 1.15 | 12.500 8.29 | 18.50 1.04
0.583 0.58 | 6.583 1.15 | 12.583 4.26 | 18.58 1.04
0.667 0.58 | 6.667 1.15 | 12.667 4.26 | 18.67 1.04
0.750 0.58 | 6.750 1.15 | 12.750 4.26 | 18.75 1.04
0.833 0.58 | 6.833 1.15 | 12.833 4.26 | 18.83 1.04
0.917 0.58 | 6.917 1.15 | 12.917 4.26 | 18.92 1.04
1.000 0.58 | 7.000 1.15 | 13.000 4.26 | 19.00 1.04
1.083 0.58 | 7.083 1.15 | 13.083 0.81 | 19.08 1.04
1.167 0.58 | 7.167 1.15 | 13.167 0.81 | 19.17 1.04
1.250 0.58 | 7.250 1.15 | 13.250 0.81 | 19.25 1.04

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1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 0.155

PEAK FLOW (cms)= 0.050 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 20.153
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.350

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0007)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0262): 1.61 0.050 12.25 20.15
+ ID2= 2 (0005): 63.67 1.374 12.00 27.56
=====

ID = 3 (0007): 65.28 1.402 12.00 27.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L

HRP9-PR_2-100 YEAR.OUT

VV I SSSS UUUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y Y M M 0 0
000 T T H H Y Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\Abira\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\cc05aa4e-e0da-4406-a4a5-e8197b7275cd\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\cc05aa4e-e0da-4406-a4a5-e8197b7275cd\scenar

DATE: 03/24/2023 TIME: 11:22:47

USER:

COMMENTS: _____

** SIMULATION : Run 03 **

MASS STORM File: C:\Users\Abira\AppData\Local\Temp\02865965-de5e-425b-8e40-fa97018006d7\1913d010
Ptotal= 88.80 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60	
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60	
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60	
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60	
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60	
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60	
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60	
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60	
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07	
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07	
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07	
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07	
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07	
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07	
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07	
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07	
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07	
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07	
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07	
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07	
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07	
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07	
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07	
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07	

CALIB
NASHYD (1060) Area (ha)= 51.71 Curve Number (CN)= 82.0
ID= 1 DT= 6.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.48

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60	
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60	
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60	
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60	
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60	

HRP9-PR_2-100 YEAR.OUT

0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.800	1.24	7.800	1.78	13.800	7.28	19.80	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.500	1.42	11.500	8.53	17.500	1.60	23.50	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.800	1.42	11.800	67.49	17.800	1.60	23.80	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
6.000	1.42	12.000	98.03	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 3.645 (i)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 50.313
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0260) Area (ha)= 9.02
ID= 1 DT= 3.0 min Total Imp(%)= 55.00 Dir. Conn.(%)= 55.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.96	4.06
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	245.22	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60	
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60	

HRP9-PR_2-100 YEAR.OUT									
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07		
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07		
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07		
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07		
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07		
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07		
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07		
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07		
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07		
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07		

HRP9-PR_2-100 YEAR.OUT							
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07
Max.Eff.Inten.(mm/hr)= 98.04 43.00							
over (min) 6.00 12.00							
Storage Coeff. (min)= 3.58 (ii) 10.15 (ii)							
Unit Hyd. Tpeak (min)= 6.00 12.00							
Unit Hyd. peak (cms)= 0.25 0.10							
TOTALS							
PEAK FLOW (cms)= 1.33 0.34 1.638 (iii)							
TIME TO PEAK (hrs)= 12.00 12.05 12.00							
RUNOFF VOLUME (mm)= 87.30 32.72 62.74							
TOTAL RAINFALL (mm)= 88.80 88.80 88.80							
RUNOFF COEFFICIENT = 0.98 0.37 0.71							
(i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:							
CN* = 66.0 Ia = Dep. Storage (Above)							
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.							
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

MOD HYD (0003)							
1 * 2 = 3							
AREA QPEAK TPEAK R.V.							
(ha) (cms) (hrs) (mm)							
ID1= 1 (1060):	51.71	3.645	12.30	50.31			
+ ID2= 2 (0260):	9.02	1.638	12.00	62.74			
=====							
ID = 3 (0003):	60.73	4.839	12.05	52.16			
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.							

RESERVOIR(0009)							
N= 2----> OUT= 1							
DT= 5.0 min							
OVERFLOW IS OFF							
OUTFLOW STORAGE OUTFLOW STORAGE							
(cms) (ha.m.) (cms) (ha.m.)							
0.0000 0.0000 0.0000 0.4500							
0.0200 0.0400 0.9300 0.5750							
0.0350 0.1540 1.5000 0.6500							
0.0450 0.2340 2.6000 0.7300							
0.0540 0.3160 5.2000 1.0200							
0.0610 0.4000 7.7000 1.2000							
0.0600 0.5000 0.0000 0.0000							
AREA QPEAK TPEAK R.V.							
(ha) (cms) (hrs) (mm)							
INFLOW : ID= 2 (0003)	60.730	4.839	12.05	52.16			
OUTFLOW: ID= 1 (0009)	60.730	3.408	12.60	52.15			
PEAK FLOW REDUCTION [Qout/Qin](%)= 84.38							
TIME SHIFT OF PEAK FLOW (min)= 33.00							
MAXIMUM STORAGE USED (ha.m.)= 0.8206							

HRP9-PR_2-100 YEAR.OUT

2.333	1.15	1.333	2.40	14.333	2.66	20.33	1.07
2.367	1.15	1.367	2.40	14.367	2.66	20.37	1.07
2.400	1.15	1.400	2.40	14.400	2.66	20.40	1.07
2.433	1.15	1.433	2.40	14.433	2.66	20.43	1.07
2.467	1.15	1.467	2.40	14.467	2.66	20.47	1.07
2.500	1.15	1.500	2.40	14.500	2.66	20.50	1.07
2.533	1.15	1.533	2.40	14.533	2.66	20.53	1.07
2.567	1.15	1.567	2.40	14.567	2.66	20.57	1.07
2.600	1.15	1.600	2.40	14.600	2.66	20.60	1.07
2.633	1.15	1.633	2.40	14.633	2.66	20.63	1.07
2.667	1.15	1.667	2.40	14.667	2.66	20.67	1.07
2.700	1.15	1.700	2.40	14.700	2.66	20.70	1.07
2.733	1.15	1.733	2.40	14.733	2.66	20.73	1.07
2.767	1.15	1.767	2.40	14.767	2.66	20.77	1.07
2.800	1.15	1.800	2.40	14.800	2.66	20.80	1.07
2.833	1.15	1.833	2.40	14.833	2.66	20.83	1.07
2.867	1.15	1.867	2.40	14.867	2.66	20.87	1.07
2.900	1.15	1.900	2.40	14.900	2.66	20.90	1.07
2.933	1.15	1.933	2.40	14.933	2.66	20.93	1.07
2.967	1.15	1.967	2.40	14.967	2.66	20.97	1.07
3.000	1.15	2.000	2.40	15.000	2.66	21.00	1.07
3.033	1.15	1.933	2.84	15.033	2.66	21.03	1.07
3.067	1.15	1.967	2.84	15.067	2.66	21.07	1.07
3.100	1.15	1.100	2.84	15.100	2.66	21.10	1.07
3.133	1.15	1.133	2.84	15.133	2.66	21.13	1.07
3.167	1.15	1.167	2.84	15.167	2.66	21.17	1.07
3.200	1.15	1.200	2.84	15.200	2.66	21.20	1.07
3.233	1.15	1.233	2.84	15.233	2.66	21.23	1.07
3.267	1.15	1.267	2.84	15.267	2.66	21.27	1.07
3.300	1.15	1.300	2.84	15.300	2.66	21.30	1.07
3.333	1.15	1.333	2.84	15.333	2.66	21.33	1.07
3.367	1.15	1.367	2.84	15.367	2.66	21.37	1.07
3.400	1.15	1.400	2.84	15.400	2.66	21.40	1.07
3.433	1.15	1.433	2.84	15.433	2.66	21.43	1.07
3.467	1.15	1.467	2.84	15.467	2.66	21.47	1.07
3.500	1.15	1.500	2.84	15.500	2.66	21.50	1.07
3.533	1.15	1.533	3.20	15.533	2.66	21.53	1.07
3.567	1.15	1.567	3.20	15.567	2.66	21.57	1.07
3.600	1.15	1.600	3.20	15.600	2.66	21.60	1.07
3.633	1.15	1.633	3.20	15.633	2.66	21.63	1.07
3.667	1.15	1.667	3.20	15.667	2.66	21.67	1.07
3.700	1.15	1.700	3.20	15.700	2.66	21.70	1.07
3.733	1.15	1.733	3.20	15.733	2.66	21.73	1.07
3.767	1.15	1.767	3.20	15.767	2.66	21.77	1.07
3.800	1.15	1.800	3.20	15.800	2.66	21.80	1.07
3.833	1.15	1.833	3.20	15.833	2.66	21.83	1.07
3.867	1.15	1.867	3.20	15.867	2.66	21.87	1.07
3.900	1.15	1.900	3.20	15.900	2.66	21.90	1.07
3.933	1.15	1.933	3.20	15.933	2.66	21.93	1.07
3.967	1.15	1.967	3.20	15.967	2.66	21.97	1.07
4.000	1.15	1.000	3.20	16.000	2.66	22.00	1.07
4.033	1.15	1.033	3.20	16.033	2.66	22.03	1.07
4.067	1.15	1.067	3.20	16.067	2.66	22.07	1.07
4.100	1.15	1.100	3.20	16.100	2.66	22.10	1.07
4.133	1.15	1.133	3.20	16.133	2.66	22.13	1.07
4.167	1.15	1.167	3.20	16.167	2.66	22.17	1.07
4.200	1.15	1.200	3.20	16.200	2.66	22.20	1.07
4.233	1.15	1.233	3.20	16.233	2.66	22.23	1.07
4.267	1.15	1.267	3.20	16.267	2.66	22.27	1.07
4.300	1.15	1.300	3.20	16.300	2.66	22.30	1.07
4.333	1.15	1.333	3.20	16.333	2.66	22.33	1.07
4.367	1.15	1.367	3.20	16.367	2.66	22.37	1.07
4.400	1.15	1.400	3.20	16.400	2.66	22.40	1.07
4.433	1.15	1.433	3.20	16.433	2.66	22.43	1.07
4.467	1.15	1.467	3.20	16.467	2.66	22.47	1.07
4.500	1.15	1.500	3.20	16.500	2.66	22.50	1.07
4.533	1.15	1.533	3.20	16.533	2.66	22.53	1.07
4.567	1.15	1.567	3.20	16.567	2.66	22.57	1.07
4.600	1.15	1.600	3.20	16.600	2.66	22.60	1.07
4.633	1.15	1.633	3.20	16.633	2.66	22.63	1.07
4.667	1.15	1.667	3.20	16.667	2.66	22.67	1.07
4.700	1.15	1.700	3.20	16.700	2.66	22.70	1.07
4.733	1.15	1.733	3.20	16.733	2.66	22.73	1.07
4.767	1.15	1.767	3.20	16.767	2.66	22.77	1.07
4.800	1.15	1.800	3.20	16.800	2.66	22.80	1.07
4.833	1.15	1.833	3.20	16.833	2.66	22.83	1.07
4.867	1.15	1.867	3.20	16.867	2.66	22.87	1.07
4.900	1.15	1.900	3.20	16.900	2.66	22.90	1.07
4.933	1.15	1.933	3.20	16.933	2.66	22.93	1.07
4.967	1.15	1.967	3.20	16.967	2.66	22.97	1.07
5.000	1.15	1.000	3.20	17.000	2.66	23.00	1.07
5.033	1.15	1.033	3.20	17.033	2.66	23.03	1.07
5.067	1.15	1.067	3.20	17.067	2.66	23.07	1.07
5.100	1.15	1.100	3.20	17.100	2.66	23.10	1.07
5.133	1.15	1.133	3.20	17.133	2.66	23.13	1.07
5.167	1.15	1.167	3.20	17.167	2.66	23.17	1.07
5.200	1.15	1.200	3.20	17.200	2.66	23.20	1.07

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5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.367	1.42	11.367	8.52	17.367	1.60	23.37	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07
5.500	1.42	11.500	8.56	17.500	1.60	23.50	1.07
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07
5.767	1.42	11.767	67.57	17.767	1.60	23.77	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07
5.967	1.42	11.967	98.04	17.967	1.60	23.97	1.07
6.000	1.42	12.000	97.92	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 52.06
over (min) 5.00 12.00
Storage Coeff. (min)= 2.56 (ii) 11.72 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.36 0.10

PEAK FLOW (cms)= 0.33 0.16 0.472 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 87.30 38.46 58.48
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.43 0.66

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0261):	2.94	0.472	12.00	58.48
+ ID2= 2 (0009):	60.73	3.408	12.60	52.15
ID = 3 (0005):	63.67	3.483	12.57	52.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	1.61	Curve Number (CN)=	75.0
NASHYD (0262)	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.40		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60

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1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 0.155

PEAK FLOW (cms)= 0.105 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 41.679
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.469

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0262):	1.69	0.105	12.25	41.68
+ ID2= 2 (0005):	63.67	3.483	12.57	52.36
ID = 3 (0007):	65.28	3.566	12.53	52.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH	V	V	I	SSSS	U	U	A	L	(v 6.1.2002)
	V	V	I	SS	U	U	A	A	L
	V	V	I	SS	U	U	AAAA	L	

HRP9-PR_2-100 YEAR.OUT

V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\6dc6f93a-a72b-43bc-bf5b-2afc05347271\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\6dc6f93a-a72b-43bc-bf5b-2afc05347271\scenar

DATE: 03/24/2023 TIME: 11:22:46

USER:

COMMENTS: _____

** SIMULATION : Run 04 **

| MASS STORM | Filename: C:\Users\AbirA\AppData
| | ata\Local\Temp\
| | 02805965-de5e-425b-8e40-fa97018006d7\cddf3d47
| Ptotal=103.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86	
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86	
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86	
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86	
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86	
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86	
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86	
2.00	1.86	8.00	2.06	14.00	8.46	20.00	1.86	
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24	
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24	
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24	
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24	
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24	
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24	
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24	
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24	
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24	
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24	
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24	
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24	
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24	
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24	
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24	
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24	

| CALIB |
| NASHYD (1060) | Area (ha)= 51.71 Curve Number (CN)= 82.0
| ID= 1 DT= 6.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.48

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.100 1.03 | 6.100 2.06 | 12.100 14.86 | 18.10 1.86
0.200 1.03 | 6.200 2.06 | 12.200 14.86 | 18.20 1.86
0.300 1.03 | 6.300 2.06 | 12.300 14.86 | 18.30 1.86
0.400 1.03 | 6.400 2.06 | 12.400 14.86 | 18.40 1.86

HRP9-PR_2-100 YEAR.OUT

0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.800	1.44	7.800	2.06	13.800	8.46	19.80	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.800	1.65	11.800	78.44	17.800	1.86	23.80	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
6.000	1.65	12.000	113.92	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 4.554 (i)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 62.628
TOTAL RAINFALL (mm)= 163.200
RUNOFF COEFFICIENT = 0.607

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0260) | Area (ha)= 9.02
| ID= 1 DT= 3.0 min | Total Imp(%)= 55.00 Dir. Conn.(%)= 55.00

IMPERVIOUS	(ha)=	4.96	4.06
PERVIOUS (i)			
Surface Area	(mm)=	1.50	5.00
Dep. Storage	(%)=	2.00	2.00
Average Slope	(m)=	245.22	40.00
Length	=	0.013	0.250
Mannings n			

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.050 1.03 | 6.050 2.06 | 12.050 14.86 | 18.05 1.86

HRP-PR-2-100 Year Out							
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.800	1.65	10.800	6.40	17.800	1.86	22.80	1.24
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24
nten. (mm/hr) = 113.93 55.37							
over (min) 6.00 12.00							
coeff. (min) = 3.37 (ii) 9.56 (ii)							
Tpeak (min) = 6.00 12.00							
peak (cms) = 0.26 0.11							
**TOTALS*							
(cms) = 1.55 0.45 1.962 (iii)							
EAK (hrs) = 12.00 12.05 12.00							
LEAK (mm) = 101.70 42.10 74.88							
INFALL (mm) = 103.20 103.20 103.20							
EFFICIENT = 0.99 0.41 0.73							
PROCEDURE SELECTED FOR PEROUS LOSSES:							
* = 66.0 Ia = Dep. Storage (Above)							
E STEP (DT) SHOULD BE SMALLER OR EQUAL							
N THE STORAGE COEFFICIENT.							
K FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

0003)							
3	AREA	QPEAK	TPEAK	R.V.			
	(ha)	(cms)	(hrs)	(mm)			
(1660):	51.71	4.554	12.30	62.63			
(0260):	9.92	1.962	12.00	74.88			
(0003):	60.73	5.001	12.05	64.45			
PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.							

0009)							
T = 1	OVERFLOW IS OFF						
	OUTFLOW	STORAGE	OUTFLOW	STORAGE			
	(cms)	(ha.m.)	(cms)	(ha.m.)			
	0.0000	0.0000	0.4500	0.5700			
	0.0200	0.0400	0.9300	0.5750			
	0.0350	0.1540	1.5000	0.6500			
	0.0450	0.2340	2.0000	0.7300			
	0.0540	0.3100	5.2000	1.0200			
	0.0610	0.4000	7.7000	1.2000			
	0.0680	0.5000	0.0000	0.0000			
	AREA	QPEAK	TPEAK	R.V.			
	(ha)	(cms)	(hrs)	(mm)			
= 2 (0003)	60.730	5.001	12.05	64.45			
= 1 (0009)	60.730	4.320	12.55	64.44			
PEAK FLOW REDUCTION [Qout/Qin](%) = 86.39							
TIME SHIFT OF PEAK FLOW (min) = 30.00							
MAXIMUM STORAGE USED (ha.m.) = 0.9224							

HRP9-PR_2-100 YEAR.OUT

CALIB
STANDHYD (0261)
ID= 1 DT= 2.0 min

Area (ha)= 2.94
Total Imp(%)= 41.00 Dir. Conn.(%)= 41.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.21 1.73
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 140.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86		
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.500	1.03	6.500	2.06	12.500	14.85	18.50	1.86		
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86		
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86		
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86		
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86		
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86		
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86		
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86		
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86		
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86		
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86		
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86		
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86		
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86		
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24		
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		

HRP9-PR_2-100 YEAR.OUT

2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24
4.000	1.65	10.000	4.75	16.000	1.86	22.00	1.24
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24
5.000	1.65	11.000	9.91	17.000	1.86	23.00	1.24
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24

HRP9-PR_2-100 YEAR.OUT									
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24		
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24		
5.500	1.65	11.500	9.95	17.500	1.86	23.50	1.24		
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24		
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24		
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24		
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24		
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)= 113.93 66.06
over (min) 5.00 12.00
Storage Coeff. (min)= 2.41 (ii) 10.16 (iii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.37 0.10

PEAK FLOW (cms)= 0.38 0.22 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 101.70 48.95 70.58
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.47 0.68

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0261):	2.94	0.579	12.00	70.58
+ ID2= 2 (0009):	60.73	4.320	12.55	64.44
=====				
ID = 3 (0005):	63.67	4.418	12.53	64.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (0262)			
ID= 1 DT= 5.0 min	Area (ha)=	1.61	Curve Number (CN)= 75.0
	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.40	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr		
0.003	1.03	6.083	2.06	12.083	14.87	18.08	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86		

HRP9-PR_2-100 YEAR.OUT									
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86		
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86		
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24		
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24		
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24		
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24		

Unit Hyd Qpeak (cms)= 0.155

PEAK FLOW (cms)= 0.134 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 52.727
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.511

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0262):	1.61	0.134	12.25	52.73
+ ID2= 2 (0005):	63.67	4.418	12.53	64.64
=====				
ID = 3 (0007):	65.28	4.526	12.53	64.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

HRP9-PR_2-100 YEAR.OUT

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\Abir\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\b7ad2dec-afa5-4ca3-91f9-38f5b9b986fe\scenar
Summary filename: C:\Users\Abir\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\b7ad2dec-afa5-4ca3-91f9-38f5b9b986fe\scenar

DATE: 03/24/2023 TIME: 11:22:47

USER:

COMMENTS: _____

** SIMULATION : Run 05

MASS STORM
Filename: C:\Users\Abir\AppData\Local\Temp\
b2865965-de5e-425b-8e40-fa97018006d7\95accb52
Ptotal=115.20 mm
Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07	
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07	
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07	
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07	
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07	
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07	
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07	
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07	
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38	
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38	
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38	
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38	
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38	
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38	
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38	
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38	
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38	
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38	
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38	
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38	
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38	
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38	
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38	
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38	

CALIB
NASHYD (1060)
ID= 1 DT= 6.0 min
Area (ha)= 51.71
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.48
Curve Number (CN)= 82.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07	
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07	
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07	
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07	
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07	
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07	
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07	

HRP9-PR_2-100 YEAR.OUT

0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07	
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07	
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07	
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07	
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07	
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07	
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07	
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07	
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07	
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07	
1.800	1.61	7.800	2.30	13.800	9.45	19.80	2.07	
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07	
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07	
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38	
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38	
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38	
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38	
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38	
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38	
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38	
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38	
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38	
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38	
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38	
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38	
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38	
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38	
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38	
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38	
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38	
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38	
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38	
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38	
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38	
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38	
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38	
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38	
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38	
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38	
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38	
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38	
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38	
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38	
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38	
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38	
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38	
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38	
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38	
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38	
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38	
5.800	1.84	11.800	87.56	17.800	2.07	23.80	1.38	
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38	
6.000	1.84	12.000	127.17	18.000	2.07	24.00	1.38	

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 5.330 (i)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 73.167
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.635

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0260)
ID= 1 DT= 3.0 min
Area (ha)= 9.02
Total Imp(%)= 55.00
Dir. Conn.(%)= 55.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.96
Dep. Storage (mm)= 1.50
Average Slope (%)= 2.00
Length (m)= 245.22
Mannings n = 0.013
4.00
5.00
2.00
40.00
0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07	
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07	
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07	
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07	

HRP9-PR_2-100 YEAR.OUT									
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		

HRP9-PR_2-100 YEAR.OUT							
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38
Max.Eff.Inten.(mm/hr)= 127.18 66.27							
over (min) 6.00 12.00							
Storage Coeff. (min)= 3.23 (ii) 9.14 (ii)							
Unit Hyd. Tpeak (min)= 6.00 12.00							
Unit Hyd. peak (cms)= 0.26 0.11							
TOTALS							
PEAK FLOW (cms)= 1.73 0.55 2.239 (iii)							
TIME TO PEAK (hrs)= 12.00 12.05 12.00							
RUNOFF VOLUME (mm)= 113.70 50.38 85.21							
TOTAL RAINFALL (mm)= 115.20 115.20 115.20							
RUNOFF COEFFICIENT = 0.99 0.44 0.74							
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:							
CN* = 66.0 Ia = Dep. Storage (Above)							
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.							
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

ADD HYD (0003)							
1 + 2 = 3							

		AREA	QPEAK	TPEAK	R.V.		
		(ha)	(cms)	(hrs)	(mm)		
ID1= 1 (1060):	51.71	5.330	12.30	73.17			
+ ID2= 2 (0260):	9.02	2.239	12.00	85.21			
=====							
ID = 3 (0003):	60.73	5.827	12.05	74.96			
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.							

RESERVOIR(0009)							
IN= 2---> OUT= 1							
DT= 5.0 min							

		OUTFLOW	STORAGE	OUTFLOW	STORAGE		
		(cms)	(ha.m.)	(cms)	(ha.m.)		
		0.0000	0.0000	0.4500	0.5700		
		0.0200	0.0400	0.9300	0.5750		
		0.0350	0.1540	1.5000	0.6500		
		0.0450	0.2340	2.6000	0.7300		
		0.0540	0.3160	5.2000	1.0200		
		0.0610	0.4000	7.7000	1.2000		
		0.0600	0.5000	0.0000	0.0000		
		AREA	QPEAK	TPEAK	R.V.		
		(ha)	(cms)	(hrs)	(mm)		
INFLOW : ID= 2 (0003)	60.730	5.827	12.05	74.96			
OUTFLOW: ID= 1 (0009)	60.730	5.088	12.55	74.95			
PEAK FLOW REDUCTION [Qout/Qin](%)= 87.32							
TIME SHIFT OF PEAK FLOW (min)= 30.00							
MAXIMUM STORAGE USED (ha.m.)= 1.0076							

CALIB							

| STANDHYD (0261)| Area (ha)= 2.94
|ID= 1 DT= 2.0 min | Total Imp(%)= 41.00 Dir. Conn.(%)= 41.00

IMPERVIOUS PERVIOUS (I)
Surface Area (ha)= 1.21
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 140.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07		
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07		
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07		
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07		
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07		
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07		
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07		
1.000	1.15	7.000	2.30	13.000	8.51	19.00	2.07		
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07		
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07		
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07		
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07		
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.767	1.61	7.767	2.30	13.767	9.45	19.77	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		

HRP9-PR_2-100 YEAR.OUT									
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38		
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38		
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38		
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38		
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38		
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38		
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38		
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38		
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38		
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38		
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38		
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38		
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38		
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38		
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38		

HRP9-PR_2-100 YEAR.OUT

5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.500	1.84	11.500	11.10	17.500	2.07	23.50	1.38
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.767	1.84	11.767	87.66	17.767	2.07	23.77	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38
6.000	1.84	12.000	127.03	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 78.21
over (min) 5.00 10.00
Storage Coeff. (min)= 2.31 (ii) 9.72 (ii)
Unit Hyd. Tpeak (min)= 4.00 10.00
Unit Hyd. peak (cms)= 0.38 0.12

TOTALS
PEAK FLOW (cms)= 0.42 0.27
TIME TO PEAK (hrs)= 12.00 12.07
RUNOFF VOLUME (mm)= 113.70 80.11
TOTAL RAINFALL (mm)= 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.50 0.70

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005) |
1 + 2 = 3
ID1= 1 (0261): 2.94 0.683 12.00 80.90
+ ID2= 2 (0009): 60.73 5.088 12.55 74.95
=====

ID = 3 (0005): 63.67 5.199 12.53 75.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0262) | Area (ha)= 1.61 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.40

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07

HRP9-PR_2-100 YEAR.OUT

1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Tpeak (cms)= 0.155

PEAK FLOW (cms)= 0.159 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 62.311
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.541

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007) |
1 + 2 = 3
ID1= 1 (0262): 1.61 0.159 12.25 62.31
+ ID2= 2 (0005): 63.67 5.199 12.53 75.14
=====

ID = 3 (0007): 65.28 5.327 12.50 74.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y Y M M 0 0

HRP9-PR_2-100 YEAR.OUT

000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\15bd8ba3-4a5a-4940-ad29-b05a3f09e941\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\15bd8ba3-4a5a-4940-ad29-b05a3f09e941\scenar

DATE: 03/24/2023 TIME: 11:22:46

USER:

COMMENTS: _____

** SIMULATION : Run 06 **

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\h2865965-de5e-425b-8e40-fa97018006d7\2985551a
| | ata\Local\Temp\h2865965-de5e-425b-8e40-fa97018006d7\2985551a
| Ptotal=127.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53

| CALIB |
| NASHYD (1060) | Area (ha)= 51.71 Curve Number (CN)= 82.0
| ID= 1 DT= 6.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| | U.H. Tp(hrs)= 0.48

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29

HRP9-PR_2-100 YEAR.OUT

1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.800	1.78	7.800	2.54	13.800	10.43	19.80	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.800	2.04	11.800	96.68	17.800	2.29	23.80	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 6.117 (1)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 83.902
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.660

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0260) | Area (ha)= 9.02
| ID= 1 DT= 3.0 min | Total Imp(%)= 55.00 Dir. Conn.(%)= 55.00

	IMPERVIOUS	PERVIOUS (1)
Surface Area (ha)=	4.96	4.06
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	245.22	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29

							HRP9-PR-2-100	YEAR.	OUT
	4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53	
	4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53	
	4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53	
	4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53	
	4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53	
	5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53	
	5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53	
	5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53	
	5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53	
	5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53	
	5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53	
	5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53	
	5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53	
	5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53	
	5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53	
	5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53	
	5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53	
	5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53	
	5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53	
	5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53	
	5.750	2.04	11.750	52.90	17.750	2.29	23.75	1.53	
	5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53	
	5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53	
	5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53	
	5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53	
	6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53	
Max.Eff.Inten.(mm/hr)=			140.43		77.60				
over	(min)		6.00		9.00				
Storage Coeff. (min)=			3.10 (ii)		8.79 (ii)				
Unit Hyd. Tpeak (min)=			6.00		9.00				
Unit Hyd. peak (cms)=			0.27		0.13				
							TOTALS		
PEAK FLOW (cms)=			1.92		0.68		2.581 (iii)		
TIME TO PEAK (hrs)=			12.00		12.05		12.00		
RUNOFF VOLUME (mm) =			125.70		59.81		95.69		
TOTAL RAINFALL (mm) =			127.20		127.20		127.20		
RUNOFF COEFFICIENT =			0.99		0.46		0.75		
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN"	=	66.0	Ia = Dep.	STORGE	(Above)				
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0003)			AREA	QPEAK	TPEAK		R.V.		
1 + 2 = 3			(ha)	(cms)	(hrs)		(mm)		
ID=1 1 (1060):		51.71	6.117	12.30	83.90				
+ ID2= 2 (0260):		9.02	2.581	12.00	95.69				
ID = 3 (0003):		60.73	6.698	12.05	85.65				
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

RESERVOIR(0009)			OVERFLOW IS OFF						
IN= 2---> OUT= 1									
DT= 5.0 min									
			OUTFLOW	STORAGE	OUTFLOW	STORAGE			
			(cms)	(ha.m.)	(cms)	(ha.m.)			
			0.0000	0.0000	0.4500	0.5700			
			0.0200	0.0400	0.9300	0.5750			
			0.0350	0.1540	1.5000	0.6500			
			0.0450	0.2340	2.6000	0.7300			
			0.0540	0.3160	5.2000	1.0200			
			0.0610	0.4000	7.7000	1.2000			
			0.0600	0.5000	0.0000	0.0000			
			AREA	QPEAK	TPEAK		R.V.		
			(ha)	(cms)	(hrs)		(mm)		
INFLOW : ID= 2 (0003)		60.730	6.698	12.05			85.65		
OUTFLOW: ID= 1 (0009)		60.730	5.998	12.50			85.64		
PEAK FLOW REDUCTION [Qout/Qin](%)= 89.55									
TIME SHIFT OF PEAK FLOW (min)= 27.00									
MAXIMUM STORAGE USED (ha.m.)= 1.0783									

CALIB									
STANDHYD (0261)			Area (ha)=	2.94					
ID= 1 DT= 2.0 min			Total Imp(%)=	41.00	Dir. Conn.(%)=	41.00			

HRP9-PR_2-100 YEAR.OUT					
	IMPERVIOUS	PERVIOUS (i)			
Surface Area	(ha)= 1.21	1.73			
Dep. Storage	(mm)= 1.50	5.00			
Average Slope	(%)= 2.00	2.00			
Length	(m)= 140.00	40.00			
Mannings n	= 0.013	0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29
0.500	1.27	6.500	2.54	12.500	18.30	18.50	2.29
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.767	1.78	7.767	2.54	13.767	10.43	19.77	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53

HRP9-PR_2-100 YEAR.OUT							
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53

HRP9-PR_2-100 YEAR.OUT									
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53		
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53		
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53		
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53		
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53		
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53		
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53		
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53		
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53		
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53		
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53		
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53		
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53		
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53		
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53		
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53		
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53		
Max.Eff.Inten.(mm/hr)= 140.43 90.68 5.00 19.00									
Storage Coeff. (min)= 2.22 (ii) 9.34 (iii)									
Unit Hyd. Tpeak (min)= 4.00 10.00									
Unit Hyd. peak (cms)= 0.39 0.12									
PEAK FLOW (cms)= 0.47 0.32 0.775 (iii)									
TIME TO PEAK (hrs)= 12.00 12.07									
RUNOFF VOLUME (mm)= 125.70 67.57 91.40									
TOTAL RAINFALL (mm)= 127.20 127.20									
RUNOFF COEFFICIENT = 0.99 0.53 0.72									
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL									
THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0005)				
1	2	3	AREA (ha)	QPEAK (cms)
ID1= 1 (0261):			2.94	0.775
+ ID2= 2 (0000):			60.73	5.998
=====				
ID = 3 (0005):			63.67	6.142
=====				
			12.50	85.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (0262)	Area (ha)=	1.61	Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.40	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		

HRP9-PR_2-100 YEAR.OUT									
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53		
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53		
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53		
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53		
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53		
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53		
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53		
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53		

Unit Hyd Qpeak (cms)= 0.155

PEAK FLOW (cms)=	0.184 (i)
TIME TO PEAK (hrs)=	12.250
RUNOFF VOLUME (mm)=	72.176
TOTAL RAINFALL (mm)=	127.200
RUNOFF COEFFICIENT =	0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1	2	3	AREA (ha)	QPEAK (cms)
ID1= 1 (0262):			1.61	0.184
+ ID2= 2 (0005):			63.67	6.142
=====				
ID = 3 (0007):			65.28	6.296
=====				
			12.50	85.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

D.4 VO Output Regional Storm



HRP1-3-PR_50-100 YEAR-2096 IDF.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\54bf8634-0509-412d-8c7d-626ff454bd37\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\54bf8634-0509-412d-8c7d-626ff454bd37\scenar

DATE: 03/24/2023 TIME: 09:47:19

USER:

COMMENTS: _____

** SIMULATION : Run 11

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\94921029-8673-46b1-b675-2241c83b1ebf\5fdf4178
Ptotal=124.80 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.25	6.25	2.50	12.25	17.97	18.25	2.25	
0.50	1.25	6.50	2.50	12.50	17.97	18.50	2.25	
0.75	1.25	6.75	2.50	12.75	9.24	18.75	2.25	
1.00	1.25	7.00	2.50	13.00	9.24	19.00	2.25	
1.25	1.25	7.25	2.50	13.25	1.75	19.25	2.25	
1.50	1.25	7.50	2.50	13.50	1.75	19.50	2.25	
1.75	1.25	7.75	2.50	13.75	10.23	19.75	2.25	
2.00	2.25	8.00	2.50	14.00	10.23	20.00	2.25	
2.25	1.62	8.25	3.37	14.25	3.74	20.25	1.50	
2.50	1.62	8.50	3.37	14.50	3.74	20.50	1.50	
2.75	1.62	8.75	3.37	14.75	3.74	20.75	1.50	
3.00	1.62	9.00	3.37	15.00	3.74	21.00	1.50	
3.25	1.62	9.25	3.00	15.25	3.74	21.25	1.50	
3.50	1.62	9.50	3.00	15.50	3.74	21.50	1.50	
3.75	1.62	9.75	4.49	15.75	3.74	21.75	1.50	
4.00	1.62	10.00	4.49	16.00	3.74	22.00	1.50	
4.25	2.00	10.25	5.74	16.25	2.25	22.25	1.50	
4.50	2.00	10.50	5.74	16.50	2.25	22.50	1.50	
4.75	2.00	10.75	7.74	16.75	2.25	22.75	1.50	
5.00	2.00	11.00	7.74	17.00	2.25	23.00	1.50	
5.25	2.00	11.25	11.98	17.25	2.25	23.25	1.50	
5.50	2.00	11.50	11.98	17.50	2.25	23.50	1.50	
5.75	2.00	11.75	51.92	17.75	2.25	23.75	1.50	
6.00	2.00	12.00	137.78	18.00	2.25	24.00	1.50	

CALIB
NASHYD (1020) Area (ha)= 24.22 Curve Number (CN)= 79.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.53

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25	
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25	
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25	
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25	
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25	
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25	
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25	
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25	
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25	
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25	
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25	
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25	
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25	
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25	
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25	
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25	
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25	
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25	
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25	
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25	
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25	
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25	
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25	
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25	
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50	
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50	
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50	
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50	
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50	
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50	
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50	
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50	
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50	
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50	
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50	
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50	
3.083	1.62	9.083	3.00	15.083	3.74	21.08	1.50	
3.167	1.62	9.167	3.00	15.167	3.74	21.17	1.50	
3.250	1.62	9.250	3.00	15.250	3.74	21.25	1.50	
3.333	1.62	9.333	3.00	15.333	3.74	21.33	1.50	
3.417	1.62	9.417	3.00	15.417	3.74	21.42	1.50	
3.500	1.62	9.500	3.00	15.500	3.74	21.50	1.50	
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50	
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50	
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50	
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50	
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50	
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50	
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50	
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50	
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50	
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50	
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50	
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50	
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50	
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50	
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50	
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50	
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50	
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50	
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50	
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50	
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50	
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50	
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50	
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50	
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50	
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50	
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50	
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50	
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50	
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50	

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 2.420 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 76.615
TOTAL RAINFALL (mm)= 124.800
RUNOFF COEFFICIENT = 0.614

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTEPIPE(0014) PIPE Number = 1.00

IN= 2--> OUT= 1 | Width (mm)=2400.00
DT= 5.0 min | Length (m)= 207.00
Slope (m/m)= 0.003
Manning n = 0.020

HRP1-3-PR_50-100 YEAR-2096 IDF.OUT
Height (mm)= 900.00

<----- TRAVEL TIME TABLE ----->						
DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME min		
0.05	.235E+02	0.0	0.35	9.87		
0.09	.471E+02	0.1	0.54	6.37		
0.14	.706E+02	0.2	0.69	4.98		
0.19	.941E+02	0.4	0.82	4.21		
0.24	.118E+03	0.5	0.93	3.71		
0.28	.141E+03	0.7	1.03	3.36		
0.33	.165E+03	0.9	1.12	3.09		
0.38	.188E+03	1.1	1.20	2.89		
0.43	.212E+03	1.3	1.27	2.72		
0.47	.235E+03	1.5	1.33	2.59		
0.52	.259E+03	1.7	1.40	2.47		
0.57	.282E+03	2.0	1.45	2.38		
0.62	.306E+03	2.2	1.51	2.29		
0.66	.329E+03	2.5	1.55	2.22		
0.71	.353E+03	2.7	1.60	2.16		
0.76	.377E+03	3.0	1.64	2.10		
0.81	.400E+03	3.3	1.68	2.05		
0.85	.424E+03	3.5	1.72	2.00		
0.90	.447E+03	3.8	1.76	1.96		
<---- hydrograph ----> <-pipe / channel->						
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (1020)	24.22	2.42	12.42	76.61	0.65	1.54
OUTFLOW: ID= 1 (0014)	24.22	2.42	12.42	76.61	0.65	1.54

STANDHYD (0220) | Area (ha)= 10.65
ID= 1 DT= 3.0 min | Total Imp(%)= 55.00 Dir. Conn.(%)= 55.00

Surface Area	(ha)=	5.86	4.79
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	266.46	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.25 6.050	2.50 12.050	17.97 18.05	2.25			
0.100	1.25 6.100	2.50 12.100	17.97 18.10	2.25			
0.150	1.25 6.150	2.50 12.150	17.97 18.15	2.25			
0.200	1.25 6.200	2.50 12.200	17.97 18.20	2.25			
0.250	1.25 6.250	2.50 12.250	17.97 18.25	2.25			
0.300	1.25 6.300	2.50 12.300	17.97 18.30	2.25			
0.350	1.25 6.350	2.50 12.350	17.97 18.35	2.25			
0.400	1.25 6.400	2.50 12.400	17.97 18.40	2.25			
0.450	1.25 6.450	2.50 12.450	17.97 18.45	2.25			
0.500	1.25 6.500	2.50 12.500	17.97 18.50	2.25			
0.550	1.25 6.550	2.50 12.550	9.24 18.55	2.25			
0.600	1.25 6.600	2.50 12.600	9.24 18.60	2.25			
0.650	1.25 6.650	2.50 12.650	9.24 18.65	2.25			
0.700	1.25 6.700	2.50 12.700	9.24 18.70	2.25			
0.750	1.25 6.750	2.50 12.750	9.24 18.75	2.25			
0.800	1.25 6.800	2.50 12.800	9.24 18.80	2.25			
0.850	1.25 6.850	2.50 12.850	9.24 18.85	2.25			
0.900	1.25 6.900	2.50 12.900	9.24 18.90	2.25			
0.950	1.25 6.950	2.50 12.950	9.24 18.95	2.25			
1.000	1.25 7.000	2.50 13.000	9.23 19.00	2.25			
1.050	1.25 7.050	2.50 13.050	1.75 19.05	2.25			
1.100	1.25 7.100	2.50 13.100	1.75 19.10	2.25			
1.150	1.25 7.150	2.50 13.150	1.75 19.15	2.25			
1.200	1.25 7.200	2.50 13.200	1.75 19.20	2.25			
1.250	1.25 7.250	2.50 13.250	1.75 19.25	2.25			
1.300	1.25 7.300	2.50 13.300	1.75 19.30	2.25			
1.350	1.25 7.350	2.50 13.350	1.75 19.35	2.25			
1.400	1.25 7.400	2.50 13.400	1.75 19.40	2.25			
1.450	1.25 7.450	2.50 13.450	1.75 19.45	2.25			
1.500	1.25 7.500	2.50 13.500	1.75 19.50	2.25			
1.550	1.25 7.550	2.50 13.550	10.23 19.55	2.25			
1.600	1.25 7.600	2.50 13.600	10.23 19.60	2.25			
1.650	1.25 7.650	2.50 13.650	10.23 19.65	2.25			

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1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

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Max.Eff.Inten.(mm/hr)=	137.78	88.79	
over (min)	6.00	12.00	
Storage Coeff. (min)=	3.29 (ii)	9.02 (iii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.26	0.11	
			TOTALS
PEAK FLOW (cms)=	2.21	0.88	3.041 (iii)
TIME TO PEAK (hrs)=	12.00	12.05	12.00
RUNOFF VOLUME (mm)=	123.30	68.46	98.62
TOTAL RAINFALL (mm)=	124.80	124.80	124.80
RUNOFF COEFFICIENT =	0.99	0.55	0.79

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0014):	24.22	2.420	12.42	76.61
+ ID2= 2 (0220):	10.65	3.041	12.00	98.62
ID = 3 (0006):	34.87	4.221	12.00	83.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0200)	Area (ha)=	10.34	
ID= 1 DT= 3.0 min	Total Imp(%)=	50.00	Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.17	5.17
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	0.40
Length (m)=	262.55	40.00
Mannings n	=	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25		
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25		
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25		
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25		
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25		
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25		
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25		
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25		
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25		
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25		
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25		
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25		
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25		
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25		
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25		
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25		
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25		
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25		
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25		
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25		
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25		
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25		
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25		
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25		

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1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)=	137.78	88.79	
over (min)	6.00	12.00	

Storage Coeff. (min)= 3.26 (ii) 15.25 (ii)
Unit Hyd. Tpeak (min)= 6.00 18.00
Unit Hyd. peak (cms)= 0.26 0.07
TOTALS
PEAK FLOW (cms)= 1.95 0.74 2.505 (iii)
TIME TO PEAK (hrs)= 12.00 12.15 12.00
RUNOFF VOLUME (mm)= 123.30 68.45 95.88
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.77

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0201)
ID= 1 DT= 4.0 min
Area (ha)= 21.81
Total Imp(%)= 70.00
Dir. Conn.(%)= 70.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 15.27 6.54
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 381.31 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	1.25	6.067	2.50	12.067	17.99	18.07	2.25				
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25				
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25				
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25				
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25				
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25				
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25				
0.533	1.25	6.533	2.50	12.533	13.00	18.53	2.25				
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25				
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25				
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25				
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25				
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25				
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25				
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25				
1.067	1.25	7.067	2.50	13.067	1.75	19.07	2.25				
1.133	1.25	7.133	2.50	13.133	1.75	19.13	2.25				
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25				
1.267	1.25	7.267	2.50	13.267	1.75	19.27	2.25				
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25				
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25				
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25				
1.533	1.25	7.533	2.50	13.533	5.99	19.53	2.25				
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25				
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25				
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25				
1.800	2.00	7.800	2.50	13.800	10.23	19.80	2.25				
1.867	2.25	7.867	2.50	13.867	10.23	19.87	2.25				
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25				
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25				
2.067	1.62	8.067	3.37	14.067	3.75	20.07	1.50				
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50				
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50				
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50				
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50				
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50				
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50				
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50				
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50				
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50				
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50				
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50				
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50				
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50				
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50				
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50				
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50				
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50				
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50				
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50				
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50				

HRP1-3-PR_50-100 YEAR-2096 IDF.OUT
3.467 1.62 | 9.467 3.99 | 15.467 3.74 | 21.47 1.50
3.533 1.62 | 9.533 4.24 | 15.533 3.74 | 21.53 1.50
3.600 1.62 | 9.600 4.49 | 15.600 3.74 | 21.60 1.50
3.667 1.62 | 9.667 4.49 | 15.667 3.74 | 21.67 1.50
3.733 1.62 | 9.733 4.49 | 15.733 3.74 | 21.73 1.50
3.800 1.62 | 9.800 4.49 | 15.800 3.74 | 21.80 1.50
3.867 1.62 | 9.867 4.49 | 15.867 3.74 | 21.87 1.50
3.933 1.62 | 9.933 4.49 | 15.933 3.74 | 21.93 1.50
4.000 1.62 | 10.000 4.49 | 16.000 3.74 | 22.00 1.50
4.067 2.00 | 10.067 5.74 | 16.067 2.25 | 22.07 1.50
4.133 2.00 | 10.133 5.74 | 16.133 2.25 | 22.13 1.50
4.200 2.00 | 10.200 5.74 | 16.200 2.25 | 22.20 1.50
4.267 2.00 | 10.267 5.74 | 16.267 2.25 | 22.27 1.50
4.333 2.00 | 10.333 5.74 | 16.333 2.25 | 22.33 1.50
4.400 2.00 | 10.400 5.74 | 16.400 2.25 | 22.40 1.50
4.467 2.00 | 10.467 5.74 | 16.467 2.25 | 22.47 1.50
4.533 2.00 | 10.533 6.74 | 16.533 2.25 | 22.53 1.50
4.600 2.00 | 10.600 7.74 | 16.600 2.25 | 22.60 1.50
4.667 2.00 | 10.667 7.74 | 16.667 2.25 | 22.67 1.50
4.733 2.00 | 10.733 7.74 | 16.733 2.25 | 22.73 1.50
4.800 2.00 | 10.800 7.74 | 16.800 2.25 | 22.80 1.50
4.867 2.00 | 10.867 7.74 | 16.867 2.25 | 22.87 1.50
4.933 2.00 | 10.933 7.74 | 16.933 2.25 | 22.93 1.50
5.000 2.00 | 11.000 7.74 | 17.000 2.25 | 23.00 1.50
5.067 2.00 | 11.067 11.98 | 17.067 2.25 | 23.07 1.50
5.133 2.00 | 11.133 11.98 | 17.133 2.25 | 23.13 1.50
5.200 2.00 | 11.200 11.98 | 17.200 2.25 | 23.20 1.50
5.267 2.00 | 11.267 11.98 | 17.267 2.25 | 23.27 1.50
5.333 2.00 | 11.333 11.98 | 17.333 2.25 | 23.33 1.50
5.400 2.00 | 11.400 11.98 | 17.400 2.25 | 23.40 1.50
5.467 2.00 | 11.467 11.98 | 17.467 2.25 | 23.47 1.50
5.533 2.00 | 11.533 31.94 | 17.533 2.25 | 23.53 1.50
5.600 2.00 | 11.600 51.92 | 17.600 2.25 | 23.60 1.50
5.667 2.00 | 11.667 51.92 | 17.667 2.25 | 23.67 1.50
5.733 2.00 | 11.733 51.92 | 17.733 2.25 | 23.73 1.50
5.800 2.00 | 11.800 116.30 | 17.800 2.25 | 23.80 1.50
5.867 2.00 | 11.867 137.78 | 17.867 2.25 | 23.87 1.50
5.933 2.00 | 11.933 137.78 | 17.933 2.25 | 23.93 1.50
6.000 2.00 | 12.000 137.78 | 18.000 2.25 | 24.00 1.50

Max.Eff.Inten.(mm/hr)= 137.78 88.80
over (min) 5.00 12.00
Storage Coeff. (min)= 4.07 (ii) 8.50 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.27 0.12

TOTALS
PEAK FLOW (cms)= 5.74 1.23 6.917 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 123.30 68.46 106.85
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.86

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0200): 10.34 2.505 12.00 95.88
+ ID2= 2 (0201): 21.81 6.917 12.00 106.85
=====ID = 3 (0009): 32.15 9.420 12.00 103.51=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL
000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\Abira\AppData\Local\Civica\VHS\18b4af95-7c1b-43ad-8aec-1bb40ca06caf\b5b95f58-db93-40e1-9ec1-7f7219a27fda\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VHS\18b4af95-7c1b-43ad-8aec-1bb40ca06caf\b5b95f58-db93-40e1-9ec1-7f7219a27fda\scenar

DATE: 03/24/2023 TIME: 09:47:19

USER:

COMMENTS: _____

** SIMULATION : Run 12 **

[MASS STORM Filename: C:\Users\Abira\AppData
 ata\Local\Temp\
 94921029-8673-46b1-b675-2241c83b1ebf\c7ff0caf
[Ptotal=136.80 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.37	6.25	2.74	12.25	19.70	18.25	2.46	
0.50	1.37	6.50	2.74	12.50	19.70	18.50	2.46	
0.75	1.37	6.75	2.74	12.75	19.12	18.75	2.46	
1.00	1.37	7.00	2.74	13.00	18.12	19.00	2.46	
1.25	1.37	7.25	2.74	13.25	1.92	19.25	2.46	
1.50	1.37	7.50	2.74	13.50	1.92	19.50	2.46	
1.75	1.37	7.75	2.74	13.75	11.22	19.75	2.46	
2.00	2.46	8.00	2.74	14.00	11.22	20.00	2.46	
2.25	1.78	8.25	3.69	14.25	4.10	20.25	1.64	
2.50	1.78	8.50	3.69	14.50	4.10	20.50	1.64	
2.75	1.78	8.75	3.69	14.75	4.10	20.75	1.64	
3.00	1.78	9.00	3.69	15.00	4.10	21.00	1.64	
3.25	1.78	9.25	4.38	15.25	4.10	21.25	1.64	
3.50	1.78	9.50	4.38	15.50	4.10	21.50	1.64	
3.75	1.78	9.75	4.92	15.75	4.10	21.75	1.64	
4.00	1.78	10.00	4.92	16.00	4.10	22.00	1.64	
4.25	2.19	10.25	6.29	16.25	2.46	22.25	1.64	
4.50	2.19	10.50	6.29	16.50	2.46	22.50	1.64	
4.75	2.19	10.75	8.48	16.75	2.46	22.75	1.64	
5.00	2.19	11.00	8.48	17.00	2.46	23.00	1.64	
5.25	2.19	11.25	13.13	17.25	2.46	23.25	1.64	
5.50	2.19	11.50	13.13	17.50	2.46	23.50	1.64	
5.75	2.19	11.75	56.91	17.75	2.46	23.75	1.64	
6.00	2.19	12.00	151.03	18.00	2.46	24.00	1.64	

[CALIB]
[NASHYD (1020)] Area (ha)= 24.22 Curve Number (CN)= 79.0
[ID= 1 DT= 5.0 min] Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.53

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46	
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46	
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46	
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46	
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46	
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46	
0.583	1.37	6.583	2.74	12.583	19.12	18.58	2.46	
0.667	1.37	6.667	2.74	12.667	18.12	18.67	2.46	
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46	
0.833	1.37	6.833	2.74	12.833	18.12	18.83	2.46	
0.917	1.37	6.917	2.74	12.917	18.12	18.92	2.46	
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46	
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46	
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46	

1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.11	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 1.755

PEAK FLOW (cms)= 2.755 (l)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 87.149
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.637

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

[ROUTEPIPE(0014)] PIPE Number = 1.00
[IN= 2 ---> OUT= 1] Width (mm)=2400.00 Height (mm)= 900.00
[DT= 5.0 min] Length (m)= 207.00

Slope (m/m)= 0.003
Manning n = 0.020

----- TRAVEL TIME TABLE ----->

DEPTH	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(cu.m.)	(cms)	(m/s)	min
0.05	.235E+02	0.0	0.35	9.87
0.09	.471E+02	0.1	0.54	6.37
0.14	.706E+02	0.2	0.69	4.98
0.19	.941E+02	0.4	0.82	4.21
0.24	.118E+03	0.5	0.93	3.71
0.28	.141E+03	0.7	1.03	3.36
0.33	.165E+03	0.9	1.12	3.09

HRP1-3-PR_50-100 YEAR-2096 IDF.OUT									
0.38	.188E+03	1.1	1.20	2.89					
0.43	.212E+03	1.3	1.27	2.72					
0.47	.235E+03	1.5	1.33	2.59					
0.52	.259E+03	1.7	1.40	2.47					
0.57	.282E+03	2.0	1.45	2.38					
0.62	.306E+03	2.2	1.51	2.29					
0.66	.329E+03	2.5	1.55	2.22					
0.71	.353E+03	2.7	1.60	2.16					
0.76	.377E+03	3.0	1.64	2.10					
0.81	.400E+03	3.3	1.68	2.05					
0.85	.424E+03	3.5	1.72	2.00					
0.90	.447E+03	3.8	1.76	1.96					
<---- hydrograph ---->									
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	<-pipe / channel-->		
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)			
INFLOW : ID= 2 (1020)	24.22	2.75	12.42	87.15	0.72	1.60			
OUTFLOW: ID= 1 (0014)	24.22	2.76	12.42	87.15	0.72	1.61			

CALIB	
STANDHYD (0220)	
ID= 1 DT= 3.0 min	

Area (ha)=	10.65
Total Imp(%)=	55.00
Dir. Conn.(%)=	55.00

IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.86 4.79
Dep. Storage (mm)=	1.50 1.50
Average Slope (%)=	2.00 2.00
Length (m)=	266.46 40.00
Mannings n	= 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46		
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46		
0.550	1.37	6.550	2.74	12.550	18.12	18.55	2.46		
0.600	1.37	6.600	2.74	12.600	18.12	18.60	2.46		
0.650	1.37	6.650	2.74	12.650	18.12	18.65	2.46		
0.700	1.37	6.700	2.74	12.700	18.12	18.70	2.46		
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46		
0.800	1.37	6.800	2.74	12.800	18.12	18.80	2.46		
0.850	1.37	6.850	2.74	12.850	18.12	18.85	2.46		
0.900	1.37	6.900	2.74	12.900	18.12	18.90	2.46		
0.950	1.37	6.950	2.74	12.950	18.12	18.95	2.46		
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46		
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46		
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46		
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46		
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46		
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64		
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64		
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		

HRP1-3-PR_50-100 YEAR-2096 IDF.OUT									
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64		
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64		
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64		
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64		
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64		
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64		
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64		
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64		
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64		
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64		
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64		
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64		
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64		
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64		
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64		
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64		
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64		
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64		
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64		
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64		
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64		
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64		
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64		
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64		
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64		
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64		
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64		
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64		
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64		
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64		
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64		
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64		
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64		
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64		
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64		
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64		
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64		
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64		
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64		
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64		
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64		
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64		
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64		
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64		
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64		
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64		
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64		
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64		
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64		
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64		
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64		
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64		
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64		
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64		
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64		
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64		
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64		
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64		
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64		
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64		
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64		
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64		
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64		
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64		
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64		
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64		
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64		
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64		
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64		
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64		
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64		
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64		
Max. Eff. Inten. (mm/hr)=			151.03	101.33					
over (min)			6.00	9.00					
Storage Coeff. (min)=			3.17 (ii)	8.69 (ii)					
Unit Hyd. Tpeak (min)=			6.00	9.00					
Unit Hyd. peak (cms)=			0.27	0.13					
					TOTALS				
PEAK FLOW (cms)=			2.43	1.06	3.476 (iii)				
TIME TO PEAK (hrs)=			12.00	12.05	12.00				
RUNOFF VOLUME (mm)=			135.30	78.20	109.61				
TOTAL RAINFALL (mm)=			136.80	136.80	136.80				
RUNOFF COEFFICIENT =			0.99	0.57	0.80				

HRP1-3-PR_50-100 YEAR-2096 IDF.OUT
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)				
1	2	3		
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0014):	24.22	2.757	12.42	87.15
+ ID2= 2 (0220):	10.65	3.476	12.00	109.61
ID = 3 (0006):	34.87	4.843	12.00	94.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0200)			
ID= 1 DT= 3.0 min	Area (ha)=	10.34	
	Total Imp(%)=	50.00	Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.17	5.17
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	0.40
Length (m)=	262.55	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.37	6.950	2.74	12.050	19.70	18.05	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46		
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46		
0.550	1.37	6.550	2.74	12.550	19.12	18.55	2.46		
0.600	1.37	6.600	2.74	12.600	18.12	18.60	2.46		
0.650	1.37	6.650	2.74	12.650	18.12	18.65	2.46		
0.700	1.37	6.700	2.74	12.700	18.12	18.70	2.46		
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46		
0.800	1.37	6.800	2.74	12.800	18.12	18.80	2.46		
0.850	1.37	6.850	2.74	12.850	18.12	18.85	2.46		
0.900	1.37	6.900	2.74	12.900	18.12	18.90	2.46		
0.950	1.37	6.950	2.74	12.950	18.12	18.95	2.46		
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46		
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46		
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46		
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46		
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46		
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64		
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64		
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64		
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64		
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64		

HRP1-3-PR_50-100 YEAR-2096 IDF.OUT									
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64		
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64		
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64		
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64		
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64		
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64		
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64		
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64		
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64		
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64		
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64		
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64		
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64		
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64		
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64		
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64		
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64		
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64		
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64		
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64		
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64		
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64		
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64		
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64		
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64		
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64		
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64		
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64		
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64		
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64		
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64		
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64		
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64		
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64		
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64		
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64		
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64		
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64		
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64		
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64		
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64		
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64		
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64		
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64		
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64		
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64		
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64		
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64		
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64		
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64		
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64		
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64		
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64		
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64		
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64		
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64		
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64		
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64		
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64		
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64		
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64		
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64		
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64		
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64		
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64		
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64		
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64		
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64		
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64		

Max.Eff.Inten.(mm/hr)=	151.03	101.33
over (min)	6.00	15.00
Storage Coeff. (min)=	3.14 (ii)	14.52 (ii)
Unit Hyd. Tpeak (min)=	6.00	15.00
Unit Hyd. peak (cms)=	0.27	0.08
PEAK FLOW (cms)=	2.15	0.08
TIME TO PEAK (hrs)=	12.00	12.10
RUNOFF VOLUME (mm)=	135.30	78.20
TOTAL RAINFALL (mm)=	136.80	136.80
RUNOFF COEFFICIENT =	0.99	0.57

HRP1-3-PR 50-100 YEAR-2096 IDF.OUT

4.467	2.19	18.467	6.29	16.467	2.46	22.47	1.64
4.533	2.19	18.533	7.39	16.533	2.46	22.53	1.64
4.600	2.19	18.600	8.48	16.600	2.46	22.60	1.64
4.667	2.19	18.667	8.58	16.667	2.46	22.67	1.64
4.733	2.19	18.733	8.48	16.733	2.46	22.73	1.64
4.800	2.19	18.800	8.48	16.800	2.46	22.80	1.64
4.867	2.19	18.867	8.48	16.867	2.46	22.87	1.64
4.933	2.19	18.933	8.48	16.933	2.46	22.93	1.64
5.000	2.19	19.000	8.48	17.000	2.46	23.00	1.64
5.067	2.19	19.067	8.48	17.067	2.46	23.07	1.64
5.133	2.19	19.133	13.13	17.133	2.46	23.13	1.64
5.200	2.19	19.200	13.13	17.200	2.46	23.20	1.64
5.267	2.19	19.267	13.13	17.267	2.46	23.27	1.64
5.333	2.19	19.333	13.13	17.333	2.46	23.33	1.64
5.400	2.19	19.400	13.13	17.400	2.46	23.40	1.64
5.467	2.19	19.467	13.13	17.467	2.46	23.47	1.64
5.533	2.19	19.533	35.02	17.533	2.46	23.53	1.64
5.600	2.19	19.600	56.91	17.600	2.46	23.60	1.64
5.667	2.19	19.667	56.91	17.667	2.46	23.67	1.64
5.733	2.19	19.733	56.91	17.733	2.46	23.73	1.64
5.800	2.19	19.800	127.49	17.800	2.46	23.80	1.64
5.867	2.19	19.867	127.49	17.867	2.46	23.87	1.64
5.933	2.19	19.933	151.03	17.933	2.46	23.93	1.64
6.000	2.19	19.000	151.03	18.000	2.46	24.00	1.64

Max. Eff. Inten. (mm/hr)	151.03	101.34	
over (min)	5.00	12.00	
Storage Coeff. (min)	3.93 (ii)	8.19 (ii)	
Unit Hyd. Tpeak (min)	4.00	12.00	
Unit Hyd. peak (cms)	0.27	0.12	
			TOTALS
PEAK FLOW (cms)	6.31	1.42	7.672 (iii)
TIME TO PEAK (hrs)	12.00	12.07	12.00
RUNOFF VOLUME (mm)	135.38	78.28	118.17
TOTAL RAINFALL (mm)	136.80	136.80	136.80
RUNOFF COEFFICIENT =	0.99	0.57	0.86

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
```

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0200):	10.34	2.889	12.00	106.75
ID2= 2 (0201):	21.81	7.672	12.00	118.17
ID = 3 (0009):	32.15	10.559	12.00	114.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

TIME	----- TRANSFORMED HYETOGRAPH -----						TIME	RAIN
	RAIN	TIME	RAIN	TIME	RAIN	TIME		
mm/hr	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	
0.067	1.37	6.067	2.74	12.067	19.72	18.07	2.46	
0.133	1.37	6.133	2.74	12.133	19.78	18.13	2.46	
0.200	1.37	6.200	2.74	12.200	19.78	18.20	2.46	
0.267	1.37	6.267	2.74	12.267	19.78	18.27	2.46	
0.333	1.37	6.333	2.74	12.333	19.78	18.33	2.46	
0.400	1.37	6.400	2.74	12.400	19.78	18.40	2.46	
0.467	1.37	6.467	2.74	12.467	19.78	18.47	2.46	
0.533	1.37	6.533	2.74	12.533	14.91	18.53	2.46	
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46	
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46	
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46	
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46	
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46	
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46	
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46	
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46	
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46	
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46	
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46	
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46	
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46	
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46	
1.533	1.37	7.533	2.74	13.533	6.56	19.53	2.46	
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46	
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46	
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46	
1.800	2.19	7.800	2.74	13.800	11.22	19.80	2.46	
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46	
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46	
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46	
2.067	1.78	8.067	3.69	14.067	4.11	20.07	1.64	
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64	
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64	
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64	
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64	
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64	
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64	
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64	
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64	
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64	
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64	
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64	
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64	
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64	
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64	
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64	
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64	
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64	
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64	
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64	
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64	
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64	
3.533	1.78	9.533	4.65	15.533	4.10	21.53	1.64	
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64	
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64	
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64	
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64	
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64	
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64	
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64	
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64	
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64	
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64	
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64	
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64	
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64	

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

V V I SSSS U U A L (v 6.1.2002)

V V I SS U U A A L

V V I SS U U A A A A L

V V I SS U U A A L

VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM

O O T T T H H Y Y MM MM O O

O O T T H H Y M M O O

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\vooin.dat

Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\6a1f2d60-4819-41ce-8960-57c8cf7d84b9\scenar

Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\6a1f2d60-4819-41ce-8960-57c8cf7d84b9\scenar

DATE: 03/24/2023 TIME: 10:23:28

USER:

COMMENTS: _____

** SIMULATION : Run 11

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\7da315dc-0fdd-4b6b-b6ab-798313320844\5fdf4178
Ptotal=124.08 mm	Comments: Mass 24-Hour SCS Type-II Design Storm

Duration of storm = 24.00 hrs

Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.25	6.25	2.50	12.25	17.97	18.25	2.25	
0.50	1.25	6.50	2.50	12.50	17.97	18.50	2.25	
0.75	1.25	6.75	2.50	12.75	9.24	18.75	2.25	
1.00	1.25	7.00	2.50	13.00	9.24	19.00	2.25	
1.25	1.25	7.25	2.50	13.25	1.75	19.25	2.25	
1.50	1.25	7.50	2.50	13.50	1.75	19.50	2.25	
1.75	1.25	7.75	2.50	13.75	10.23	19.75	2.25	
2.00	2.25	8.00	2.50	14.00	10.23	20.00	2.25	
2.25	1.62	8.25	3.37	14.25	3.74	20.25	1.50	
2.50	1.62	8.50	3.37	14.50	3.74	20.50	1.50	
2.75	1.62	8.75	3.37	14.75	3.74	20.75	1.50	
3.00	1.62	9.00	3.37	15.00	3.74	21.00	1.50	
3.25	1.62	9.25	3.00	15.25	3.74	21.25	1.50	
3.50	1.62	9.50	3.00	15.50	3.74	21.50	1.50	
3.75	1.62	9.75	4.49	15.75	3.74	21.75	1.50	
4.00	1.62	10.00	4.49	16.00	3.74	22.00	1.50	
4.25	2.00	10.25	5.74	16.25	2.25	22.25	1.50	
4.50	2.00	10.50	5.74	16.50	2.25	22.50	1.50	
4.75	2.00	10.75	7.74	16.75	2.25	22.75	1.50	
5.00	2.00	11.00	7.74	17.00	2.25	23.00	1.50	
5.25	2.00	11.25	11.98	17.25	2.25	23.25	1.50	
5.50	2.00	11.50	11.98	17.50	2.25	23.50	1.50	
5.75	2.00	11.75	51.92	17.75	2.25	23.75	1.50	
6.00	2.00	12.00	137.78	18.00	2.25	24.00	1.50	

CALIB	
NASHYD (1030)	Area (ha)= 30.38
ID= 1 DT= 5.0 min	Ia (mm)= 5.00
	Curve Number (CN)= 77.0
	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr
0.083	1.25	6.083	2.50	12.083	17.98	18.08
0.167	1.25	6.167	2.50	12.167	17.97	18.17
0.250	1.25	6.250	2.50	12.250	17.97	18.25
0.333	1.25	6.333	2.50	12.333	17.97	18.33
0.417	1.25	6.417	2.50	12.417	17.97	18.42
0.500	1.25	6.500	2.50	12.500	17.97	18.50
0.583	1.25	6.583	2.50	12.583	9.24	18.58
0.667	1.25	6.667	2.50	12.667	9.24	18.67
0.750	1.25	6.750	2.50	12.750	9.24	18.75
0.833	1.25	6.833	2.50	12.833	9.24	18.83
0.917	1.25	6.917	2.50	12.917	9.24	18.92
1.000	1.25	7.000	2.50	13.000	9.24	19.00
1.083	1.25	7.083	2.50	13.083	1.75	19.08
1.167	1.25	7.167	2.50	13.167	1.75	19.17
1.250	1.25	7.250	2.50	13.250	1.75	19.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33
1.417	1.25	7.417	2.50	13.417	1.75	19.42
1.500	1.25	7.500	2.50	13.500	1.75	19.50
1.583	1.25	7.583	2.50	13.583	10.23	19.58
1.667	1.25	7.667	2.50	13.667	10.23	19.67
1.750	1.25	7.750	2.50	13.750	10.23	19.75
1.833	2.25	7.833	2.50	13.833	10.23	19.83
1.917	2.25	7.917	2.50	13.917	10.23	19.92
2.000	2.25	8.000	2.50	14.000	10.23	20.00
2.083	1.62	8.083	3.37	14.083	3.75	20.08
2.167	1.62	8.167	3.37	14.167	3.74	20.17
2.250	1.62	8.250	3.37	14.250	3.74	20.25
2.333	1.62	8.333	3.37	14.333	3.74	20.33
2.417	1.62	8.417	3.37	14.417	3.74	20.42
2.500	1.62	8.500	3.37	14.500	3.74	20.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58
2.667	1.62	8.667	3.37	14.667	3.74	20.67
2.750	1.62	8.750	3.37	14.750	3.74	20.75
2.833	1.62	8.833	3.37	14.833	3.74	20.83
2.917	1.62	8.917	3.37	14.917	3.74	20.92
3.000	1.62	9.000	3.37	15.000	3.74	21.00
3.083	1.62	9.083	3.00	15.083	3.74	21.08
3.167	1.62	9.167	3.00	15.167	3.74	21.17
3.250	1.62	9.250	3.00	15.250	3.74	21.25
3.333	1.62	9.333	3.00	15.333	3.74	21.33
3.417	1.62	9.417	3.00	15.417	3.74	21.42
3.500	1.62	9.500	3.00	15.500	3.74	21.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58
3.667	1.62	9.667	4.49	15.667	3.74	21.67
3.750	1.62	9.750	4.49	15.750	3.74	21.75
3.833	1.62	9.833	4.49	15.833	3.74	21.83
3.917	1.62	9.917	4.49	15.917	3.74	21.92
4.000	1.62	10.000	4.49	16.000	3.74	22.00
4.083	2.00	10.083	5.74	16.083	2.25	22.08
4.167	2.00	10.167	5.74	16.167	2.25	22.17
4.250	2.00	10.250	5.74	16.250	2.25	22.25
4.333	2.00	10.333	5.74	16.333	2.25	22.33
4.417	2.00	10.417	5.74	16.417	2.25	22.42
4.500	2.00	10.500	5.74	16.500	2.25	22.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58
4.667	2.00	10.667	7.74	16.667	2.25	22.67
4.750	2.00	10.750	7.74	16.750	2.25	22.75
4.833	2.00	10.833	7.74	16.833	2.25	22.83
4.917	2.00	10.917	7.74	16.917	2.25	22.92
5.000	2.00	11.000	7.74	17.000	2.25	23.00
5.083	2.00	11.083	11.98	17.083	2.25	23.08
5.167	2.00	11.167	11.98	17.167	2.25	23.17
5.250	2.00	11.250	11.98	17.250	2.25	23.25
5.333	2.00	11.333	11.98	17.333	2.25	23.33
5.417	2.00	11.417	11.98	17.417	2.25	23.42
5.500	2.00	11.500	11.98	17.500	2.25	23.50
5.583	2.00	11.583	51.91	17.583	2.25	23.58
5.667	2.00	11.667	51.92	17.667	2.25	23.67
5.750	2.00	11.750	51.92	17.750	2.25	23.75
5.833	2.00	11.833	137.77	17.833	2.25	23.83
5.917	2.00	11.917	137.78	17.917	2.25	23.92
6.000	2.00	12.000	137.78	18.000	2.25	24.00

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 2.980 (1)

TIME TO PEAK (hrs)= 12.333

RUNOFF VOLUME (mm)= 73.344

TOTAL RAINFALL (mm)= 124.080

RUNOFF COEFFICIENT = 0.588

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ROUTE CHN(0021)|

HRP6.1-PR-PR-EX-POND1-6.50-100 YEAR-2096 IDF.OUT
| IN= 2--> OUT= 1 | Routing time step (min)'= 4.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0000 /0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 /0.0000	Main Channel	
6.00	100.67	0.0000		
7.00	101.00	0.0000		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.145E+02	0.0	0.34	13.16
0.09	100.09	.327E+02	0.1	0.51	8.00
0.14	100.14	.545E+02	0.1	0.64	7.02
0.19	100.19	.800E+02	0.2	0.75	6.00
0.24	100.24	.109E+03	0.3	0.85	5.31
0.28	100.28	.142E+03	0.5	0.94	4.81
0.33	100.33	.178E+03	0.7	1.02	4.42
0.39	100.39	.226E+03	1.0	1.17	3.84
0.44	100.44	.279E+03	1.3	1.30	3.47
0.50	100.50	.336E+03	1.7	1.40	3.21
0.55	100.55	.399E+03	2.2	1.49	3.02
0.61	100.61	.466E+03	2.7	1.57	2.87
0.66	100.66	.539E+03	3.3	1.63	2.75
0.72	100.72	.616E+03	3.9	1.69	2.66
0.78	100.78	.690E+03	4.5	1.75	2.58
0.83	100.83	.766E+03	5.2	1.80	2.51
0.89	100.89	.879E+03	6.0	1.84	2.45
0.94	100.94	.977E+03	6.8	1.88	2.39
1.00	101.00	.108E+04	7.7	1.92	2.35

<---- hydrograph ---->					<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (1030)	30.38	2.98	12.33	73.34	0.64	1.60
OUTFLOW: ID= 1 (0021)	30.38	2.98	12.42	73.34	0.64	1.60

| CALIB |
| NASHYD (0230) | Area (ha)= 9.14 Curve Number (CN)= 82.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.42

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25		
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25		
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25		
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25		
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25		
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25		
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25		
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25		
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25		
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25		
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50		
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50		
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50		
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50		
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50		
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50		

HRP6.1-PR-PR-EX-POND1-6.50-100 YEAR-2096 IDF.OUT									
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50		
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50		
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50		
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50		
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50		
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50		
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50		
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50		
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50		
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50		
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50		
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50		
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50		
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50		
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50		
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50		
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50		
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50		
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50		
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50		
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50		
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50		
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50		
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50		
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50		
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50		
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50		
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50		
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50		
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50		
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50		
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50		
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50		
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50		
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50		
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50		
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50		
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50		
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50		
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50		
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50		
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50		

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW (cms)= 1.149 (1)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 81.743
TOTAL RAINFALL (mm)= 124.800
RUNOFF COEFFICIENT = 0.655

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0021):	30.38	2.981	12.42	73.34
+ ID2= 2 (0230):	9.14	1.149	12.25	81.74
=====				
ID = 3 (0003):	39.52	4.077	12.33	75.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)				
IN= 2--> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
1.250	0.0000	0.0000	2.7760	0.2010
1.0940	0.0700	3.2380	0.2400	
1.8140	0.1110	3.7590	0.2830	
2.2340	0.1460	0.0000	0.0000	
=====				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0003)	39.520	4.077	12.33	75.29
OUTFLOW: ID= 1 (0030)	39.520	3.625	12.58	75.29
=====				
PEAK FLOW REDUCTION [Qout/Qin](%)= 88.02				
TIME SHIFT OF PEAK FLOW (min)= 15.00				
MAXIMUM STORAGE USED (ha.m.)= 0.2732				
=====				

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

CALIB	
STANDHYD (0231)	Area (ha)= 7.45
ID= 1 DT= 2.0 min	Total Imp(%)= 24.00 Dir. Conn.(%)= 24.00

Surface Area	(ha)=	1.79	5.66
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	1.10
Length	(m)=	222.86	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.25 6.033	2.50 12.033	17.97 18.03	2.25			
0.067	1.25 6.067	2.50 12.067	17.97 18.07	2.25			
0.100	1.25 6.100	2.50 12.100	17.97 18.10	2.25			
0.133	1.25 6.133	2.50 12.133	17.97 18.13	2.25			
0.167	1.25 6.167	2.50 12.167	17.97 18.17	2.25			
0.200	1.25 6.200	2.50 12.200	17.97 18.20	2.25			
0.233	1.25 6.233	2.50 12.233	17.97 18.23	2.25			
0.267	1.25 6.267	2.50 12.267	17.97 18.27	2.25			
0.300	1.25 6.300	2.50 12.300	17.97 18.30	2.25			
0.333	1.25 6.333	2.50 12.333	17.97 18.33	2.25			
0.367	1.25 6.367	2.50 12.367	17.97 18.37	2.25			
0.400	1.25 6.400	2.50 12.400	17.97 18.40	2.25			
0.433	1.25 6.433	2.50 12.433	17.97 18.43	2.25			
0.467	1.25 6.467	2.50 12.467	17.97 18.47	2.25			
0.500	1.25 6.500	2.50 12.500	17.96 18.50	2.25			
0.533	1.25 6.533	2.50 12.533	9.24 18.53	2.25			
0.567	1.25 6.567	2.50 12.567	9.24 18.57	2.25			
0.600	1.25 6.600	2.50 12.600	9.24 18.60	2.25			
0.633	1.25 6.633	2.50 12.633	9.24 18.63	2.25			
0.667	1.25 6.667	2.50 12.667	9.24 18.67	2.25			
0.700	1.25 6.700	2.50 12.700	9.24 18.70	2.25			
0.733	1.25 6.733	2.50 12.733	9.24 18.73	2.25			
0.767	1.25 6.767	2.50 12.767	9.24 18.77	2.25			
0.800	1.25 6.800	2.50 12.800	9.24 18.80	2.25			
0.833	1.25 6.833	2.50 12.833	9.24 18.83	2.25			
0.867	1.25 6.867	2.50 12.867	9.24 18.87	2.25			
0.900	1.25 6.900	2.50 12.900	9.24 18.90	2.25			
0.933	1.25 6.933	2.50 12.933	9.24 18.93	2.25			
0.967	1.25 6.967	2.50 12.967	9.24 18.97	2.25			
1.000	1.25 7.000	2.50 13.000	9.22 19.00	2.25			
1.033	1.25 7.033	2.50 13.033	1.75 19.03	2.25			
1.067	1.25 7.067	2.50 13.067	1.75 19.07	2.25			
1.100	1.25 7.100	2.50 13.100	1.75 19.10	2.25			
1.133	1.25 7.133	2.50 13.133	1.75 19.13	2.25			
1.167	1.25 7.167	2.50 13.167	1.75 19.17	2.25			
1.200	1.25 7.200	2.50 13.200	1.75 19.20	2.25			
1.233	1.25 7.233	2.50 13.233	1.75 19.23	2.25			
1.267	1.25 7.267	2.50 13.267	1.75 19.27	2.25			
1.300	1.25 7.300	2.50 13.300	1.75 19.30	2.25			
1.333	1.25 7.333	2.50 13.333	1.75 19.33	2.25			
1.367	1.25 7.367	2.50 13.367	1.75 19.37	2.25			
1.400	1.25 7.400	2.50 13.400	1.75 19.40	2.25			
1.433	1.25 7.433	2.50 13.433	1.75 19.43	2.25			
1.467	1.25 7.467	2.50 13.467	1.75 19.47	2.25			
1.500	1.25 7.500	2.50 13.500	1.76 19.50	2.25			
1.533	1.25 7.533	2.50 13.533	10.23 19.53	2.25			
1.567	1.25 7.567	2.50 13.567	10.23 19.57	2.25			
1.600	1.25 7.600	2.50 13.600	10.23 19.60	2.25			
1.633	1.25 7.633	2.50 13.633	10.23 19.63	2.25			
1.667	1.25 7.667	2.50 13.667	10.23 19.67	2.25			
1.700	1.25 7.700	2.50 13.700	10.23 19.70	2.25			
1.733	1.25 7.733	2.50 13.733	10.23 19.73	2.25			
1.767	1.25 7.767	2.50 13.767	10.23 19.77	2.25			
1.800	2.25 7.800	2.50 13.800	10.23 19.80	2.25			
1.833	2.25 7.833	2.50 13.833	10.23 19.83	2.25			
1.867	2.25 7.867	2.50 13.867	10.23 19.87	2.25			
1.900	2.25 7.900	2.50 13.900	10.23 19.90	2.25			
1.933	2.25 7.933	2.50 13.933	10.23 19.93	2.25			
1.967	2.25 7.967	2.50 13.967	10.23 19.97	2.25			
2.000	2.25 8.000	2.50 14.000	10.22 20.00	2.25			
2.033	1.62 8.033	3.37 14.033	3.74 20.03	1.50			
2.067	1.62 8.067	3.37 14.067	3.74 20.07	1.50			
2.100	1.62 8.100	3.37 14.100	3.74 20.10	1.50			
2.133	1.62 8.133	3.37 14.133	3.74 20.13	1.50			
2.167	1.62 8.167	3.37 14.167	3.74 20.17	1.50			
2.200	1.62 8.200	3.37 14.200	3.74 20.20	1.50			
2.233	1.62 8.233	3.37 14.233	3.74 20.23	1.50			
2.267	1.62 8.267	3.37 14.267	3.74 20.27	1.50			
2.300	1.62 8.300	3.37 14.300	3.74 20.30	1.50			
2.333	1.62 8.333	3.37 14.333	3.74 20.33	1.50			

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50
4.967	2.00	10.967	7.74	16.967	2.25	22.97	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.033	2.00	11.033	11.98	17.033	2.25	23.03	1.50
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.233	2.00	11.233	11.98	17.233	2.25	23.23	1.50

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5.267	2.00	11.267	11.98	17.267	2.25	23.27	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.367	2.00	11.367	11.98	17.367	2.25	23.37	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.433	2.00	11.433	11.98	17.433	2.25	23.43	1.50
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50
5.500	2.00	11.500	12.03	17.500	2.25	23.50	1.50
5.533	2.00	11.533	51.92	17.533	2.25	23.53	1.50
5.567	2.00	11.567	51.92	17.567	2.25	23.57	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.633	2.00	11.633	51.92	17.633	2.25	23.63	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50
5.767	2.00	11.767	94.96	17.767	2.25	23.77	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.833	2.00	11.833	137.78	17.833	2.25	23.83	1.50
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50
5.967	2.00	11.967	137.78	17.967	2.25	23.97	1.50
6.000	2.00	12.000	137.61	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 110.34
over (min) 5.00 12.00
Storage Coeff. (min)= 2.95 (ii) 11.07 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.34 0.10

TOTALS
PEAK FLOW (cms)= 0.68 1.21 1.785 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 123.30 84.90 94.12
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.68 0.75

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0211)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0231):	7.45	1.785	12.00	94.12
+ ID2= 2 (0030):	39.52	3.625	12.58	75.29
=====				
ID = 3 (0211):	46.97	4.003	12.53	78.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)
IN= 2----> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.05	100.05	.485E+01	0.0	0.34	4.39	
0.09	100.09	.109E+02	0.1	0.51	2.93	
0.14	100.14	.182E+02	0.1	0.64	2.34	
0.19	100.19	.267E+02	0.2	0.75	2.00	
0.24	100.24	.364E+02	0.3	0.85	1.77	
0.28	100.28	.473E+02	0.5	0.94	1.60	
0.33	100.33	.594E+02	0.7	1.02	1.47	
0.39	100.39	.753E+02	1.0	1.17	1.28	
0.44	100.44	.928E+02	1.3	1.30	1.16	
0.50	100.50	.112E+03	1.7	1.40	1.07	
0.55	100.55	.133E+03	2.2	1.49	1.01	
0.61	100.61	.155E+03	2.7	1.57	0.96	
0.66	100.66	.180E+03	3.3	1.63	0.92	

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0.72	100.72	.205E+03	3.9	1.69	0.89		
0.78	100.78	.233E+03	4.5	1.75	0.86		
0.83	100.83	.262E+03	5.2	1.80	0.84		
0.89	100.89	.293E+03	6.0	1.84	0.82		
0.94	100.94	.326E+03	6.8	1.89	0.80		
1.00	101.00	.360E+03	7.7	1.92	0.78		

<---- hydrograph ----> <-pipe / channel->							
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0211)	46.97	4.00	12.53	78.27	0.73	1.70	
OUTFLOW: ID= 1 (0005)	46.97	4.01	12.53	78.27	0.73	1.70	

CALIB							
STANDHYD (0232)							
ID= 1 DT= 3.0 min							
Area (ha)=		8.25					
Total Imp(%)=		39.00		Dir. Conn.(%)=		39.00	

		IMPERVIOUS		PERVIOUS (i)			
Surface Area	(ha)=	3.22		5.83			
Dep. Storage	(mm)=	15.00		1.50			
Average Slope	(%)=	2.00		2.00			
Length	(m)=	234.52		40.00			
Mannings n	=	0.013		0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25		
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25		
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25		
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25		
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25		
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25		
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25		
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25		
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25		
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25		
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25		
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25		
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25		
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25		
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25		
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25		
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25		
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25		
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25		
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25		
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25		
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25		
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25		
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.800	1.25	7.800	2.50	13.800	10.23	19.80	2.25		
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25		
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25		
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25		
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25		
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50		
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50		
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50		
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50		
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50		
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50		
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50		
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50		
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50		
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50		
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50		
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50		
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50		

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2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 88.79
over (min) 6.00 12.00
Storage Coeff. (min)= 3.04 (ii) 10.47 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.10

TOTALS

PEAK FLOW (cms)= 1.22 0.88 2.038 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 109.80 68.46 84.58
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.88 0.55 0.68

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

ADD HYD (0007)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0232): 8.25 2.038 12.00 84.58
+ ID2= 2 (0005): 46.97 4.006 12.53 78.27
=====

ID = 3 (0007): 55.22 5.009 12.03 79.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2--> OUT= 1 Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0800
1.00 100.67 0.0800
2.00 100.33 0.0800 /0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 /0.0800 Main Channel
6.00 100.67 0.0800
7.00 101.00 0.0800

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .609E+01 0.0 0.34 5.51
0.09 100.09 .137E+02 0.1 0.51 3.68
0.14 100.14 .228E+02 0.1 0.64 2.94
0.19 100.19 .335E+02 0.2 0.75 2.51
0.24 100.24 .457E+02 0.3 0.85 2.22
0.28 100.28 .594E+02 0.5 0.94 2.01
0.33 100.33 .746E+02 0.7 1.02 1.85
0.39 100.39 .945E+02 1.0 1.17 1.61
0.44 100.44 .117E+03 1.3 1.30 1.45
0.50 100.50 .141E+03 1.7 1.40 1.34
0.55 100.55 .167E+03 2.2 1.49 1.26
0.61 100.61 .195E+03 2.7 1.57 1.20
0.66 100.66 .225E+03 3.3 1.63 1.15
0.72 100.72 .258E+03 3.9 1.69 1.11
0.78 100.78 .292E+03 4.5 1.75 1.08
0.83 100.83 .329E+03 5.2 1.80 1.05
0.89 100.89 .368E+03 6.0 1.84 1.02
0.94 100.94 .409E+03 6.8 1.88 1.00
1.00 101.00 .452E+03 7.7 1.92 0.98

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0007) 55.22 5.09 12.03 79.21 0.82 1.79
OUTFLOW: ID= 1 (0022) 55.22 5.06 12.03 79.21 0.82 1.78

CALIB
STANDHYD (0133)
ID= 1 DT= 3.0 min
Area (ha)= 6.79
Total Imp(%)= 47.00 Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.19 3.60
Dep. Storage (mm)= 15.00 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 212.76 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.050 1.25 | 6.050 2.50 | 12.050 17.97 | 18.05 2.25
0.100 1.25 | 6.100 2.50 | 12.100 17.97 | 18.10 2.25
0.150 1.25 | 6.150 2.50 | 12.150 17.97 | 18.15 2.25
0.200 1.25 | 6.200 2.50 | 12.200 17.97 | 18.20 2.25
0.250 1.25 | 6.250 2.50 | 12.250 17.97 | 18.25 2.25
0.300 1.25 | 6.300 2.50 | 12.300 17.97 | 18.30 2.25
0.350 1.25 | 6.350 2.50 | 12.350 17.97 | 18.35 2.25
0.400 1.25 | 6.400 2.50 | 12.400 17.97 | 18.40 2.25
0.450 1.25 | 6.450 2.50 | 12.450 17.97 | 18.45 2.25

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0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50

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4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)=	137.78	70.45	
over (min)	6.00	12.00	
Storage Coeff. (min)=	2.87 (ii)	9.39 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.28	0.11	
			TOTALS
PEAK FLOW (cms)=	1.21	0.51	1.688 (iii)
TIME TO PEAK (hrs)=	12.00	12.05	12.00
RUNOFF VOLUME (mm)=	109.80	54.49	80.49
TOTAL RAINFALL (mm)=	124.80	124.80	124.80
RUNOFF COEFFICIENT =	0.88	0.44	0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

[ADD HYD (0091)]				
[1 + 2 = 3]				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0133):	6.79	1.688	12.00	80.49
+ ID2= 2 (0022):	55.22	5.057	12.03	79.21
=====				
ID = 3 (0091):	62.01	6.600	12.03	79.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

[CALIB				
[NASHYD (0222)]				
ID= 1 DT= 5.0 min	Area	(ha)=	3.54	Curve Number (CN)= 75.0
	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.15		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
	mm/hr	hrs	mm/hr	'	hrs	mm/hr		hrs	mm/hr
0.083	1.25	6.083	2.50	12.083	17.98	18.08		2.25	
0.167	1.25	6.167	2.50	12.167	17.97	18.17		2.25	
0.250	1.25	6.250	2.50	12.250	17.97	18.25		2.25	
0.333	1.25	6.333	2.50	12.333	17.97	18.33		2.25	
0.417	1.25	6.417	2.50	12.417	17.97	18.42		2.25	
0.500	1.25	6.500	2.50	12.500	17.97	18.50		2.25	
0.583	1.25	6.583	2.50	12.583	9.24	18.58		2.25	
0.667	1.25	6.667	2.50	12.667	9.24	18.67		2.25	
0.750	1.25	6.750	2.50	12.750	9.24	18.75		2.25	
0.833	1.25	6.833	2.50	12.833	9.24	18.83		2.25	
0.917	1.25	6.917	2.50	12.917	9.24	18.92		2.25	
1.000	1.25	7.000	2.50	13.000	9.24	19.00		2.25	
1.083	1.25	7.083	2.50	13.083	1.75	19.08		2.25	
1.167	1.25	7.167	2.50	13.167	1.75	19.17		2.25	
1.250	1.25	7.250	2.50	13.250	1.75	19.25		2.25	
1.333	1.25	7.333	2.50	13.333	1.75	19.33		2.25	
1.417	1.25	7.417	2.50	13.417	1.75	19.42		2.25	

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1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.083	1.62	8.083	3.37	14.083	3.74	20.08	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.723 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 69.788
TOTAL RAINFALL (mm)= 124.800
RUNOFF COEFFICIENT = 0.559

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)= 3.79
STANDHYD (0221)	Total Imp(%)= 27.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)= 27.00

IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)= 1.02	2.77
Dep. Storage (mm)= 1.50	5.00
Average Slope (%)= 2.00	2.00
Length (m)= 158.95	40.00
Mannings n = 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25

---- TRANSFORMED HYETOGRAPH ----

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 98.26
over (min) 5.00 10.00
Storage Coeff. (min)= 2.41 (ii) 9.52 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.12

TOTALS
PEAK FLOW (cms)= 0.39 0.57 0.959 (iii)
TIME TO PEAK (hrs)= 12.00 12.00 12.00
RUNOFF VOLUME (mm)= 123.30 73.35 86.83
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.59 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0000)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0221):	3.79	0.959	12.00	86.83
+ ID2= 2 (0222):	3.54	0.723	12.00	69.79
=====				
ID = 3 (0009):	7.33	1.682	12.00	78.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0000)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0009):	7.33	1.682	12.00	78.00
+ ID2= 2 (0091):	62.01	6.600	12.03	79.35
=====				
ID = 1 (0009):	69.34	8.197	12.00	79.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)		OVERFLOW IS OFF			
IN= 2--> OUT= 1					
DT= 4.0 min					
		OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
		0.0000	0.0000	3.2510	1.2472
		0.6750	0.7720	3.7840	1.3920
		1.6680	0.9849	4.5560	1.5300
		2.4150	1.1060	0.0000	0.0000
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0009)		69.340	8.197	12.00	79.27
OUTFLOW: ID= 1 (0010)		69.340	4.262	12.00	79.27

PEAK FLOW REDUCTION [Qout/Qin](%)= 51.99
TIME SHIFT OF PEAK FLOW (min)= 48.00
MAXIMUM STORAGE USED (ha.m.)= 1.4774

CALIB			
STANDHYD (0234)		Area (ha)=	17.56
ID= 1 DT= 3.0 min		Total Imp(%)=	28.00
		Dir. Conn.(%)=	28.00
		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=		4.92	12.64
Dep. Storage (mm)=		1.50	1.50
Average Slope (%)=		2.00	2.00
Length (m)=		342.15	40.00
Mannings n		=	0.013
			0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25		
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25		
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25		
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25		
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25		
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25		
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25		
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25		
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25		
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25		
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25		
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25		
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25		
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25		

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT									
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25		
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25		
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25		
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25		
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25		
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25		
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25		
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25		
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25		
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25		
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25		
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25		
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25		
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25		
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50		
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50		
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50		
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50		
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50		
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50		
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50		
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50		
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50		
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50		
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50		
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50		
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50		
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50		
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50		
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50		
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50		
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50		
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50		
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50		
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50		
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50		
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50		
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50		
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50		
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50		
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50		
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50		
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50		
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50		
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50		
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50		
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50		
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50		
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50		
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50		
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50		
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50		
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50		
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50		
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50		
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50		
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50		
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50		
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50		
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50		
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50		
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50		
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50		
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50		
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50		
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50		
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50		
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50		
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50		
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50		
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50		
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50		
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50		
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50		
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50		
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50		
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50		
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50		
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50		
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50		
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50		

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

5.400	2.00	[11.400	11.98	[17.400	2.25		23.40	1.50
5.450	2.00	[11.450	11.98	[17.450	2.25		23.45	1.50
5.500	2.00	[11.500	12.00	[17.500	2.25		23.50	1.50
5.550	2.00	[11.550	51.92	[17.550	2.25		23.55	1.50
5.600	2.00	[11.600	51.92	[17.600	2.25		23.60	1.50
5.650	2.00	[11.650	51.92	[17.650	2.25		23.65	1.50
5.700	2.00	[11.700	51.92	[17.700	2.25		23.70	1.50
5.750	2.00	[11.750	51.96	[17.750	2.25		23.75	1.50
5.800	2.00	[11.800	137.78	[17.800	2.25		23.80	1.50
5.850	2.00	[11.850	137.78	[17.850	2.25		23.85	1.50
5.900	2.00	[11.900	137.78	[17.900	2.25		23.90	1.50
5.950	2.00	[11.950	137.78	[17.950	2.25		23.95	1.50
6.000	2.00	[12.000	137.71	[18.000	2.25		24.00	1.50
Max.Eff.Inten.(mm/hr)= 137.78 88.79								
over (min) 6.00 12.00								
Storage Coeff. (min)= 3.82 (ii) 11.22 (ii)								
Unit Hyd. Tpeak (min)= 6.00 12.00								
Unit Hyd. peak (cms)= 0.24 0.10								
TOTALS								
PEAK FLOW (cms)= 1.84 2.15 3.838 (iii)								
TIME TO PEAK (hrs)= 12.00 12.00								
RUNOFF VOLUME (mm)= 123.30 68.46 83.81								
TOTAL RAINFALL (mm)= 124.80 124.80 124.80								
RUNOFF COEFFICIENT = 0.99 0.55 0.67								

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CW= 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)					
1 + 2 = 3					

ID1= 1 (0010):	69.34	4.262	12.00	79.27	
+ ID2= 2 (0234):	17.56	3.838	12.00	83.81	
=====					
ID = 3 (0011):	86.90	5.744	12.07	88.18	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)					
OVERFLOW IS OFF					
IN= 2----> OUT= 1					
DT= 5.0 min					

		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	9.4690	0.3520
		0.4100	0.1040	0.0000	0.0000

		AREA	OPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0011)	86.900	5.744	12.07	88.18	
OUTFLOW: ID= 1 (0015)	86.900	5.409	12.17	80.18	

PEAK FLOW REDUCTION [Qout/Qin](%)= 94.16
TIME SHIFT OF PEAK FLOW (min)= 6.00
MAXIMUM STORAGE USED (ha.m.)= 0.2411

**** WARNING : SELECTED ROUTING TIME STEP DENIED.

CALIB					
STANDHYD (0235)					
ID= 1 DT= 2.0 min					

		Area	(ha)=	4.28	
		Total Imp(%)=	30.00	Dir. Conn.(%)=	30.00

		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	1.28	3.00		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	168.92	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.25	6.033	2.50	12.033	17.97	18.03	2.25
0.067	1.25	6.067	2.50	12.067	17.97	18.07	2.25
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

0.167	1.25	6.167	2.50	[12.167	17.97	18.17	2.25
0.200	1.25	6.200	2.50	[12.200	17.97	18.20	2.25
0.233	1.25	6.233	2.50	[12.233	17.97	18.23	2.25
0.267	1.25	6.267	2.50	[12.267	17.97	18.27	2.25
0.300	1.25	6.300	2.50	[12.300	17.97	18.30	2.25
0.333	1.25	6.333	2.50	[12.333	17.97	18.33	2.25
0.367	1.25	6.367	2.50	[12.367	17.97	18.37	2.25
0.400	1.25	6.400	2.50	[12.400	17.97	18.40	2.25
0.433	1.25	6.433	2.50	[12.433	17.97	18.43	2.25
0.467	1.25	6.467	2.50	[12.467	17.97	18.47	2.25
0.500	1.25	6.500	2.50	[12.500	17.96	18.50	2.25
0.533	1.25	6.533	2.50	[12.533	9.24	18.53	2.25
0.567	1.25	6.567	2.50	[12.567	9.24	18.57	2.25
0.600	1.25	6.600	2.50	[12.600	9.24	18.60	2.25
0.633	1.25	6.633	2.50	[12.633	9.24	18.63	2.25
0.667	1.25	6.667	2.50	[12.667	9.24	18.67	2.25
0.700	1.25	6.700	2.50	[12.700	9.24	18.70	2.25
0.733	1.25	6.733	2.50	[12.733	9.24	18.73	2.25
0.767	1.25	6.767	2.50	[12.767	9.24	18.77	2.25
0.800	1.25	6.800	2.50	[12.800	9.24	18.80	2.25
0.833	1.25	6.833	2.50	[12.833	9.24	18.83	2.25
0.867	1.25	6.867	2.50	[12.867	9.24	18.87	2.25
0.900	1.25	6.900	2.50	[12.900	9.24	18.90	2.25
0.933	1.25	6.933	2.50	[12.933	9.24	18.93	2.25
0.967	1.25	6.967	2.50	[12.967	9.24	18.97	2.25
1.000	1.25	7.000	2.50	[13.000	9.22	19.00	2.25
1.033	1.25	7.033	2.50	[13.033	1.75	19.03	2.25
1.067	1.25	7.067	2.50	[13.067	1.75	19.07	2.25
1.100	1.25	7.100	2.50	[13.100	1.75	19.10	2.25
1.133	1.25	7.133	2.50	[13.133	1.75	19.13	2.25
1.167	1.25	7.167	2.50	[13.167	1.75	19.17	2.25
1.200	1.25	7.200	2.50	[13.200	1.75	19.20	2.25
1.233	1.25	7.233	2.50	[13.233	1.75	19.23	2.25
1.267	1.25	7.267	2.50	[13.267	1.75	19.27	2.25
1.300	1.25	7.300	2.50	[13.300	1.75	19.30	2.25
1.333	1.25	7.333	2.50	[13.333	1.75	19.33	2.25
1.367	1.25	7.367	2.50	[13.367	1.75	19.37	2.25
1.400	1.25	7.400	2.50	[13.400	1.75	19.40	2.25
1.433	1.25	7.433	2.50	[13.433	1.75	19.43	2.25
1.467	1.25	7.467	2.50	[13.467	1.75	19.47	2.25
1.500	1.25	7.500	2.50	[13.500	1.76	19.50	2.25
1.533	1.25	7.533	2.50	[13.533	10.23	19.53	2.25
1.567	1.25	7.567	2.50	[13.567	10.23	19.57	2.25
1.600	1.25	7.600	2.50	[13.600	10.23	19.60	2.25
1.633	1.25	7.633	2.50	[13.633	10.23	19.63	2.25
1.667	1.25	7.667	2.50	[13.667	10.23	19.67	2.25
1.700	1.25	7.700	2.50	[13.700	10.23	19.70	2.25
1.733	1.25	7.733	2.50	[13.733	10.23	19.73	2.25
1.767	1.75	7.767	2.50	[13.767	10.23	19.77	2.25
1.800	2.25	7.800	2.50	[13.800	10.23	19.80	2.25
1.833	2.25	7.833	2.50	[13.833	10.23	19.83	2.25
1.867	2.25	7.867	2.50	[13.867	10.23	19.87	2.25
1.900	2.25	7.900	2.50	[13.900	10.23	19.90	2.25
1.933	2.25	7.933	2.50	[13.933	10.23	19.93	2.25
1.967	2.25	7.967	2.50	[13.967	10.23	19.97	2.25
2.000	2.25	8.000	2.50	[14.000	10.22	20.00	2.25
2.033	1.62	8.033	3.37	[14.033	3.74	20.03	1.50
2.067	1.62	8.067	3.37	[14.067	3.74	20.07	1.50
2.100	1.62	8.100	3.37	[14.100	3.74	20.10	1.50
2.133	1.62	8.133	3.37	[14.133	3.74	20.13	1.50
2.167	1.62	8.167	3.37	[14.167	3.74	20.17	1.50
2.200	1.62	8.200	3.37	[14.200	3.74	20.20	1.50
2.233	1.62	8.233	3.37	[14.233	3.74	20.23	1.50
2.267	1.62	8.267	3.37	[14.267	3.74	20.27	1.50
2.300	1.62	8.300	3.37	[14.300	3.74	20.30	1.50
2.333	1.62	8.333	3.37	[14.333	3.74	20.33	1.50
2.367	1.62	8.367	3.37	[14.367	3.74	20.37	1.50
2.400	1.62	8.400	3.37	[14.400	3.74	20.40	1.50
2.433	1.62	8.433	3.37	[14.433	3.74	20.43	1.50
2.467	1.62	8.467	3.37	[14.467	3.74	20.47	1.50
2.500	1.62	8.500	3.37	[14.500	3.74	20.50	1.50
2.533	1.62	8.533	3.37	[14.533	3.74	20.53	1.50
2.567	1.62	8.567	3.37	[14.567	3.74	20.57	1.50
2.600	1.62	8.600	3.37	[14.600	3.74	20.60	1.50
2.633	1.62	8.633	3.37	[14.633	3.74	20.63	1.50
2.667	1.62	8.667	3.37	[14.667	3.74	20.67	1.50
2.700	1.62	8.700	3.37	[14.700	3.74	20.70	1.50
2.733	1.62	8.733	3.37	[14.733	3.74	20.73	1.50
2.767	1.62	8.767	3.37	[14.767	3.74	20.77	1.50
2.800	1.62	8.800	3.37	[14.800	3.74	20.80	1.50
2.833	1.62	8.833	3.37	[14.833	3.74	20.83	1.50
2.867	1.62	8.867	3.37	[14.867	3.74	20.87	1.50
2.900	1.62	8.900	3.37	[14.900	3.74	20.90	1.50
2.933	1.62	8.933	3.37	[14.933	3.74	20.93	1.50
2.967	1.62	8.967	3.37	[14.967	3.74	20.97	1.50
3.000	1.62	9.000	3.37	[15.000	3.74	21.00	1.50
3.033	1.62	9.033	3.99	[15.033	3.74	21.03	1.50

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50
4.967	2.00	10.967	7.74	16.967	2.25	22.97	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.033	2.00	11.033	11.98	17.033	2.25	23.03	1.50
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.233	2.00	11.233	11.98	17.233	2.25	23.23	1.50
5.267	2.00	11.267	11.98	17.267	2.25	23.27	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.367	2.00	11.367	11.98	17.367	2.25	23.37	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.433	2.00	11.433	11.98	17.433	2.25	23.43	1.50
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50
5.500	2.00	11.500	12.03	17.500	2.25	23.50	1.50
5.533	2.00	11.533	51.92	17.533	2.25	23.53	1.50
5.567	2.00	11.567	51.92	17.567	2.25	23.57	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.633	2.00	11.633	51.92	17.633	2.25	23.63	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50
5.767	2.00	11.767	94.96	17.767	2.25	23.77	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.833	2.00	11.833	137.78	17.833	2.25	23.83	1.50
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

5.967	2.00	11.967	137.78	17.967	2.25	23.97	1.50
6.000	2.00	12.000	137.61	18.000	2.25	24.00	1.50
Max.Eff.Inten.(mm/hr)=	137.78	90.21					
Storage Coeff. (min)=	2.50 (ii)	9.85 (iii)					
Unit Hyd. Tpeak (min)=	4.00	10.00					
Unit Hyd. peak (cms)=	0.37	0.11					
PEAK FLOW (cms)=	0.49	0.55					
TIME TO PEAK (hrs)=	12.00	12.07					
RUNOFF VOLUME (mm)=	123.30	68.45					
TOTAL RAINFALL (mm)=	124.00	124.00					
RUNOFF COEFFICIENT =	0.99	0.55					

TOTALS

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0012)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0015):	86.90	5.409	12.17	80.18
+ ID2= 2 (0235):	4.28	1.007	12.00	84.91
ID = 3 (0012):	91.18	5.929	12.13	80.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)	Routing Time step (min)'= 2.00				
IN= 2--> OUT= 1					
<----- DATA FOR SECTION (1.1) ----->					
Distance	Elevation	Manning			
0.00	101.00	0.0000			
1.00	100.67	0.0000			
2.00	100.33	0.0000 / 0.0350	Main Channel		
3.00	100.00	0.0350	Main Channel		
4.00	100.00	0.0350	Main Channel		
5.00	100.33	0.0350 / 0.0000	Main Channel		
6.00	100.67	0.0000			
7.00	101.00	0.0000			
<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.590E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.79
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.136E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

	<---- hydrograph ---->				<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0012)	91.18	5.93	12.13	80.40	0.88	1.84
OUTFLOW: ID= 1 (0040)	91.18	5.34	12.33	80.40	0.84	1.80

CALIB	Area (ha)= 1.62
STANDHYD (0121)	Total Imp(%)= 28.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)= 28.00

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

	IMPERVIOUS		PERVIOUS (i)
Surface Area	(ha)= 0.45		1.17
Dep. Storage	(mm)= 1.50		1.50
Average Slope	(%)= 2.00		2.00
Length	(m)= 103.32		40.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT							
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)=	137.78	88.79
over (min)	6.00	12.00
Storage Coeff. (min)=	1.87 (ii)	9.27 (ii)
Unit Hyd. Tpeak (min)=	6.00	12.00
Unit Hyd. peak (cms)=	0.32	0.11
PEAK FLOW (cms)=	0.17	0.21
TIME TO PEAK (hrs)=	12.00	12.00
RUNOFF VOLUME (mm)=	123.30	68.46
TOTAL RAINFALL (mm)=	124.80	124.80
RUNOFF COEFFICIENT =	0.99	0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		Area (ha)= 13.12	
STANDHYD (0122)		Total Imp(%)= 44.00	Dir. Conn.(%)= 44.00
ID= 1 DT= 3.0 min			

Surface Area	(ha)= 5.77	7.35	
Dep. Storage	(mm)= 1.50	1.50	
Average Slope	(%)= 2.00	2.00	
Length	(m)= 295.75	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 88.79
over (min) 6.00 12.00
Storage Coeff. (min)= 3.50 (ii) 10.34 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.10

TOTALS
PEAK FLOW (cms)= 2.17 1.29 3.375 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 123.30 68.46 92.59
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.74

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0019) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0121): 1.62 0.373 12.00 83.81
+ ID2= 2 (0122): 13.12 3.375 12.00 92.59

ID = 3 (0019): 14.74 3.748 12.00 91.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0020) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0019): 14.74 3.748 12.00 91.62
+ ID2= 2 (0040): 91.18 5.337 12.33 88.40

ID = 3 (0020): 105.92 7.161 12.03 81.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT
O O T T H H Y M M O O
000 T T H H Y M M 000
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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\9c0be014-e3d4-4aec-9abe-2fcf723a02c5\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\9c0be014-e3d4-4aec-9abe-2fcf723a02c5\scenar

DATE: 03/24/2023 TIME: 10:23:29

USER:

COMMENTS: _____

** SIMULATION : Run 12 **

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\7da315dc-0fdd-4b6b-b6ab-798313320844\c7ff0caf
Ptotal=136.80 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.37	6.25	2.74	12.25	19.70	18.25	2.46	
0.50	1.37	6.50	2.74	12.50	19.70	18.50	2.46	
0.75	1.37	6.75	2.74	12.75	10.12	18.75	2.46	
1.00	1.37	7.00	2.74	13.00	10.12	19.00	2.46	
1.25	1.37	7.25	2.74	13.25	1.92	19.25	2.46	
1.50	1.37	7.50	2.74	13.50	1.92	19.50	2.46	
1.75	1.37	7.75	2.74	13.75	11.22	19.75	2.46	
2.00	2.46	8.00	2.74	14.00	11.22	20.00	2.46	
2.25	1.78	8.25	3.69	14.25	4.10	20.25	1.64	
2.50	1.78	8.50	3.69	14.50	4.10	20.50	1.64	
2.75	1.78	8.75	3.69	14.75	4.10	20.75	1.64	
3.00	1.78	9.00	3.69	15.00	4.10	21.00	1.64	
3.25	1.78	9.25	4.38	15.25	4.10	21.25	1.64	
3.50	1.78	9.50	4.38	15.50	4.10	21.50	1.64	
3.75	1.78	9.75	4.92	15.75	4.10	21.75	1.64	
4.00	1.78	10.00	4.92	16.00	4.10	22.00	1.64	
4.25	2.19	10.25	6.29	16.25	2.46	22.25	1.64	
4.50	2.19	10.50	6.29	16.50	2.46	22.50	1.64	
4.75	2.19	10.75	8.48	16.75	2.46	22.75	1.64	
5.00	2.19	11.00	8.48	17.00	2.46	23.00	1.64	
5.25	2.19	11.25	13.13	17.25	2.46	23.25	1.64	
5.50	2.19	11.50	13.13	17.50	2.46	23.50	1.64	
5.75	2.19	11.75	56.91	17.75	2.46	23.75	1.64	
6.00	2.19	12.00	151.03	18.00	2.46	24.00	1.64	

CALIB
NASHYD (1030)
ID= 1 DT= 5.0 min
Area (ha)= 30.38 Curve Number (CN)= 77.0
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.003	1.37	6.003	2.74	12.003	19.71	18.00	2.46	
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46	
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46	
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46	
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46	
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46	
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46	
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46	
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46	

0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.11	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 3.406 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 83.644
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.611

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```

[ ROUTE CHN( 0021) |
  IN= 2---> OUT= 1 |
  Routing time step (min)'= 4.00

<----- DATA FOR SECTION ( 1.1) ----->
Distance      Elevation      Manning
0.00          101.00      0.0000
1.00          100.67      0.0000
2.00          100.33      0.0000 / 0.0350 Main Channel
3.00          100.00      0.0350 Main Channel
4.00          100.00      0.0350 Main Channel
5.00          100.33      0.0350 / 0.0000 Main Channel

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HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT
6.00 100.67 0.0000
7.00 101.00 0.0000

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.05	100.05	.145E+02	0.0	0.34	13.16	
0.09	100.09	.327E+02	0.1	0.51	8.80	
0.14	100.14	.545E+02	0.1	0.64	7.02	
0.19	100.19	.800E+02	0.2	0.75	6.00	
0.24	100.24	.109E+03	0.3	0.85	5.31	
0.28	100.28	.142E+03	0.5	0.94	4.81	
0.33	100.33	.170E+03	0.7	1.02	4.42	
0.39	100.39	.226E+03	1.0	1.17	3.84	
0.44	100.44	.279E+03	1.3	1.30	3.47	
0.50	100.50	.336E+03	1.7	1.40	3.21	
0.55	100.55	.399E+03	2.2	1.49	3.02	
0.61	100.61	.466E+03	2.7	1.57	2.87	
0.66	100.66	.539E+03	3.3	1.63	2.75	
0.72	100.72	.616E+03	3.9	1.69	2.66	
0.78	100.78	.699E+03	4.5	1.75	2.58	
0.83	100.83	.786E+03	5.2	1.80	2.51	
0.89	100.89	.879E+03	6.0	1.84	2.45	
0.94	100.94	.977E+03	6.8	1.88	2.39	
1.00	101.00	.108E+04	7.7	1.92	2.35	
<---- hydrograph ----> <-pipe / channel->						
INFLOW : ID= 2 (1030)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
OUTFLOW: ID= 1 (0021)	30.38	3.41	12.42	83.64	0.68	1.65

| CALIB
| NASHYD (0230) | Area (ha)= 9.14 Curve Number (CN)= 82.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.42

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT							
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW (cms)= 1.302 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 92.610
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.677

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0021):	30.38	3.405	12.42	83.64
+ ID2= 2 (0230):	9.14	1.302	12.25	92.61
=====				
ID = 3 (0003):	39.52	4.650	12.33	85.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)				
IN= 2----> OUT= 1	OVERFLOW IS OFF			
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	2.7760	0.2010
	1.0940	0.0700	3.2300	0.2400
	1.8140	0.1110	3.7590	0.2830
	2.2340	0.1460	0.0000	0.0000
**** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0003)	39.520	4.650	12.33	85.72
OUTFLOW: ID= 1 (0030)	39.520	4.138	12.58	85.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 89.00
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.3155

CALIB			
STANDHYD (0231)	Area (ha)=	7.45	1.64
ID= 1 DT= 2.0 min	Total Imp(%)=	24.00	Dir. Conn.(%)= 24.00

Surface Area	(ha)=	1.79	5.66
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	1.10
Length	(m)=	222.86	40.00

Mannings n = 0.013 HRP6_1-PR-PR-EX-POND1-6_50-100 YEAR-2096 IDF.OUT
0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.37	6.033	2.74	12.033	19.70	18.03	2.46		
0.067	1.37	6.067	2.74	12.067	19.70	18.07	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46		
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.233	1.37	6.233	2.74	12.233	19.70	18.23	2.46		
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46		
0.367	1.37	6.367	2.74	12.367	19.70	18.37	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46		
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46		
0.500	1.37	6.500	2.74	12.500	19.68	18.50	2.46		
0.533	1.37	6.533	2.74	12.533	18.12	18.53	2.46		
0.567	1.37	6.567	2.74	12.567	18.12	18.57	2.46		
0.600	1.37	6.600	2.74	12.600	18.12	18.60	2.46		
0.633	1.37	6.633	2.74	12.633	18.12	18.63	2.46		
0.667	1.37	6.667	2.74	12.667	18.12	18.67	2.46		
0.700	1.37	6.700	2.74	12.700	18.12	18.70	2.46		
0.733	1.37	6.733	2.74	12.733	18.12	18.73	2.46		
0.767	1.37	6.767	2.74	12.767	18.12	18.77	2.46		
0.800	1.37	6.800	2.74	12.800	18.12	18.80	2.46		
0.833	1.37	6.833	2.74	12.833	18.12	18.83	2.46		
0.867	1.37	6.867	2.74	12.867	18.12	18.87	2.46		
0.900	1.37	6.900	2.74	12.900	18.12	18.90	2.46		
0.933	1.37	6.933	2.74	12.933	18.12	18.93	2.46		
0.967	1.37	6.967	2.74	12.967	18.12	18.97	2.46		
1.000	1.37	7.000	2.74	13.000	18.11	19.00	2.46		
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46		
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46		
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46		
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.500	1.37	7.500	2.74	13.500	1.93	19.50	2.46		
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46		
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46		
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.767	1.92	7.767	2.74	13.767	11.22	19.77	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46		
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46		
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46		
2.000	2.46	8.000	2.74	14.000	11.20	20.00	2.46		
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64		
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64		
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64		
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64		
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64		
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64		
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64		
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64		
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64		
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64		
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64		
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64		
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64		

HRP6_1-PR-PR-EX-POND1-6_50-100 YEAR-2096 IDF.OUT									
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64		
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64		
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64		
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64		
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64		
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64		
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64		
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64		
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64		
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64		
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64		
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64		
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64		
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64		
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64		
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64		
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64		
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64		
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64		
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64		
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64		
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64		
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64		
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64		
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64		
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64		
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64		
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64		
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64		
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64		
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64		
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64		
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64		
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64		
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64		
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64		
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64		
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64		
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64		
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64		
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64		
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64		
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64		
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64		
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64		
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64		
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64		
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64		
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64		
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64		
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64		
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64		
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64		
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64		
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64		
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64		
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64		
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64		
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64		
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64		
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64		
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64		
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64		
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64		
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64		
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64		
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64		
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64		
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64		
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64		
5.000	2.19	11.000	8.49	17.000	2.46	23.00	1.64		
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64		
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64		
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64		
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64		
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64		
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64		
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64		
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64		
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64		
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64		
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64		
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64		
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64		
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64		
5.500	2.19	11.500	13.19	17.500	2.46	23.50	1.64		
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64		

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT									
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64		
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64		
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64		
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64		
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64		
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64		
5.767	2.19	11.767	104.09	17.767	2.46	23.77	1.64		
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64		
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64		
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64		
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64		
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64		
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64		
6.000	2.19	12.000	150.85	18.000	2.46	24.00	1.64		

Max.Eff.Inten.(mm/hr)=	151.03	123.96		
CN ² = 82.0	Ia = Dep. Storage	over (min)	5.00	12.00
Storage Coeff. (min)=	2.85 (ii)	10.59 (ii)		
Unit Hyd. Tpeak (min)=	4.00	12.00		
Unit Hyd. peak (cms)=	0.34	0.10		
			TOTALS	
PEAK FLOW (cms)=	0.75	1.38	2.018 (iii)	
TIME TO PEAK (hrs)=	12.00	12.07	12.00	
RUNOFF VOLUME (mm)=	135.30	95.81	105.29	
TOTAL RAINFALL (mm)=	136.80	136.80	136.80	
RUNOFF COEFFICIENT =	0.99	0.70	0.77	

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN² = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0211)				
1	2	3		
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0231):	7.45	2.018	12.00	105.29
+ ID2= 2 (0030):	39.52	4.138	12.58	85.72
=====				
ID = 3 (0211):	46.97	4.552	12.53	88.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)	
IN= 2--> OUT= 1	

Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.485E+01	0.0	0.34	4.39
0.09	100.09	.109E+02	0.1	0.51	2.93
0.14	100.14	.182E+02	0.1	0.64	2.34
0.19	100.19	.267E+02	0.2	0.75	2.00
0.24	100.24	.364E+02	0.3	0.85	1.77
0.28	100.28	.473E+02	0.5	0.94	1.60
0.33	100.33	.590E+02	0.7	1.02	1.47
0.39	100.39	.753E+02	1.0	1.17	1.28
0.44	100.44	.928E+02	1.3	1.30	1.16
0.50	100.50	.112E+03	1.7	1.40	1.07
0.55	100.55	.133E+03	2.2	1.49	1.01
0.61	100.61	.155E+03	2.7	1.57	0.96
0.66	100.66	.180E+03	3.3	1.63	0.92
0.72	100.72	.205E+03	3.9	1.69	0.89
0.78	100.78	.233E+03	4.5	1.75	0.86
0.83	100.83	.262E+03	5.2	1.80	0.84
0.89	100.89	.293E+03	6.0	1.84	0.82
0.94	100.94	.326E+03	6.8	1.88	0.80
1.00	101.00	.360E+03	7.7	1.92	0.78

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT					
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0211)	46.97	4.55	12.53	88.82	0.78
OUTFLOW: ID= 1 (0005)	46.97	4.56	12.53	88.82	0.78

CALIB	
STANDHYD (0232)	
ID= 1 DT= 3.0 min	

Area (ha)= 8.25
Total Imp(%)= 39.00 Dir. Conn.(%)= 39.00

IMPERVIOUS		PERVIOUS (I)	
Surface Area	(ha)= 3.22	5.03	
Dep. Storage	(mm)= 15.00	1.50	
Average Slope	(%)= 2.00	2.00	
Length	(m)= 234.52	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT									
3.150	1.78		9.150	4.38		15.150	4.10		21.15
3.200	1.78		9.200	4.38		15.200	4.10		21.20
3.250	1.78		9.250	4.38		15.250	4.10		21.25
3.300	1.78		9.300	4.38		15.300	4.10		21.30
3.350	1.78		9.350	4.38		15.350	4.10		21.35
3.400	1.78		9.400	4.38		15.400	4.10		21.40
3.450	1.78		9.450	4.38		15.450	4.10		21.45
3.500	1.78		9.500	4.38		15.500	4.10		21.50
3.550	1.78		9.550	4.92		15.550	4.10		21.55
3.600	1.78		9.600	4.92		15.600	4.10		21.60
3.650	1.78		9.650	4.92		15.650	4.10		21.65
3.700	1.78		9.700	4.92		15.700	4.10		21.70
3.750	1.78		9.750	4.92		15.750	4.10		21.75
3.800	1.78		9.800	4.92		15.800	4.10		21.80
3.850	1.78		9.850	4.92		15.850	4.10		21.85
3.900	1.78		9.900	4.92		15.900	4.10		21.90
3.950	1.78		9.950	4.92		15.950	4.10		21.95
4.000	1.78		10.000	4.93		16.000	4.10		22.00
4.050	2.19		10.050	6.29		16.050	2.46		22.05
4.100	2.19		10.100	6.29		16.100	2.46		22.10
4.150	2.19		10.150	6.29		16.150	2.46		22.15
4.200	2.19		10.200	6.29		16.200	2.46		22.20
4.250	2.19		10.250	6.29		16.250	2.46		22.25
4.300	2.19		10.300	6.29		16.300	2.46		22.30
4.350	2.19		10.350	6.29		16.350	2.46		22.35
4.400	2.19		10.400	6.29		16.400	2.46		22.40
4.450	2.19		10.450	6.29		16.450	2.46		22.45
4.500	2.19		10.500	6.29		16.500	2.46		22.50
4.550	2.19		10.550	8.48		16.550	2.46		22.55
4.600	2.19		10.600	8.48		16.600	2.46		22.60
4.650	2.19		10.650	8.48		16.650	2.46		22.65
4.700	2.19		10.700	8.48		16.700	2.46		22.70
4.750	2.19		10.750	8.48		16.750	2.46		22.75
4.800	2.19		10.800	8.48		16.800	2.46		22.80
4.850	2.19		10.850	8.48		16.850	2.46		22.85
4.900	2.19		10.900	8.48		16.900	2.46		22.90
4.950	2.19		10.950	8.48		16.950	2.46		22.95
5.000	2.19		11.000	8.48		17.000	2.46		23.00
5.050	2.19		11.050	13.13		17.050	2.46		23.05
5.100	2.19		11.100	13.13		17.100	2.46		23.10
5.150	2.19		11.150	13.13		17.150	2.46		23.15
5.200	2.19		11.200	13.13		17.200	2.46		23.20
5.250	2.19		11.250	13.13		17.250	2.46		23.25
5.300	2.19		11.300	13.13		17.300	2.46		23.30
5.350	2.19		11.350	13.13		17.350	2.46		23.35
5.400	2.19		11.400	13.13		17.400	2.46		23.40
5.450	2.19		11.450	13.13		17.450	2.46		23.45
5.500	2.19		11.500	13.16		17.500	2.46		23.50
5.550	2.19		11.550	56.91		17.550	2.46		23.55
5.600	2.19		11.600	56.91		17.600	2.46		23.60
5.650	2.19		11.650	56.91		17.650	2.46		23.65
5.700	2.19		11.700	56.91		17.700	2.46		23.70
5.750	2.19		11.750	56.96		17.750	2.46		23.75
5.800	2.19		11.800	151.03		17.800	2.46		23.80
5.850	2.19		11.850	151.03		17.850	2.46		23.85
5.900	2.19		11.900	151.03		17.900	2.46		23.90
5.950	2.19		11.950	151.03		17.950	2.46		23.95
6.000	2.19		12.000	150.96		18.000	2.46		24.00

Max.Eff.Inten.(mm/hr)=	151.03	101.33	
over (min)	6.00	12.00	
Storage Coeff. (min)=	2.93 (ii)	10.09 (iii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.27	0.11	
			TOTALS
PEAK FLOW (cms)=	1.34	1.02	2.291 (iii)
TIME TO PEAK (hrs)=	12.00	12.05	12.00
RUNOFF VOLUME (mm)=	121.80	78.20	95.21
TOTAL RAINFALL (mm)=	136.80	136.80	136.80
RUNOFF COEFFICIENT =	0.89	0.57	0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0232):	8.25	2.291	12.00	95.21
+ ID2= 2 (0005):	46.97	4.557	12.53	88.82

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT															
=====															
ID = 3 (0007):		55.22	5.779	12.03	89.77										
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.															

ROUTE CHN(0022)															
IN= 2--> OUT= 1		Routing time step (min)'= 2.00													

<----- DATA FOR SECTION (1.1) ----->															
Distance	Elevation	Manning													
0.00	101.00	0.0800													
1.00	100.67	0.0800													
2.00	100.33	0.0800 / 0.0350	Main Channel												
3.00	100.00	0.0350	Main Channel												
4.00	100.00	0.0350	Main Channel												
5.00	100.33	0.0350 / 0.0800	Main Channel												
6.00	100.67	0.0800													
7.00	101.00	0.0800													
<----- TRAVEL TIME TABLE ----->															
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME										
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)										
0.05	100.05	.609E+01	0.0	0.34	5.51										
0.09	100.09	.137E+02	0.1	0.51	3.68										
0.14	100.14	.228E+02	0.1	0.64	2.94										
0.19	100.19	.335E+02	0.2	0.75	2.51										
0.24	100.24	.457E+02	0.3	0.85	2.22										
0.28	100.28	.594E+02	0.5	0.94	2.01										
0.33	100.33	.746E+02	0.7	1.02	1.85										
0.39	100.39	.945E+02	1.0	1.17	1.61										
0.44	100.44	.117E+03	1.3	1.30	1.45										
0.50	100.50	.141E+03	1.7	1.40	1.34										
0.55	100.55	.167E+03	2.2	1.49	1.26										
0.61	100.61	.195E+03	2.7	1.57	1.20										
0.66	100.66	.225E+03	3.3	1.63	1.15										
0.72	100.72	.258E+03	3.9	1.69	1.11										
0.78	100.78	.292E+03	4.5	1.75	1.08										
0.83	100.83	.329E+03	5.2	1.80	1.05										
0.89	100.89	.368E+03	6.0	1.84	1.02										
0.94	100.94	.409E+03	6.8	1.88	1.00										
1.00	101.00	.452E+03	7.7	1.92	0.98										
<---- hydrograph ----> <-pipe / channel-->															
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL									
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)									
INFLOW : ID= 2 (0007)	55.22	5.78	12.03	89.77	0.87	1.83									
OUTFLOW: ID= 1 (0022)	55.22	5.75	12.03	89.77	0.87	1.83									

CALIB															
STANDHYD (0133)		Area	(ha)=	6.79											
ID= 1 DT= 3.0 min		Total Imp(%)=	47.00	Dir. Conn.(%)=	47.00										

	IMPERVIOUS	PERVIOUS (i)													
Surface Area	(ha)=	3.19	3.60												
Dep. Storage	(mm)=	15.00	1.50												
Average Slope	(%)=	2.00	2.00												
Length	(m)=	212.76	40.00												
Mannings n	=	0.013	0.250												
NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.															
----- TRANSFORMED HYETOGRAPH -----															
TIME	RAIN		TIME							RAIN		TIME	RAIN		TIME
hrs	mm/hr		hrs							mm/hr		hrs	mm/hr		hrs
0.050	1.37		6.050							2.74		12.050	19.70		18.05
0.100	1.37		6.100							2.74		12.100	19.70		18.10
0.150	1.37		6.150							2.74		12.150	19.70		18.15
0.200	1.37		6.200							2.74		12.200	19.70		18.20
0.250	1.37		6.250							2.74		12.250	19.70		18.25
0.300	1.37		6.300	2.74		12.300	19.70		18.30						
0.350	1.37		6.350	2.74		12.350	19.70		18.35						
0.400	1.37		6.400	2.74		12.400	19.70		18.40						
0.450	1.37		6.450	2.74		12.450	19.70		18.45						
0.500	1.37		6.500	2.74		12.500	19.69		18.50						
0.550	1.37		6.550	2.74		12.550	10.12		18.55						
0.600	1.37		6.600	2.74		12.600	10.12		18.60						
0.650	1.37		6.650	2.74		12.650	10.12		18.65						
0.700	1.37		6.700	2.74		12.700	10.12		18.70						
0.750	1.37		6.750	2.74		12.750	10.12		18.75						
0.800	1.37		6.800	2.74		12.800	10.12		18.80						
0.850	1.37		6.850	2.74		12.850	10.12		18.85						

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64

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5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 81.39
over (min) 6.00 12.00
Storage Coeff. (min)= 2.77 (ii) 9.05 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.28 0.11

PEAK FLOW (cms)= 1.33 0.60 1.091 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 121.80 62.91 90.59
TOTAL RAINFALL (mm)= 136.80 136.80 136.80
RUNOFF COEFFICIENT = 0.89 0.46 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0091) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0133): 6.79 1.891 12.00 90.59
+ ID2= 2 (0022): 55.22 5.751 12.03 89.77
=====

ID = 3 (0091): 62.01 7.480 12.03 89.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0222) |
ID= 1 DT= 5.0 min
Area (ha)= 3.54 Curve Number (CN)= 75.0
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.15

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	1.37	6.003	2.74	12.003	19.71	18.00	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.11	20.08	1.64

HRP6.1-PR-PR-EX_POND1-6 50-100 YEAR-2096 IDF.OUT

2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 0.981

PEAK FLOW (cms)= 0.827 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 79.786
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.583

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0221)	Area (ha)= 3.79
ID= 1 DT= 5.0 min	Total Imp(%)= 27.00 Dir. Conn.(%)= 27.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.02	2.77
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	158.95	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46

HRP6.1-PR-PR-EX_POND1-6 50-100 YEAR-2096 IDF.OUT

0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.11	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 111.58
over (min) 5.00 10.00
Storage Coeff. (min)= 2.32 (ii) 9.08 (iii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.12

TOTALS
PEAK FLOW (cms)= 0.43 0.66 1.088 (iii)
TIME TO PEAK (hrs)= 12.00 12.00
RUNOFF VOLUME (mm)= 135.30 97.50
TOTAL RAINFALL (mm)= 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.61 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0009)|

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0221):	3.79	1.088	12.00	97.59
+ ID2= 2 (0222):	3.54	0.827	12.00	79.79
=====				
ID = 3 (0009):	7.33	1.914	12.00	88.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0009)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3 + 2 = 1				
ID1= 3 (0009):	7.33	1.914	12.00	88.99
+ ID2= 2 (0091):	62.01	7.480	12.03	89.86
=====				
ID = 1 (0009):	69.34	9.303	12.00	89.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 4.0 min				

	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	3.2510	1.2472
	0.6750	0.7720	3.7840	1.3920
	1.6680	0.9849	4.5560	1.5300
	2.4150	1.1060	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0009)	69.340	9.303	12.00	89.77
OUTFLOW: ID= 1 (0010)	69.340	4.957	12.77	89.77

PEAK FLOW REDUCTION [Qout/Qin](%)= 53.28
TIME SHIFT OF PEAK FLOW (min)= 46.00
MAXIMUM STORAGE USED (ha.m.)= 1.6018

CALIB	Area (ha)=	IMPERVIOUS	PERVIOUS (i)
STANDHYD (0234)	17.56		
ID= 1 DT= 3.0 min	Total Imp(%)= 28.00		Dir. Conn.(%)= 28.00

Surface Area	(ha)= 4.92	12.64	
Dep. Storage	(mm)= 1.50	1.50	
Average Slope	(%)= 2.00	2.00	
Length	(m)= 342.15	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT							
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT									
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64		
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64		
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64		
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64		
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64		
Max.Eff.Inten.(mm/hr)=	151.03	101.33							
over (min)	6.00	15.00							
Storage Coeff. (min)=	3.68 (ii)	12.41 (ii)							
Unit Hyd. Tpeak (min)=	6.00	15.00							
Unit Hyd. peak (cms)=	0.25	0.09							
PEAK FLOW (cms)=	2.02	2.30							
TIME TO PEAK (hrs)=	12.00	12.10							
RUNOFF VOLUME (mm)=	135.30	78.20							
TOTAL RAINFALL (mm)=	136.80	136.80							
RUNOFF COEFFICIENT =	0.99	0.57							

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (0010):	69.34	4.957	12.77	89.77	
+ ID2= 2 (0234):	17.56	3.981	12.00	94.19	
=====					
ID = 3 (0011):	86.90	6.722	12.07	90.66	

RESERVOIR(0015)					
IN= 2--> OUT= 1	OVERFLOW IS OFF				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	9.4690	0.3520	
	0.4100	0.1040	0.0000	0.0000	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
INFLOW : ID= 2 (0011)	86.900	6.722	12.07	90.66	
OUTFLOW: ID= 1 (0015)	86.900	6.307	12.20	90.66	
PEAK FLOW REDUCTION [Qout/Qin](%)= 93.83					
TIME SHIFT OF PEAK FLOW (min)= 8.00					
MAXIMUM STORAGE USED (ha.m.)= 0.2656					

CALIB					
STANDHYD (0235)	Area (ha)=	4.28			
ID= 1 DT= 2.0 min	Total Imp(%)=	30.00	Dir. Conn.(%)=	30.00	
	IMPERVIOUS		PERVIOUS (i)		
Surface Area	(ha)=	1.28	3.00		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	168.92	40.00		
Mannings n	=	0.013	0.250		

TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	1.37	6.033	2.74	12.033	19.70	18.03	2.46		
0.067	1.37	6.067	2.74	12.067	19.70	18.07	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46		
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.233	1.37	6.233	2.74	12.233	19.70	18.23	2.46		
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46		
0.367	1.37	6.367	2.74	12.367	19.70	18.37	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT									
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46		
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46		
0.500	1.37	6.500	2.74	12.500	19.68	18.50	2.46		
0.533	1.37	6.533	2.74	12.533	19.68	18.53	2.46		
0.567	1.37	6.567	2.74	12.567	19.12	18.57	2.46		
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46		
0.633	1.37	6.633	2.74	12.633	10.12	18.63	2.46		
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46		
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46		
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46		
0.767	1.37	6.767	2.74	12.767	10.12	18.77	2.46		
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46		
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46		
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46		
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46		
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46		
0.967	1.37	6.967	2.74	12.967	10.12	18.97	2.46		
1.000	1.37	7.000	2.74	13.000	10.11	19.00	2.46		
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46		
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46		
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46		
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.500	1.37	7.500	2.74	13.500	1.93	19.50	2.46		
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46		
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46		
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.767	1.92	7.767	2.74	13.767	11.22	19.77	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46		
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46		
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46		
2.000	2.46	8.000	2.74	14.000	11.20	20.00	2.46		
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64		
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64		
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64		
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64		
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64		
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64		
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64		
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64		
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64		
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64		
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64		
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64		
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64		
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64		
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64		
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64		
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64		
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64		
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64		
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64		
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64		
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64		
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64		
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64		
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64		
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64		
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64		
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64		
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64		
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64		
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64		
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64		
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64		

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64
5.000	2.19	11.000	8.49	17.000	2.46	23.00	1.64
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.500	2.19	11.500	13.19	17.500	2.46	23.50	1.64
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.767	2.19	11.767	104.09	17.767	2.46	23.77	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64
6.000	2.19	12.000	150.85	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 102.85
over (min) 5.00 10.00
Storage Coeff. (min)= 2.41 (ii) 9.39 (ii)
Unit Hyd. Tpeak (min)= 4.00 10.00
Unit Hyd. peak (cms)= 0.37 0.12

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

TOTALS
PEAK FLOW (cms)= 0.54 0.63 1.142 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 135.30 78.20 95.33
TOTAL RAINFALL (mm)= 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.57 0.70

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0012) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0015): 86.90 6.307 12.20 90.66
+ ID2= 2 (0235): 4.28 1.142 12.00 95.33
=====

ID = 3 (0012): 91.18 6.877 12.13 90.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0040) |
IN= 2---> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0800
1.00 100.67 0.0800
2.00 100.33 0.0800 / 0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 / 0.0800 Main Channel
6.00 100.67 0.0800
7.00 101.00 0.0800

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .590E+02 0.0 0.34 53.30
0.09 100.09 .133E+03 0.1 0.51 35.70
0.14 100.14 .221E+03 0.1 0.64 28.48
0.19 100.19 .324E+03 0.2 0.75 24.33
0.24 100.24 .442E+03 0.3 0.85 21.55
0.28 100.28 .575E+03 0.5 0.94 19.51
0.33 100.33 .723E+03 0.7 1.02 17.94
0.39 100.39 .916E+03 1.0 1.17 15.58
0.44 100.44 .113E+04 1.3 1.30 14.08
0.50 100.50 .136E+04 1.7 1.40 13.03
0.55 100.55 .162E+04 2.2 1.49 12.25
0.61 100.61 .189E+04 2.7 1.57 11.65
0.66 100.66 .218E+04 3.3 1.63 11.17
0.72 100.72 .250E+04 3.9 1.69 10.77
0.78 100.78 .283E+04 4.5 1.75 10.45
0.83 100.83 .319E+04 5.2 1.80 10.17
0.89 100.89 .357E+04 6.0 1.84 9.92
0.94 100.94 .396E+04 6.8 1.88 9.71
1.00 101.00 .438E+04 7.7 1.92 9.52

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0012) 91.18 6.88 12.13 90.88 0.95 1.88
OUTFLOW: ID= 1 (0040) 91.18 6.28 12.37 90.88 0.91 1.85

| CALIB |
| STANDHYD (0121) | Area (ha)= 1.62
| ID= 1 DT= 3.0 min | Total Imp(%)= 28.00 Dir. Conn.(%)= 28.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.45 1.17
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 103.92 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP6.1-PR-EX-POND1-6.50-100 YEAR-2096 IDF.OUT

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	2.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64

HRP6.1-PR-EX-POND1-6.50-100 YEAR-2096 IDF.OUT

4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 101.33
over (min) 6.00 12.00
Storage Coeff. (min)= 1.00 (ii) 10.53 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.33 0.10

PEAK FLOW (cms)= 0.19 0.23 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.05 0.407 (iii)
RUNOFF VOLUME (mm)= 135.30 78.20 94.19
TOTAL RAINFALL (mm)= 136.80 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.57 0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0122) | Area (ha)= 13.12
|ID= 1 DT= 3.0 min | Total Imp(%)= 44.00 Dir. Conn.(%)= 44.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 5.77 7.35
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 295.75 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64

HRP6.1-PR-PR-EX_POND1-6.50-100 YEAR-2096 IDF.OUT

4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)=	151.03	101.33	
over (min)	6.00	12.00	
Storage Coeff. (min)=	3.37 (ii)	9.96 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.26	0.11	
			TOTALS
PEAK FLOW (cms)=	2.39	1.50	3.786 (iii)
TIME TO PEAK (hrs)=	12.00	12.05	12.00
RUNOFF VOLUME (mm)=	135.30	78.20	103.33
TOTAL RAINFALL (mm)=	136.80	136.80	136.80
RUNOFF COEFFICIENT =	0.99	0.57	0.76

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):	1.62	0.407	12.00	94.19
+ ID2= 2 (0122):	13.12	3.786	12.00	103.33
ID = 3 (0019):	14.74	4.193	12.00	102.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0019):	14.74	4.193	12.00	102.32
+ ID2= 2 (0040):	91.18	6.279	12.37	90.88
ID = 3 (0020):	105.92	8.051	12.07	92.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\50506e98-a269-4312-9df7-3d0f11e25a54\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\50506e98-a269-4312-9df7-3d0f11e25a54\scenar

DATE: 03/24/2023 TIME: 10:47:37

USER:

COMMENTS: _____

** SIMULATION : Run 11

MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\270a41f9-095e-4ac0-bd0c-f09ad517dbb7\5fdf4178
| Ptotal=124.08 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.25	6.25	2.50	12.25	17.97	18.25	2.25	
0.50	1.25	6.50	2.50	12.50	17.97	18.50	2.25	
0.75	1.25	6.75	2.50	12.75	9.24	18.75	2.25	
1.00	1.25	7.00	2.50	13.00	9.24	19.00	2.25	
1.25	1.25	7.25	2.50	13.25	1.75	19.25	2.25	
1.50	1.25	7.50	2.50	13.50	1.75	19.50	2.25	
1.75	1.25	7.75	2.50	13.75	10.23	19.75	2.25	
2.00	2.25	8.00	2.50	14.00	10.23	20.00	2.25	
2.25	1.62	8.25	3.37	14.25	3.74	20.25	1.50	
2.50	1.62	8.50	3.37	14.50	3.74	20.50	1.50	
2.75	1.62	8.75	3.37	14.75	3.74	20.75	1.50	
3.00	1.62	9.00	3.37	15.00	3.74	21.00	1.50	
3.25	1.62	9.25	3.00	15.25	3.74	21.25	1.50	
3.50	1.62	9.50	3.00	15.50	3.74	21.50	1.50	
3.75	1.62	9.75	4.49	15.75	3.74	21.75	1.50	
4.00	1.62	10.00	4.49	16.00	3.74	22.00	1.50	
4.25	2.00	10.25	5.74	16.25	2.25	22.25	1.50	
4.50	2.00	10.50	5.74	16.50	2.25	22.50	1.50	
4.75	2.00	10.75	7.74	16.75	2.25	22.75	1.50	
5.00	2.00	11.00	7.74	17.00	2.25	23.00	1.50	
5.25	2.00	11.25	11.98	17.25	2.25	23.25	1.50	
5.50	2.00	11.50	11.98	17.50	2.25	23.50	1.50	
5.75	2.00	11.75	51.92	17.75	2.25	23.75	1.50	
6.00	2.00	12.00	137.78	18.00	2.25	24.00	1.50	

CALIB
NASHYD (1040) | Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25	
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25	
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25	
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25	
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25	
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25	
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25	
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25	
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25	
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25	
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25	
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25	
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25	
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25	
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25	
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25	
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25	
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25	
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25	
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25	
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25	
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25	
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25	
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25	
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50	
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50	
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50	
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50	
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50	
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50	
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50	
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50	
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50	
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50	
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50	
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50	
3.083	1.62	9.083	3.00	15.083	3.74	21.08	1.50	
3.167	1.62	9.167	3.00	15.167	3.74	21.17	1.50	
3.250	1.62	9.250	3.00	15.250	3.74	21.25	1.50	
3.333	1.62	9.333	3.00	15.333	3.74	21.33	1.50	
3.417	1.62	9.417	3.00	15.417	3.74	21.42	1.50	
3.500	1.62	9.500	3.00	15.500	3.74	21.50	1.50	
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50	
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50	
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50	
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50	
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50	
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50	
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50	
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50	
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50	
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50	
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50	
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50	
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50	
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50	
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50	
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50	
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50	
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50	
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50	
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50	
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50	
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50	
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50	
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50	
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50	
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50	
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50	
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50	
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50	
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50	

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 1.247 (1)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 78.178
TOTAL RAINFALL (mm)= 124.080
RUNOFF COEFFICIENT = 0.562

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

HRP7-PR_50-100 YEAR-2096 IDF.OUT
STANDHYD (0240) | Area (ha)= 20.08
ID= 1 DT= 3.0 min | Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

IMPERVIOUS PERVIOUS (I)
Surface Area (ha)= 11.65
Dep. Storage (mm)= 1.50
Average Slope (%)= 2.00
Length (m)= 365.88 100.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.050 1.25 | 6.050 2.50 | 12.050 17.97 | 18.05 2.25
0.100 1.25 | 6.100 2.50 | 12.100 17.97 | 18.10 2.25
0.150 1.25 | 6.150 2.50 | 12.150 17.97 | 18.15 2.25
0.200 1.25 | 6.200 2.50 | 12.200 17.97 | 18.20 2.25
0.250 1.25 | 6.250 2.50 | 12.250 17.97 | 18.25 2.25
0.300 1.25 | 6.300 2.50 | 12.300 17.97 | 18.30 2.25
0.350 1.25 | 6.350 2.50 | 12.350 17.97 | 18.35 2.25
0.400 1.25 | 6.400 2.50 | 12.400 17.97 | 18.40 2.25
0.450 1.25 | 6.450 2.50 | 12.450 17.97 | 18.45 2.25
0.500 1.25 | 6.500 2.50 | 12.500 17.97 | 18.50 2.25
0.550 1.25 | 6.550 2.50 | 12.550 9.24 | 18.55 2.25
0.600 1.25 | 6.600 2.50 | 12.600 9.24 | 18.60 2.25
0.650 1.25 | 6.650 2.50 | 12.650 9.24 | 18.65 2.25
0.700 1.25 | 6.700 2.50 | 12.700 9.24 | 18.70 2.25
0.750 1.25 | 6.750 2.50 | 12.750 9.24 | 18.75 2.25
0.800 1.25 | 6.800 2.50 | 12.800 9.24 | 18.80 2.25
0.850 1.25 | 6.850 2.50 | 12.850 9.24 | 18.85 2.25
0.900 1.25 | 6.900 2.50 | 12.900 9.24 | 18.90 2.25
0.950 1.25 | 6.950 2.50 | 12.950 9.24 | 18.95 2.25
1.000 1.25 | 7.000 2.50 | 13.000 9.23 | 19.00 2.25
1.050 1.25 | 7.050 2.50 | 13.050 1.75 | 19.05 2.25
1.100 1.25 | 7.100 2.50 | 13.100 1.75 | 19.10 2.25
1.150 1.25 | 7.150 2.50 | 13.150 1.75 | 19.15 2.25
1.200 1.25 | 7.200 2.50 | 13.200 1.75 | 19.20 2.25
1.250 1.25 | 7.250 2.50 | 13.250 1.75 | 19.25 2.25
1.300 1.25 | 7.300 2.50 | 13.300 1.75 | 19.30 2.25
1.350 1.25 | 7.350 2.50 | 13.350 1.75 | 19.35 2.25
1.400 1.25 | 7.400 2.50 | 13.400 1.75 | 19.40 2.25
1.450 1.25 | 7.450 2.50 | 13.450 1.75 | 19.45 2.25
1.500 1.25 | 7.500 2.50 | 13.500 1.75 | 19.50 2.25
1.550 1.25 | 7.550 2.50 | 13.550 10.23 | 19.55 2.25
1.600 1.25 | 7.600 2.50 | 13.600 10.23 | 19.60 2.25
1.650 1.25 | 7.650 2.50 | 13.650 10.23 | 19.65 2.25
1.700 1.25 | 7.700 2.50 | 13.700 10.23 | 19.70 2.25
1.750 1.25 | 7.750 2.50 | 13.750 10.23 | 19.75 2.25
1.800 2.25 | 7.800 2.50 | 13.800 10.23 | 19.80 2.25
1.850 2.25 | 7.850 2.50 | 13.850 10.23 | 19.85 2.25
1.900 2.25 | 7.900 2.50 | 13.900 10.23 | 19.90 2.25
1.950 2.25 | 7.950 2.50 | 13.950 10.23 | 19.95 2.25
2.000 2.25 | 8.000 2.50 | 14.000 10.23 | 20.00 2.25
2.050 1.62 | 8.050 3.37 | 14.050 3.74 | 20.05 1.50
2.100 1.62 | 8.100 3.37 | 14.100 3.74 | 20.10 1.50
2.150 1.62 | 8.150 3.37 | 14.150 3.74 | 20.15 1.50
2.200 1.62 | 8.200 3.37 | 14.200 3.74 | 20.20 1.50
2.250 1.62 | 8.250 3.37 | 14.250 3.74 | 20.25 1.50
2.300 1.62 | 8.300 3.37 | 14.300 3.74 | 20.30 1.50
2.350 1.62 | 8.350 3.37 | 14.350 3.74 | 20.35 1.50
2.400 1.62 | 8.400 3.37 | 14.400 3.74 | 20.40 1.50
2.450 1.62 | 8.450 3.37 | 14.450 3.74 | 20.45 1.50
2.500 1.62 | 8.500 3.37 | 14.500 3.74 | 20.50 1.50
2.550 1.62 | 8.550 3.37 | 14.550 3.74 | 20.55 1.50
2.600 1.62 | 8.600 3.37 | 14.600 3.74 | 20.60 1.50
2.650 1.62 | 8.650 3.37 | 14.650 3.74 | 20.65 1.50
2.700 1.62 | 8.700 3.37 | 14.700 3.74 | 20.70 1.50
2.750 1.62 | 8.750 3.37 | 14.750 3.74 | 20.75 1.50
2.800 1.62 | 8.800 3.37 | 14.800 3.74 | 20.80 1.50
2.850 1.62 | 8.850 3.37 | 14.850 3.74 | 20.85 1.50
2.900 1.62 | 8.900 3.37 | 14.900 3.74 | 20.90 1.50
2.950 1.62 | 8.950 3.37 | 14.950 3.74 | 20.95 1.50
3.000 1.62 | 9.000 3.37 | 15.000 3.74 | 21.00 1.50
3.050 1.62 | 9.050 3.99 | 15.050 3.74 | 21.05 1.50
3.100 1.62 | 9.100 3.99 | 15.100 3.74 | 21.10 1.50
3.150 1.62 | 9.150 3.99 | 15.150 3.74 | 21.15 1.50
3.200 1.62 | 9.200 3.99 | 15.200 3.74 | 21.20 1.50
3.250 1.62 | 9.250 3.99 | 15.250 3.74 | 21.25 1.50
3.300 1.62 | 9.300 3.99 | 15.300 3.74 | 21.30 1.50
3.350 1.62 | 9.350 3.99 | 15.350 3.74 | 21.35 1.50
3.400 1.62 | 9.400 3.99 | 15.400 3.74 | 21.40 1.50
3.450 1.62 | 9.450 3.99 | 15.450 3.74 | 21.45 1.50
3.500 1.62 | 9.500 3.99 | 15.500 3.74 | 21.50 1.50
3.550 1.62 | 9.550 4.49 | 15.550 3.74 | 21.55 1.50

HRP7-PR_50-100 YEAR-2096 IDF.OUT
3.600 1.62 | 9.600 4.49 | 15.600 3.74 | 21.60 1.50
3.650 1.62 | 9.650 4.49 | 15.650 3.74 | 21.65 1.50
3.700 1.62 | 9.700 4.49 | 15.700 3.74 | 21.70 1.50
3.750 1.62 | 9.750 4.49 | 15.750 3.74 | 21.75 1.50
3.800 1.62 | 9.800 4.49 | 15.800 3.74 | 21.80 1.50
3.850 1.62 | 9.850 4.49 | 15.850 3.74 | 21.85 1.50
3.900 1.62 | 9.900 4.49 | 15.900 3.74 | 21.90 1.50
3.950 1.62 | 9.950 4.49 | 15.950 3.74 | 21.95 1.50
4.000 1.62 | 10.000 4.49 | 16.000 3.74 | 22.00 1.50
4.050 2.00 | 10.050 5.74 | 16.050 2.25 | 22.05 1.50
4.100 2.00 | 10.100 5.74 | 16.100 2.25 | 22.10 1.50
4.150 2.00 | 10.150 5.74 | 16.150 2.25 | 22.15 1.50
4.200 2.00 | 10.200 5.74 | 16.200 2.25 | 22.20 1.50
4.250 2.00 | 10.250 5.74 | 16.250 2.25 | 22.25 1.50
4.300 2.00 | 10.300 5.74 | 16.300 2.25 | 22.30 1.50
4.350 2.00 | 10.350 5.74 | 16.350 2.25 | 22.35 1.50
4.400 2.00 | 10.400 5.74 | 16.400 2.25 | 22.40 1.50
4.450 2.00 | 10.450 5.74 | 16.450 2.25 | 22.45 1.50
4.500 2.00 | 10.500 5.74 | 16.500 2.25 | 22.50 1.50
4.550 2.00 | 10.550 7.74 | 16.550 2.25 | 22.55 1.50
4.600 2.00 | 10.600 7.74 | 16.600 2.25 | 22.60 1.50
4.650 2.00 | 10.650 7.74 | 16.650 2.25 | 22.65 1.50
4.700 2.00 | 10.700 7.74 | 16.700 2.25 | 22.70 1.50
4.750 2.00 | 10.750 7.74 | 16.750 2.25 | 22.75 1.50
4.800 2.00 | 10.800 7.74 | 16.800 2.25 | 22.80 1.50
4.850 2.00 | 10.850 7.74 | 16.850 2.25 | 22.85 1.50
4.900 2.00 | 10.900 7.74 | 16.900 2.25 | 22.90 1.50
4.950 2.00 | 10.950 7.74 | 16.950 2.25 | 22.95 1.50
5.000 2.00 | 11.000 7.74 | 17.000 2.25 | 23.00 1.50
5.050 2.00 | 11.050 11.98 | 17.050 2.25 | 23.05 1.50
5.100 2.00 | 11.100 11.98 | 17.100 2.25 | 23.10 1.50
5.150 2.00 | 11.150 11.98 | 17.150 2.25 | 23.15 1.50
5.200 2.00 | 11.200 11.98 | 17.200 2.25 | 23.20 1.50
5.250 2.00 | 11.250 11.98 | 17.250 2.25 | 23.25 1.50
5.300 2.00 | 11.300 11.98 | 17.300 2.25 | 23.30 1.50
5.350 2.00 | 11.350 11.98 | 17.350 2.25 | 23.35 1.50
5.400 2.00 | 11.400 11.98 | 17.400 2.25 | 23.40 1.50
5.450 2.00 | 11.450 11.98 | 17.450 2.25 | 23.45 1.50
5.500 2.00 | 11.500 12.00 | 17.500 2.25 | 23.50 1.50
5.550 2.00 | 11.550 51.92 | 17.550 2.25 | 23.55 1.50
5.600 2.00 | 11.600 51.92 | 17.600 2.25 | 23.60 1.50
5.650 2.00 | 11.650 51.92 | 17.650 2.25 | 23.65 1.50
5.700 2.00 | 11.700 51.92 | 17.700 2.25 | 23.70 1.50
5.750 2.00 | 11.750 51.96 | 17.750 2.25 | 23.75 1.50
5.800 2.00 | 11.800 137.78 | 17.800 2.25 | 23.80 1.50
5.850 2.00 | 11.850 137.78 | 17.850 2.25 | 23.85 1.50
5.900 2.00 | 11.900 137.78 | 17.900 2.25 | 23.90 1.50
5.950 2.00 | 11.950 137.78 | 17.950 2.25 | 23.95 1.50
6.000 2.00 | 12.000 137.71 | 18.000 2.25 | 24.00 1.50

Max.Eff.Inten.(mm/hr)= 137.78 96.62
over (min) 6.00 18.00
Storage Coeff. (min)= 3.98 (ii) 16.37 (iii)
Unit Hyd. Tpeak (min)= 6.00 18.00
Unit Hyd. peak (cms)= 0.24 0.07
TOTALS
PEAK FLOW (cms)= 3.15 1.81 4.508 (iii)
TIME TO PEAK (hrs)= 12.00 12.15 12.00
RUNOFF VOLUME (mm)= 123.30 76.33 96.06
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.61 0.77

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0038) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (1040): 10.35 1.247 12.17 70.18
+ ID2= 2 (0240): 20.08 4.508 12.00 96.06
===== ID = 3 (0038): 30.43 5.425 12.00 87.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0029) |
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

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Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.321E+02	0.0	0.28	35.15
0.09	100.09	.721E+02	0.1	0.42	23.51
0.14	100.14	.120E+03	0.1	0.53	18.76
0.19	100.19	.176E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.498E+03	0.8	0.97	10.26
0.44	100.44	.614E+03	1.1	1.07	9.26
0.50	100.50	.741E+03	1.4	1.16	8.55
0.55	100.55	.879E+03	1.8	1.24	8.01
0.61	100.61	.103E+04	2.3	1.31	7.60
0.66	100.66	.119E+04	2.7	1.37	7.26
0.72	100.72	.136E+04	3.2	1.42	6.98
0.78	100.78	.154E+04	3.8	1.47	6.74
0.83	100.83	.173E+04	4.4	1.52	6.53
0.89	100.89	.194E+04	5.1	1.56	6.35
0.94	100.94	.215E+04	5.8	1.60	6.19
1.00	101.00	.238E+04	6.6	1.64	6.05

<---- hydrograph ---->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0038)	30.43	5.42	12.00	87.26	0.91
OUTFLOW: ID= 1 (0029)	30.43	4.76	12.07	87.25	0.86

CALIB					
NASHYD (1041)	Area (ha)=	11.30	Curve Number (CN)=	77.0	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.26			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	1.25	6.003	2.50	12.003	17.90	18.00	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25		
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25		
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25		
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25		
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25		
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25		
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25		
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25		
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25		
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25		
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50		
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50		
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50		
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50		
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50		
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50		
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50		
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50		
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50		

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2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50		
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50		
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50		
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50		
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50		
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50		
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50		
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50		
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50		
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50		
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50		
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50		
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50		
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50		
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50		
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50		
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50		
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50		
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50		
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50		
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50		
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50		
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50		
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50		
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50		
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50		
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50		
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50		
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50		
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50		
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50		
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50		
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50		
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50		
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50		
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50		
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50		
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50		
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50		

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW	(cms)=	1.750 (i)
TIME TO PEAK	(hrs)=	12.083
RUNOFF VOLUME	(mm)=	73.299
TOTAL RAINFALL	(mm)=	124.000
RUNOFF COEFFICIENT	=	0.587

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):	11.30	1.750	12.08	73.30
+ ID2= 2 (0029):	30.43	4.765	12.07	87.25
ID = 3 (0018):	41.73	6.491	12.07	83.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0241)	Area	(ha)=	12.29	
ID= 1 DT= 2.0 min	Total Imp(%)=	73.00	Dir. Conn.(%)=	73.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	8.97	3.32	
Dep. Storage	=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	286.24	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.25	6.033	2.50	12.033	17.97	18.03	2.25		
0.067	1.25	6.067	2.50	12.067	17.97	18.07	2.25		
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25		
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25		

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0.233	1.25	6.233	2.50	12.233	17.97	18.23	2.25
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25
0.367	1.25	6.367	2.50	12.367	17.97	18.37	2.25
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25
0.433	1.25	6.433	2.50	12.433	17.97	18.43	2.25
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25
0.500	1.25	6.500	2.50	12.500	17.96	18.50	2.25
0.533	1.25	6.533	2.50	12.533	9.24	18.53	2.25
0.567	1.25	6.567	2.50	12.567	9.24	18.57	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25
0.633	1.25	6.633	2.50	12.633	9.24	18.63	2.25
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25
0.767	1.25	6.767	2.50	12.767	9.24	18.77	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25
0.967	1.25	6.967	2.50	12.967	9.24	18.97	2.25
1.000	1.25	7.000	2.50	13.000	9.22	19.00	2.25
1.033	1.25	7.033	2.50	13.033	1.75	19.03	2.25
1.067	1.25	7.067	2.50	13.067	1.75	19.07	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25
1.133	1.25	7.133	2.50	13.133	1.75	19.13	2.25
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.233	1.25	7.233	2.50	13.233	1.75	19.23	2.25
1.267	1.25	7.267	2.50	13.267	1.75	19.27	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25
1.367	1.25	7.367	2.50	13.367	1.75	19.37	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.433	1.25	7.433	2.50	13.433	1.75	19.43	2.25
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25
1.500	1.25	7.500	2.50	13.500	1.76	19.50	2.25
1.533	1.25	7.533	2.50	13.533	10.23	19.53	2.25
1.567	1.25	7.567	2.50	13.567	10.23	19.57	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.633	1.25	7.633	2.50	13.633	10.23	19.63	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25
1.767	1.75	7.767	2.50	13.767	10.23	19.77	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25
1.867	2.25	7.867	2.50	13.867	10.23	19.87	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25
1.967	2.25	7.967	2.50	13.967	10.23	19.97	2.25
2.000	2.25	8.000	2.50	14.000	10.22	20.00	2.25
2.033	1.62	8.033	3.37	14.033	3.74	20.03	1.50
2.067	1.62	8.067	3.37	14.067	3.74	20.07	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.233	1.62	8.233	3.37	14.233	3.74	20.23	1.50
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50

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3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50
4.967	2.00	10.967	7.74	16.967	2.25	22.97	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.033	2.00	11.033	11.98	17.033	2.25	23.03	1.50
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.233	2.00	11.233	11.98	17.233	2.25	23.23	1.50
5.267	2.00	11.267	11.98	17.267	2.25	23.27	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.367	2.00	11.367	11.98	17.367	2.25	23.37	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.433	2.00	11.433	11.98	17.433	2.25	23.43	1.50
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50
5.500	2.00	11.500	12.03	17.500	2.25	23.50	1.50
5.533	2.00	11.533	51.92	17.533	2.25	23.53	1.50
5.567	2.00	11.567	51.92	17.567	2.25	23.57	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.633	2.00	11.633	51.92	17.633	2.25	23.63	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50
5.767	2.00	11.767	51.92	17.767	2.25	23.77	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.833	2.00	11.833	137.78	17.833	2.25	23.83	1.50
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50
5.967	2.00	11.967	137.78	17.967	2.25	23.97	1.50
6.000	2.00	12.000	137.61	18.000	2.25	24.00	1.50

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Max.Eff.Inten.(mm/hr)=	137.78	104.19	
over (min)	5.00	8.00	
Storage Coeff. (min)=	3.43 (ii)	7.00 (iii)	
Unit Hyd. Tpeak (min)=	4.00	8.00	
Unit Hyd. peak (cms)=	0.31	0.15	
PEAK FLOW (cms)=	3.39	0.79	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.03	4.168 (iii)
RUNOFF VOLUME (mm)=	123.30	79.67	12.00
TOTAL RAINFALL (mm)=	124.80	124.80	111.52
RUNOFF COEFFICIENT =	0.99	0.64	0.89

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0018):	41.73	6.491	12.07	83.47
+ ID2= 2 (0241):	12.29	4.168	12.00	111.52
ID = 3 (0021):	54.02	6.583	12.07	83.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0142)	Area (ha)=	10.92	
ID= 1 DT= 3.0 min	Total Imp(%)=	53.00	Dir. Conn.(%)= 53.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.79	5.13
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	269.81	40.00
Mannings n	=	0.013
		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25		
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25		
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25		
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25		
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25		
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25		
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25		
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25		
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25		
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25		
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25		
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25		
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25		
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25		
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25		
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25		
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25		
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25		
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25		
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25		
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25		
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25		
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25		
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25		

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1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)=	137.78	70.45
over (min)	6.00	12.00

Storage Coeff. (min)= 3.31 (ii) 9.23 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.26 0.11

PEAK FLOW (cms)= 2.19 0.74 2.870 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 123.30 54.49 90.96
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.44 0.73

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)				
1	2	3		
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):	10.92	2.870	12.00	90.96
+ ID2= 2 (0021):	54.02	6.583	12.07	83.51
=====				
ID = 3 (0023):	64.94	8.993	12.05	84.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)				
OVERFLOW IS OFF				
IN= 2----> OUT= 1				
DT= 3.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0030	0.5000
	0.0370	0.1125	1.9000	0.7700
	0.0530	0.2275	6.4000	1.1000
	0.0650	0.3450	9.2000	1.2500
	0.0750	0.4630	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0023)	64.940	8.993	12.05	84.76
OUTFLOW: ID= 1 (0024)	64.940	6.911	12.18	83.62
PEAK FLOW REDUCTION [Qout/Qin](%)= 76.85				
TIME SHIFT OF PEAK FLOW (min)= 7.50				
MAXIMUM STORAGE USED (ha.m.)= 1.1200				

CALIB		
STANDHYD (0143)		
ID= 1 DT= 1.0 min	Area (ha)= 0.84	
	Total Imp(%)= 55.00	Dir. Conn.(%)= 55.00
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.46	0.38
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	74.83	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.017	1.25	6.017	2.50	12.017	18.05	18.02	2.25		
0.033	1.25	6.033	2.50	12.033	17.97	18.03	2.25		
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25		
0.067	1.25	6.067	2.50	12.067	17.97	18.07	2.25		
0.083	1.25	6.083	2.50	12.083	17.97	18.08	2.25		
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25		
0.117	1.25	6.117	2.50	12.117	17.97	18.12	2.25		
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25		
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.183	1.25	6.183	2.50	12.183	17.97	18.18	2.25		
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25		
0.217	1.25	6.217	2.50	12.217	17.97	18.22	2.25		
0.233	1.25	6.233	2.50	12.233	17.97	18.23	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25		
0.283	1.25	6.283	2.50	12.283	17.97	18.28	2.25		
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25		

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0.317	1.25	6.317	2.50	12.317	17.97	18.32	2.25		
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25		
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25		
0.367	1.25	6.367	2.50	12.367	17.97	18.37	2.25		
0.383	1.25	6.383	2.50	12.383	17.97	18.38	2.25		
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25		
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25		
0.433	1.25	6.433	2.50	12.433	17.97	18.43	2.25		
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25		
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25		
0.483	1.25	6.483	2.50	12.483	17.97	18.48	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.517	1.25	6.517	2.50	12.517	9.25	18.52	2.25		
0.533	1.25	6.533	2.50	12.533	9.24	18.53	2.25		
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25		
0.567	1.25	6.567	2.50	12.567	9.24	18.57	2.25		
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25		
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25		
0.617	1.25	6.617	2.50	12.617	9.24	18.62	2.25		
0.633	1.25	6.633	2.50	12.633	9.24	18.63	2.25		
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.683	1.25	6.683	2.50	12.683	9.24	18.68	2.25		
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25		
0.717	1.25	6.717	2.50	12.717	9.24	18.72	2.25		
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.767	1.25	6.767	2.50	12.767	9.24	18.77	2.25		
0.783	1.25	6.783	2.50	12.783	9.24	18.78	2.25		
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25		
0.817	1.25	6.817	2.50	12.817	9.24	18.82	2.25		
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25		
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25		
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25		
0.883	1.25	6.883	2.50	12.883	9.24	18.88	2.25		
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25		
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25		
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25		
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25		
0.967	1.25	6.967	2.50	12.967	9.24	18.97	2.25		
0.983	1.25	6.983	2.50	12.983	9.24	18.98	2.25		
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25		
1.017	1.25	7.017	2.50	13.017	1.76	19.02	2.25		
1.033	1.25	7.033	2.50	13.033	1.75	19.03	2.25		
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25		
1.067	1.25	7.067	2.50	13.067	1.75	19.07	2.25		
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25		
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25		
1.117	1.25	7.117	2.50	13.117	1.75	19.12	2.25		
1.133	1.25	7.133	2.50	13.133	1.75	19.13	2.25		
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25		
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25		
1.183	1.25	7.183	2.50	13.183	1.75	19.18	2.25		
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25		
1.217	1.25	7.217	2.50	13.217	1.75	19.22	2.25		
1.233	1.25	7.233	2.50	13.233	1.75	19.23	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.267	1.25	7.267	2.50	13.267	1.75	19.27	2.25		
1.283	1.25	7.283	2.50	13.283	1.75	19.28	2.25		
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25		
1.317	1.25	7.317	2.50	13.317	1.75	19.32	2.25		
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25		
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25		
1.367	1.25	7.367	2.50	13.367	1.75	19.37	2.25		
1.383	1.25	7.383	2.50	13.383	1.75	19.38	2.25		
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25		
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25		
1.433	1.25	7.433	2.50	13.433	1.75	19.43	2.25		
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25		
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25		
1.483	1.25	7.483	2.50	13.483	1.75	19.48	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.517	1.25	7.517	2.50	13.517	10.22	19.52	2.25		
1.533	1.25	7.533	2.50	13.533	10.23	19.53	2.25		
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25		
1.567	1.25	7.567	2.50	13.567	10.23	19.57	2.25		
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25		
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25		
1.617	1.25	7.617	2.50	13.617	10.23	19.62	2.25		
1.633	1.25	7.633	2.50	13.633	10.23	19.63	2.25		
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25		
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25		
1.683	1.25	7.683	2.50	13.683	10.23	19.68	2.25		
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25		
1.717	1.25	7.717	2.50	13.717	10.23	19.72	2.25		
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		

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1.767	2.25	7.767	2.50	13.767	10.23	19.77	2.25
1.783	2.25	7.783	2.50	13.783	10.23	19.78	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.817	2.25	7.817	2.50	13.817	10.23	19.82	2.25
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.867	2.25	7.867	2.50	13.867	10.23	19.87	2.25
1.883	2.25	7.883	2.50	13.883	10.23	19.88	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
1.967	2.25	7.967	2.50	13.967	10.23	19.97	2.25
1.983	2.25	7.983	2.50	13.983	10.23	19.98	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.017	1.62	8.017	3.37	14.017	3.76	20.02	1.50
2.033	1.62	8.033	3.37	14.033	3.74	20.03	1.50
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.067	1.62	8.067	3.37	14.067	3.74	20.07	1.50
2.083	1.62	8.083	3.37	14.083	3.74	20.08	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.117	1.62	8.117	3.37	14.117	3.74	20.12	1.50
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.183	1.62	8.183	3.37	14.183	3.74	20.18	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.217	1.62	8.217	3.37	14.217	3.74	20.22	1.50
2.233	1.62	8.233	3.37	14.233	3.74	20.23	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50
2.283	1.62	8.283	3.37	14.283	3.74	20.28	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.317	1.62	8.317	3.37	14.317	3.74	20.32	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50
2.383	1.62	8.383	3.37	14.383	3.74	20.38	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50
2.483	1.62	8.483	3.37	14.483	3.74	20.48	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.517	1.62	8.517	3.37	14.517	3.74	20.52	1.50
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.617	1.62	8.617	3.37	14.617	3.74	20.62	1.50
2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.683	1.62	8.683	3.37	14.683	3.74	20.68	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.717	1.62	8.717	3.37	14.717	3.74	20.72	1.50
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50
2.783	1.62	8.783	3.37	14.783	3.74	20.78	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.817	1.62	8.817	3.37	14.817	3.74	20.82	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50
2.883	1.62	8.883	3.37	14.883	3.74	20.88	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50
2.983	1.62	8.983	3.37	14.983	3.74	20.98	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.017	1.62	9.017	3.99	15.017	3.74	21.02	1.50
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.117	1.62	9.117	3.99	15.117	3.74	21.12	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.183	1.62	9.183	3.99	15.183	3.74	21.18	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50

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3.217	1.62	9.217	3.99	15.217	3.74	21.22	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.283	1.62	9.283	3.99	15.283	3.74	21.28	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.317	1.62	9.317	3.99	15.317	3.74	21.32	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.383	1.62	9.383	3.99	15.383	3.74	21.38	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.483	1.62	9.483	3.99	15.483	3.74	21.48	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.517	1.62	9.517	4.49	15.517	3.74	21.52	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.617	1.62	9.617	4.49	15.617	3.74	21.62	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.683	1.62	9.683	4.49	15.683	3.74	21.68	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.717	1.62	9.717	4.49	15.717	3.74	21.72	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.783	1.62	9.783	4.49	15.783	3.74	21.78	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.817	1.62	9.817	4.49	15.817	3.74	21.82	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.883	1.62	9.883	4.49	15.883	3.74	21.88	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
3.983	1.62	9.983	4.49	15.983	3.74	21.98	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.017	2.00	10.017	5.74	16.017	2.25	22.02	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.117	2.00	10.117	5.74	16.117	2.25	22.12	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.183	2.00	10.183	5.74	16.183	2.25	22.18	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.217	2.00	10.217	5.74	16.217	2.25	22.22	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.283	2.00	10.283	5.74	16.283	2.25	22.28	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.317	2.00	10.317	5.74	16.317	2.25	22.32	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.383	2.00	10.383	5.74	16.383	2.25	22.38	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.483	2.00	10.483	5.74	16.483	2.25	22.48	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.517	2.00	10.517	7.74	16.517	2.25	22.52	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.617	2.00	10.617	7.74	16.617	2.25	22.62	1.50
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50

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4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.683	2.00	10.683	7.74	16.683	2.25	22.68	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.717	2.00	10.717	7.74	16.717	2.25	22.72	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50
4.783	2.00	10.783	7.74	16.783	2.25	22.78	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.817	2.00	10.817	7.74	16.817	2.25	22.82	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50
4.883	2.00	10.883	7.74	16.883	2.25	22.88	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
4.967	2.00	10.967	7.74	16.967	2.25	22.97	1.50
4.983	2.00	10.983	7.74	16.983	2.25	22.98	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.017	2.00	11.017	11.98	17.017	2.25	23.02	1.50
5.033	2.00	11.033	11.98	17.033	2.25	23.03	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.117	2.00	11.117	11.98	17.117	2.25	23.12	1.50
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.183	2.00	11.183	11.98	17.183	2.25	23.18	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.217	2.00	11.217	11.98	17.217	2.25	23.22	1.50
5.233	2.00	11.233	11.98	17.233	2.25	23.23	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.267	2.00	11.267	11.98	17.267	2.25	23.27	1.50
5.283	2.00	11.283	11.98	17.283	2.25	23.28	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.317	2.00	11.317	11.98	17.317	2.25	23.32	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.367	2.00	11.367	11.98	17.367	2.25	23.37	1.50
5.383	2.00	11.383	11.98	17.383	2.25	23.38	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50
5.433	2.00	11.433	11.98	17.433	2.25	23.43	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50
5.483	2.00	11.483	11.98	17.483	2.25	23.48	1.50
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50
5.517	2.00	11.517	51.91	17.517	2.25	23.52	1.50
5.533	2.00	11.533	51.92	17.533	2.25	23.53	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.567	2.00	11.567	51.92	17.567	2.25	23.57	1.50
5.583	2.00	11.583	51.92	17.583	2.25	23.58	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.617	2.00	11.617	51.92	17.617	2.25	23.62	1.50
5.633	2.00	11.633	51.92	17.633	2.25	23.63	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.683	2.00	11.683	51.92	17.683	2.25	23.68	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.717	2.00	11.717	51.92	17.717	2.25	23.72	1.50
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50
5.767	2.00	11.767	137.74	17.767	2.25	23.77	1.50
5.783	2.00	11.783	137.78	17.783	2.25	23.78	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.817	2.00	11.817	137.78	17.817	2.25	23.82	1.50
5.833	2.00	11.833	137.78	17.833	2.25	23.83	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50
5.883	2.00	11.883	137.78	17.883	2.25	23.88	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
5.967	2.00	11.967	137.78	17.967	2.25	23.97	1.50
5.983	2.00	11.983	137.78	17.983	2.25	23.98	1.50
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 90.23
over (min) 5.00 8.00
Storage Coeff. (min)= 1.53 (ii) 7.26 (ii)
Unit Hyd. Tpeak (min)= 5.00 8.00
Unit Hyd. peak (cms)= 0.42 0.15

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TOTALS
PEAK FLOW (cms)= 0.18 0.08 0.252 (iii)
TIME TO PEAK (hrs)= 12.00 12.03 12.00
RUNOFF VOLUME (mm)= 123.29 68.45 98.62
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.79

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0026) |
1 + 2 = 3
ID1= 1 (0143): 0.84 0.252 12.00 98.62
+ ID2= 2 (0024): 64.94 6.911 12.18 83.62
=====

ID = 3 (0026): 65.78 6.916 8.12 56.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0244) |
ID= 1 DT= 4.0 min

Area (ha)= 6.50
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.96 3.62
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 289.44 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.067 1.25 | 6.967 2.50 | 12.067 17.99 | 18.07 2.25
0.133 1.25 | 6.133 2.50 | 12.133 17.97 | 18.13 2.25
0.200 1.25 | 6.200 2.50 | 12.200 17.97 | 18.20 2.25
0.267 1.25 | 6.267 2.50 | 12.267 17.97 | 18.27 2.25
0.333 1.25 | 6.333 2.50 | 12.333 17.97 | 18.33 2.25
0.400 1.25 | 6.400 2.50 | 12.400 17.97 | 18.40 2.25
0.467 1.25 | 6.467 2.50 | 12.467 17.97 | 18.47 2.25
0.533 1.25 | 6.533 2.50 | 12.533 13.60 | 18.53 2.25
0.600 1.25 | 6.600 2.50 | 12.600 9.24 | 18.60 2.25
0.667 1.25 | 6.667 2.50 | 12.667 9.24 | 18.67 2.25
0.733 1.25 | 6.733 2.50 | 12.733 9.24 | 18.73 2.25
0.800 1.25 | 6.800 2.50 | 12.800 9.24 | 18.80 2.25
0.867 1.25 | 6.867 2.50 | 12.867 9.24 | 18.87 2.25
0.933 1.25 | 6.933 2.50 | 12.933 9.24 | 18.93 2.25
1.000 1.25 | 7.000 2.50 | 13.000 9.24 | 19.00 2.25
1.067 1.25 | 7.067 2.50 | 13.067 1.75 | 19.07 2.25
1.133 1.25 | 7.133 2.50 | 13.133 1.75 | 19.13 2.25
1.200 1.25 | 7.200 2.50 | 13.200 1.75 | 19.20 2.25
1.267 1.25 | 7.267 2.50 | 13.267 1.75 | 19.27 2.25
1.333 1.25 | 7.333 2.50 | 13.333 1.75 | 19.33 2.25
1.400 1.25 | 7.400 2.50 | 13.400 1.75 | 19.40 2.25
1.467 1.25 | 7.467 2.50 | 13.467 1.75 | 19.47 2.25
1.533 1.25 | 7.533 2.50 | 13.533 5.99 | 19.53 2.25
1.600 1.25 | 7.600 2.50 | 13.600 10.23 | 19.60 2.25
1.667 1.25 | 7.667 2.50 | 13.667 10.23 | 19.67 2.25
1.733 1.25 | 7.733 2.50 | 13.733 10.23 | 19.73 2.25
1.800 1.25 | 7.800 2.50 | 13.800 10.23 | 19.80 2.25
1.867 1.25 | 7.867 2.50 | 13.867 10.23 | 19.87 2.25
1.933 1.25 | 7.933 2.50 | 13.933 10.23 | 19.93 2.25
2.000 1.25 | 8.000 2.50 | 14.000 10.23 | 20.00 2.25
2.067 1.62 | 8.067 3.37 | 14.067 3.75 | 20.07 1.50
2.133 1.62 | 8.133 3.37 | 14.133 3.74 | 20.13 1.50
2.200 1.62 | 8.200 3.37 | 14.200 3.74 | 20.20 1.50
2.267 1.62 | 8.267 3.37 | 14.267 3.74 | 20.27 1.50
2.333 1.62 | 8.333 3.37 | 14.333 3.74 | 20.33 1.50
2.400 1.62 | 8.400 3.37 | 14.400 3.74 | 20.40 1.50
2.467 1.62 | 8.467 3.37 | 14.467 3.74 | 20.47 1.50
2.533 1.62 | 8.533 3.37 | 14.533 3.74 | 20.53 1.50
2.600 1.62 | 8.600 3.37 | 14.600 3.74 | 20.60 1.50
2.667 1.62 | 8.667 3.37 | 14.667 3.74 | 20.67 1.50
2.733 1.62 | 8.733 3.37 | 14.733 3.74 | 20.73 1.50
2.800 1.62 | 8.800 3.37 | 14.800 3.74 | 20.80 1.50

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2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.533	1.62	9.533	4.24	15.533	3.74	21.53	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.533	2.00	10.533	6.74	16.533	2.25	22.53	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.267	2.00	11.267	11.98	17.267	2.25	23.27	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50
5.533	2.00	11.533	31.94	17.533	2.25	23.53	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50
5.800	2.00	11.800	116.30	17.800	2.25	23.80	1.50
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 88.00
over (min) 5.00 12.00
Storage Coeff. (min)= 2.84 (ii) 9.57 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.32 0.11

PEAK FLOW (cms)= 1.13 0.66 1.752 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 123.30 68.46 93.14
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.55 0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0244):	6.58	1.752	12.00	93.14
+ ID2= 2 (0026):	65.78	6.916	8.12	56.29
ID = 3 (0028):	72.36	6.949	8.12	59.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L

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V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y M M 0 0
0 0 T T H H Y Y M M 0 0
000 T T H H Y Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voin.dat
Output filename: C:\Users\Abira\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\987edbfa-472c-48f6-bbd7-1ca5e313029a\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\987edbfa-472c-48f6-bbd7-1ca5e313029a\scenar

DATE: 03/24/2023 TIME: 10:47:37

USER:

COMMENTS: _____

** SIMULATION : Run 12 **

MASS STORM Filename: C:\Users\Abira\AppData\Local\Temp\278a41f9-095e-4ac0-bd0c-f09ad517dbb7\c7ff0caf
Ptotal=136.80 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.37	6.25	2.74	12.25	19.70	18.25	2.46
0.50	1.37	6.50	2.74	12.50	19.70	18.50	2.46
0.75	1.37	6.75	2.74	12.75	18.12	18.75	2.46
1.00	1.37	7.00	2.74	13.00	18.12	19.00	2.46
1.25	1.37	7.25	2.74	13.25	1.92	19.25	2.46
1.50	1.37	7.50	2.74	13.50	1.92	19.50	2.46
1.75	1.37	7.75	2.74	13.75	11.22	19.75	2.46
2.00	2.46	8.00	2.74	14.00	11.22	20.00	2.46
2.25	1.78	8.25	3.69	14.25	4.10	20.25	1.64
2.50	1.78	8.50	3.69	14.50	4.10	20.50	1.64
2.75	1.78	8.75	3.69	14.75	4.10	20.75	1.64
3.00	1.78	9.00	3.69	15.00	4.10	21.00	1.64
3.25	1.78	9.25	4.38	15.25	4.10	21.25	1.64
3.50	1.78	9.50	4.38	15.50	4.10	21.50	1.64
3.75	1.78	9.75	4.92	15.75	4.10	21.75	1.64
4.00	1.78	10.00	4.92	16.00	4.10	22.00	1.64
4.25	2.19	10.25	6.29	16.25	2.46	22.25	1.64
4.50	2.19	10.50	6.29	16.50	2.46	22.50	1.64
4.75	2.19	10.75	8.48	16.75	2.46	22.75	1.64
5.00	2.19	11.00	8.48	17.00	2.46	23.00	1.64
5.25	2.19	11.25	13.13	17.25	2.46	23.25	1.64
5.50	2.19	11.50	13.13	17.50	2.46	23.50	1.64
5.75	2.19	11.75	56.91	17.75	2.46	23.75	1.64
6.00	2.19	12.00	151.03	18.00	2.46	24.00	1.64

CALIB
NASHYD (1040) Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46

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0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 1.429 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 80.232
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.586

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0240) |
ID= 1 DT= 3.0 min

IMPERVIOUS PERVIOUS (1)
Surface Area (ha)= 8.43 11.65

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Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 365.88 100.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64

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3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64		
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64		
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64		
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64		
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64		
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64		
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64		
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64		
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64		
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64		
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64		
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64		
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64		
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64		
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64		
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64		
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64		
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64		
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64		
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64		
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64		
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64		
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64		
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64		
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64		
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64		
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64		
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64		
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64		
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64		
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64		
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64		
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64		
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64		
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64		
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64		
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64		
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64		
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64		
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64		
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64		
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64		
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64		
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64		

Max.Eff.Inten.(mm/hr)=	151.03	111.96	
over (min)	6.00	18.00	
Storage Coeff. (min)=	3.83 (ii)	15.52 (ii)	
Unit Hyd. Tpeak (min)=	6.00	18.00	
Unit Hyd. peak (cms)=	0.24	0.07	
			TOTALS
PEAK FLOW (cms)=	3.46	2.10	5.053 (iii)
TIME TO PEAK (hrs)=	12.00	12.15	12.00
RUNOFF VOLUME (mm)=	135.30	86.69	107.10
TOTAL RAINFALL (mm)=	136.80	136.80	136.80
RUNOFF COEFFICIENT =	0.99	0.63	0.78

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0038)				
1	2	3		
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1040):	10.35	1.429	12.17	80.23
+ ID2= 2 (0240):	20.00	5.053	12.00	107.10

ID = 3 (0038):	30.43	6.109	12.00	97.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0029)	
IN= 2--> OUT= 1	Routing time step (min)= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel

HRP7-PR_SR-100 YEAR-2096 IDF.OUT			
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.321E+02	0.0	0.28	35.15
0.09	100.09	.721E+02	0.1	0.42	23.51
0.14	100.14	.120E+03	0.1	0.53	18.76
0.19	100.19	.176E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.490E+03	0.8	0.97	10.26
0.44	100.44	.614E+03	1.1	1.07	9.26
0.50	100.50	.741E+03	1.4	1.16	8.55
0.55	100.55	.879E+03	1.8	1.24	8.01
0.61	100.61	.103E+04	2.3	1.31	7.60
0.66	100.66	.119E+04	2.7	1.37	7.20
0.72	100.72	.136E+04	3.2	1.42	6.98
0.78	100.78	.154E+04	3.8	1.47	6.74
0.83	100.83	.173E+04	4.4	1.52	6.53
0.89	100.89	.194E+04	5.1	1.56	6.35
0.94	100.94	.215E+04	5.8	1.60	6.19
1.00	101.00	.238E+04	6.6	1.64	6.05
<----- hydrograph ----->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0038)	30.43	6.11	12.00	97.96	0.97
OUTFLOW: ID= 1 (0029)	30.43	5.39	12.07	97.96	0.91
					1.58

CALIB				
NASHYD (1041)	Area (ha)=	11.30	Curve Number (CN)=	77.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.26		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64

HRP7-PR_SR-100 YEAR-2096 IDF.OUT										
3.250	1.78		9.250	4.38		15.250	4.10		21.25	1.64
3.333	1.78		9.333	4.38		15.333	4.10		21.33	1.64
3.417	1.78		9.417	4.38		15.417	4.10		21.42	1.64
3.500	1.78		9.500	4.38		15.500	4.10		21.50	1.64
3.583	1.78		9.583	4.92		15.583	4.10		21.58	1.64
3.667	1.78		9.667	4.92		15.667	4.10		21.67	1.64
3.750	1.78		9.750	4.92		15.750	4.10		21.75	1.64
3.833	1.78		9.833	4.92		15.833	4.10		21.83	1.64
3.917	1.78		9.917	4.92		15.917	4.10		21.92	1.64
4.000	1.78		10.000	4.92		16.000	4.10		22.00	1.64
4.083	2.19		10.083	6.29		16.083	2.46		22.08	1.64
4.167	2.19		10.167	6.29		16.167	2.46		22.17	1.64
4.250	2.19		10.250	6.29		16.250	2.46		22.25	1.64
4.333	2.19		10.333	6.29		16.333	2.46		22.33	1.64
4.417	2.19		10.417	6.29		16.417	2.46		22.42	1.64
4.500	2.19		10.500	6.29		16.500	2.46		22.50	1.64
4.583	2.19		10.583	8.48		16.583	2.46		22.58	1.64
4.667	2.19		10.667	8.48		16.667	2.46		22.67	1.64
4.750	2.19		10.750	8.48		16.750	2.46		22.75	1.64
4.833	2.19		10.833	8.48		16.833	2.46		22.83	1.64
4.917	2.19		10.917	8.48		16.917	2.46		22.92	1.64
5.000	2.19		11.000	8.48		17.000	2.46		23.00	1.64
5.083	2.19		11.083	13.13		17.083	2.46		23.08	1.64
5.167	2.19		11.167	13.13		17.167	2.46		23.17	1.64
5.250	2.19		11.250	13.13		17.250	2.46		23.25	1.64
5.333	2.19		11.333	13.13		17.333	2.46		23.33	1.64
5.417	2.19		11.417	13.13		17.417	2.46		23.42	1.64
5.500	2.19		11.500	13.13		17.500	2.46		23.50	1.64
5.583	2.19		11.583	56.90		17.583	2.46		23.58	1.64
5.667	2.19		11.667	56.91		17.667	2.46		23.67	1.64
5.750	2.19		11.750	56.91		17.750	2.46		23.75	1.64
5.833	2.19		11.833	151.02		17.833	2.46		23.83	1.64
5.917	2.19		11.917	151.03		17.917	2.46		23.92	1.64
6.000	2.19		12.000	151.03		18.000	2.46		24.00	1.64

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.999 (l)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 83.592
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.611

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):	11.30	1.999	12.08	83.59
+ ID2= 2 (0029):	30.43	5.387	12.07	97.96
=====				
ID = 3 (0018):	41.73	7.359	12.07	94.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (0241)		
ID= 1 DT= 2.0 min		
Area	(ha)=	12.29
Total Imp(%)=		73.00
Dir. Conn.(%)=		73.00

Surface Area	(ha)=	8.97	3.32
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	286.24	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.033	1.37	6.033	2.74	12.033	19.70	18.03	2.46		
0.067	1.37	6.067	2.74	12.067	19.70	18.07	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46		
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.233	1.37	6.233	2.74	12.233	19.70	18.23	2.46		
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46		
0.367	1.37	6.367	2.74	12.367	19.70	18.37	2.46		

HRP7-PR_SR-100 YEAR-2006 IDF.OUT									
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46		
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46		
0.500	1.37	6.500	2.74	12.500	19.68	18.50	2.46		
0.533	1.37	6.533	2.74	12.533	19.12	18.53	2.46		
0.567	1.37	6.567	2.74	12.567	18.12	18.57	2.46		
0.600	1.37	6.600	2.74	12.600	18.12	18.60	2.46		
0.633	1.37	6.633	2.74	12.633	18.12	18.63	2.46		
0.667	1.37	6.667	2.74	12.667	18.12	18.67	2.46		
0.700	1.37	6.700	2.74	12.700	18.12	18.70	2.46		
0.733	1.37	6.733	2.74	12.733	18.12	18.73	2.46		
0.767	1.37	6.767	2.74	12.767	18.12	18.77	2.46		
0.800	1.37	6.800	2.74	12.800	18.12	18.80	2.46		
0.833	1.37	6.833	2.74	12.833	18.12	18.83	2.46		
0.867	1.37	6.867	2.74	12.867	18.12	18.87	2.46		
0.900	1.37	6.900	2.74	12.900	18.12	18.90	2.46		
0.933	1.37	6.933	2.74	12.933	18.12	18.93	2.46		
0.967	1.37	6.967	2.74	12.967	18.12	18.97	2.46		
1.000	1.37	7.000	2.74	13.000	18.11	19.00	2.46		
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46		
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46		
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46		
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.500	1.37	7.500	2.74	13.500	1.93	19.50	2.46		
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46		
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46		
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.767	1.92	7.767	2.74	13.767	11.22	19.77	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46		
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46		
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46		
2.000	2.46	8.000	2.74	14.000	11.20	20.00	2.46		
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64		
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64		
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64		
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64		
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64		
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64		
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64		
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64		
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64		
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64		
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64		
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64		
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64		
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64		
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64		
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64		
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64		
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64		
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64		
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64		
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64		
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64		
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64		
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64		
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64		
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64		
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64		
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64		
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64		
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64		
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64		
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64		

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3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64
5.000	2.19	11.000	8.49	17.000	2.46	23.00	1.64
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.500	2.19	11.500	13.19	17.500	2.46	23.50	1.64
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.767	2.19	11.767	104.09	17.767	2.46	23.77	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64
6.000	2.19	12.000	150.85	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 117.60
over (min) 5.00 8.00
Storage Coeff. (min)= 3.31 (ii) 7.33 (ii)
Unit Hyd. Tpeak (min)= 4.00 8.00

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Unit Hyd. peak (cms)= 0.31 0.15
TOTALS
PEAK FLOW (cms)= 3.72 0.90 4.613 (iii)
TIME TO PEAK (hrs)= 12.00 12.03 12.00
RUNOFF VOLUME (mm)= 135.30 90.26 123.14
TOTAL RAINFALL (mm)= 136.80 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.66 0.90

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0021) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
| (ha) (cms) (hrs) (mm)
ID1= 1 (0018): 41.73 7.359 12.07 94.07
+ ID2= 2 (0241): 12.29 4.613 12.00 123.14
===== ID = 3 (0021): 54.02 7.460 12.07 93.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0142) | Area (ha)= 10.92
ID= 1 DT= 3.0 min | Total Imp(%)= 53.00 Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.79 5.13
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 269.81 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr
0.050 1.37 6.050 2.74 12.050 19.70 18.05 2.46
0.100 1.37 6.100 2.74 12.100 19.70 18.10 2.46
0.150 1.37 6.150 2.74 12.150 19.70 18.15 2.46
0.200 1.37 6.200 2.74 12.200 19.70 18.20 2.46
0.250 1.37 6.250 2.74 12.250 19.70 18.25 2.46
0.300 1.37 6.300 2.74 12.300 19.70 18.30 2.46
0.350 1.37 6.350 2.74 12.350 19.70 18.35 2.46
0.400 1.37 6.400 2.74 12.400 19.70 18.40 2.46
0.450 1.37 6.450 2.74 12.450 19.70 18.45 2.46
0.500 1.37 6.500 2.74 12.500 19.69 18.50 2.46
0.550 1.37 6.550 2.74 12.550 18.12 18.55 2.46
0.600 1.37 6.600 2.74 12.600 10.12 18.60 2.46
0.650 1.37 6.650 2.74 12.650 10.12 18.65 2.46
0.700 1.37 6.700 2.74 12.700 10.12 18.70 2.46
0.750 1.37 6.750 2.74 12.750 10.12 18.75 2.46
0.800 1.37 6.800 2.74 12.800 10.12 18.80 2.46
0.850 1.37 6.850 2.74 12.850 10.12 18.85 2.46
0.900 1.37 6.900 2.74 12.900 10.12 18.90 2.46
0.950 1.37 6.950 2.74 12.950 10.12 18.95 2.46
1.000 1.37 7.000 2.74 13.000 10.12 19.00 2.46
1.050 1.37 7.050 2.74 13.050 1.92 19.05 2.46
1.100 1.37 7.100 2.74 13.100 1.92 19.10 2.46
1.150 1.37 7.150 2.74 13.150 1.92 19.15 2.46
1.200 1.37 7.200 2.74 13.200 1.92 19.20 2.46
1.250 1.37 7.250 2.74 13.250 1.92 19.25 2.46
1.300 1.37 7.300 2.74 13.300 1.92 19.30 2.46
1.350 1.37 7.350 2.74 13.350 1.92 19.35 2.46
1.400 1.37 7.400 2.74 13.400 1.92 19.40 2.46
1.450 1.37 7.450 2.74 13.450 1.92 19.45 2.46
1.500 1.37 7.500 2.74 13.500 1.92 19.50 2.46
1.550 1.37 7.550 2.74 13.550 11.22 19.55 2.46
1.600 1.37 7.600 2.74 13.600 11.22 19.60 2.46
1.650 1.37 7.650 2.74 13.650 11.22 19.65 2.46
1.700 1.37 7.700 2.74 13.700 11.22 19.70 2.46
1.750 1.37 7.750 2.74 13.750 11.22 19.75 2.46
1.800 2.46 7.800 2.74 13.800 11.22 19.80 2.46
1.850 2.46 7.850 2.74 13.850 11.22 19.85 2.46
1.900 2.46 7.900 2.74 13.900 11.22 19.90 2.46
1.950 2.46 7.950 2.74 13.950 11.22 19.95 2.46
2.000 2.46 8.000 2.74 14.000 11.21 20.00 2.46
2.050 1.78 8.050 3.69 14.050 4.10 20.05 1.64

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2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 81.39
over (min) 6.00 9.00
Storage Coeff. (min)= 3.19 (ii) 8.90 (iii)
Unit Hyd. Tpeak (min)= 6.00 9.00
Unit Hyd. peak (cms)= 0.26 0.13

PEAK FLOW (cms)= 2.40 0.90

TOTALS
3.281 (iii)

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TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 135.30 62.91 101.28
TOTAL RAINFALL (mm)= 136.80 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.46 0.74

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0142):	10.92	3.281	12.00	101.28
+ ID2= 2 (0021):	54.02	7.460	12.07	93.68
ID = 3 (0023):	64.94	10.190	12.03	94.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)
IN= 2---> OUT= 1
DT= 3.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0830	0.5800
0.0370	0.1125	1.9000	0.7700
0.0530	0.2275	6.4000	1.1000
0.0650	0.3450	9.2000	1.2500
0.0750	0.4630	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0023)	64.940	10.190	12.03	94.96
OUTFLOW: ID= 1 (0024)	64.940	7.963	12.18	93.80

PEAK FLOW REDUCTION [Qout/Qin](%)= 78.14
TIME SHIFT OF PEAK FLOW (min)= 9.00
MAXIMUM STORAGE USED (ha.m.)= 1.1842

CALIB
STANDHYD (0143)
ID= 1 DT= 1.0 min

Area (ha)= 0.84
Total Imp(%)= 55.00
Dir. Conn.(%)= 55.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.46	0.38
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	74.83	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.37	6.017	2.74	12.017	19.79	18.02	2.46
0.033	1.37	6.033	2.74	12.033	19.79	18.03	2.46
0.050	1.37	6.050	2.74	12.050	19.79	18.05	2.46
0.067	1.37	6.067	2.74	12.067	19.79	18.07	2.46
0.083	1.37	6.083	2.74	12.083	19.79	18.08	2.46
0.100	1.37	6.100	2.74	12.100	19.79	18.10	2.46
0.117	1.37	6.117	2.74	12.117	19.79	18.12	2.46
0.133	1.37	6.133	2.74	12.133	19.79	18.13	2.46
0.150	1.37	6.150	2.74	12.150	19.79	18.15	2.46
0.167	1.37	6.167	2.74	12.167	19.79	18.17	2.46
0.183	1.37	6.183	2.74	12.183	19.79	18.18	2.46
0.200	1.37	6.200	2.74	12.200	19.79	18.20	2.46
0.217	1.37	6.217	2.74	12.217	19.79	18.22	2.46
0.233	1.37	6.233	2.74	12.233	19.79	18.23	2.46
0.250	1.37	6.250	2.74	12.250	19.79	18.25	2.46
0.267	1.37	6.267	2.74	12.267	19.79	18.27	2.46
0.283	1.37	6.283	2.74	12.283	19.79	18.28	2.46
0.300	1.37	6.300	2.74	12.300	19.79	18.30	2.46
0.317	1.37	6.317	2.74	12.317	19.79	18.32	2.46
0.333	1.37	6.333	2.74	12.333	19.79	18.33	2.46
0.350	1.37	6.350	2.74	12.350	19.79	18.35	2.46
0.367	1.37	6.367	2.74	12.367	19.79	18.37	2.46
0.383	1.37	6.383	2.74	12.383	19.79	18.38	2.46

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0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46
0.483	1.37	6.483	2.74	12.483	19.70	18.48	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.517	1.37	6.517	2.74	12.517	10.13	18.52	2.46
0.533	1.37	6.533	2.74	12.533	10.12	18.53	2.46
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46
0.567	1.37	6.567	2.74	12.567	10.12	18.57	2.46
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46
0.617	1.37	6.617	2.74	12.617	10.12	18.62	2.46
0.633	1.37	6.633	2.74	12.633	10.12	18.63	2.46
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.683	1.37	6.683	2.74	12.683	10.12	18.68	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.717	1.37	6.717	2.74	12.717	10.12	18.72	2.46
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.767	1.37	6.767	2.74	12.767	10.12	18.77	2.46
0.783	1.37	6.783	2.74	12.783	10.12	18.78	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.817	1.37	6.817	2.74	12.817	10.12	18.82	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46
0.883	1.37	6.883	2.74	12.883	10.12	18.88	2.46
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46
0.967	1.37	6.967	2.74	12.967	10.12	18.97	2.46
0.983	1.37	6.983	2.74	12.983	10.12	18.98	2.46
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.017	1.37	7.017	2.74	13.017	1.93	19.02	2.46
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.117	1.37	7.117	2.74	13.117	1.92	19.12	2.46
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.183	1.37	7.183	2.74	13.183	1.92	19.18	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.217	1.37	7.217	2.74	13.217	1.92	19.22	2.46
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46
1.283	1.37	7.283	2.74	13.283	1.92	19.28	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.317	1.37	7.317	2.74	13.317	1.92	19.32	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46
1.383	1.37	7.383	2.74	13.383	1.92	19.38	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46
1.483	1.37	7.483	2.74	13.483	1.92	19.48	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.517	1.37	7.517	2.74	13.517	11.20	19.52	2.46
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.617	1.37	7.617	2.74	13.617	11.22	19.62	2.46
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.683	1.37	7.683	2.74	13.683	11.22	19.68	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.717	1.37	7.717	2.74	13.717	11.22	19.72	2.46
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.767	2.46	7.767	2.74	13.767	11.22	19.77	2.46
1.783	2.46	7.783	2.74	13.783	11.22	19.78	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.817	2.46	7.817	2.74	13.817	11.22	19.82	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46

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1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46
1.883	2.46	7.883	2.74	13.883	11.22	19.88	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46
1.983	2.46	7.983	2.74	13.983	11.22	19.98	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.017	1.78	8.017	3.69	14.017	4.12	20.02	1.65
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.117	1.78	8.117	3.69	14.117	4.10	20.12	1.64
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.183	1.78	8.183	3.69	14.183	4.10	20.18	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.217	1.78	8.217	3.69	14.217	4.10	20.22	1.64
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64
2.283	1.78	8.283	3.69	14.283	4.10	20.28	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.317	1.78	8.317	3.69	14.317	4.10	20.32	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64
2.383	1.78	8.383	3.69	14.383	4.10	20.38	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64
2.483	1.78	8.483	3.69	14.483	4.10	20.48	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.517	1.78	8.517	3.69	14.517	4.10	20.52	1.64
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.617	1.78	8.617	3.69	14.617	4.10	20.62	1.64
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.683	1.78	8.683	3.69	14.683	4.10	20.68	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.717	1.78	8.717	3.69	14.717	4.10	20.72	1.64
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64
2.783	1.78	8.783	3.69	14.783	4.10	20.78	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.817	1.78	8.817	3.69	14.817	4.10	20.82	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64

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3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.317	1.78	9.317	4.38	15.317	4.10	21.32	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.383	1.78	9.383	4.38	15.383	4.10	21.38	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.483	1.78	9.483	4.38	15.483	4.10	21.48	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.517	1.78	9.517	4.92	15.517	4.10	21.52	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.617	1.78	9.617	4.92	15.617	4.10	21.62	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.683	1.78	9.683	4.92	15.683	4.10	21.68	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.717	1.78	9.717	4.92	15.717	4.10	21.72	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.783	1.78	9.783	4.92	15.783	4.10	21.78	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.817	1.78	9.817	4.92	15.817	4.10	21.82	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.883	1.78	9.883	4.92	15.883	4.10	21.88	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
3.983	1.78	9.983	4.92	15.983	4.10	21.98	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.017	2.19	10.017	6.29	16.017	2.47	22.02	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.117	2.19	10.117	6.29	16.117	2.46	22.12	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.183	2.19	10.183	6.29	16.183	2.46	22.18	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.217	2.19	10.217	6.29	16.217	2.46	22.22	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.283	2.19	10.283	6.29	16.283	2.46	22.28	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.317	2.19	10.317	6.29	16.317	2.46	22.32	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.383	2.19	10.383	6.29	16.383	2.46	22.38	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.483	2.19	10.483	6.29	16.483	2.46	22.48	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.517	2.19	10.517	8.48	16.517	2.46	22.52	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.617	2.19	10.617	8.48	16.617	2.46	22.62	1.64
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.683	2.19	10.683	8.48	16.683	2.46	22.68	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.717	2.19	10.717	8.48	16.717	2.46	22.72	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64

HRP7-PR_50-100 YEAR-2006 IDF.OUT

4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64
4.783	2.19	10.783	8.48	16.783	2.46	22.78	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.817	2.19	10.817	8.48	16.817	2.46	22.82	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.883	2.19	10.883	8.48	16.883	2.46	22.88	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64
4.983	2.19	10.983	8.48	16.983	2.46	22.98	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.017	2.19	11.017	13.13	17.017	2.46	23.02	1.64
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.117	2.19	11.117	13.13	17.117	2.46	23.12	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.183	2.19	11.183	13.13	17.183	2.46	23.18	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.217	2.19	11.217	13.13	17.217	2.46	23.22	1.64
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.283	2.19	11.283	13.13	17.283	2.46	23.28	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.317	2.19	11.317	13.13	17.317	2.46	23.32	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64
5.383	2.19	11.383	13.13	17.383	2.46	23.38	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.483	2.19	11.483	13.13	17.483	2.46	23.48	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.517	2.19	11.517	56.91	17.517	2.46	23.52	1.64
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64
5.583	2.19	11.583	56.91	17.583	2.46	23.58	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.617	2.19	11.617	56.91	17.617	2.46	23.62	1.64
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.683	2.19	11.683	56.91	17.683	2.46	23.68	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.717	2.19	11.717	56.91	17.717	2.46	23.72	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.767	2.19	11.767	150.98	17.767	2.46	23.77	1.64

RUNOFF COEFFICIENT = 0.99 0.57 0.80

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)				
1	2	3		
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0143):	0.84	0.281	12.00	109.60
+ ID2= 2 (0024):	64.94	7.963	12.18	93.80
ID = 3 (0026):	65.78	7.968	8.12	63.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0244)			
ID= 1 DT= 4.0 min	Area (ha)=	6.58	
	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.96	3.62
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	209.44	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	1.37	6.067	2.74	12.067	19.72	18.07	2.46		
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46		
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46		
0.533	1.37	6.533	2.74	12.533	14.91	18.53	2.46		
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46		
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46		
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46		
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46		
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46		
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46		
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46		
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46		
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.533	1.37	7.533	2.74	13.533	6.56	19.53	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.800	2.19	7.800	2.74	13.800	11.22	19.80	2.46		
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46		
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46		
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46		
2.067	1.78	8.067	3.69	14.067	4.11	20.07	1.64		
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64		
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64		
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64		
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64		
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64		
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64		
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64		
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64		
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64		
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64		
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64		
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64		

HRP7-PR_50-100 YEAR-2096 IDF.OUT

3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.533	1.78	9.533	4.65	15.533	4.10	21.53	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.533	2.19	10.533	7.59	16.533	2.46	22.53	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.533	2.19	11.533	35.02	17.533	2.46	23.53	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.800	2.19	11.800	127.49	17.800	2.46	23.80	1.64
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)=	151.03	101.34	
over (min)=	5.00	12.00	
Storage Coeff. (min)=	2.74 (ii)	9.23 (iii)	
Unit Hyd. Tpeak (min)=	4.00	12.00	
Unit Hyd. peak (cms)=	0.33	0.11	
PEAK FLOW (cms)=	1.24	0.76	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.07	1.962 (iii)
RUNOFF VOLUME (mm)=	135.30	78.20	12.00
TOTAL RAINFALL (mm)=	136.80	136.80	103.90
RUNOFF COEFFICIENT =	0.99	0.57	0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)				
1	2	3		
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0244):	6.58	1.962	12.00	103.90
+ ID2= 2 (0026):	65.78	7.968	8.12	63.14
ID = 3 (0028):	72.36	8.005	8.12	66.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\3acb1db4-356e-43bf-81bb-2902fe67d759\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\3acb1db4-356e-43bf-81bb-2902fe67d759\scenar

DATE: 03/24/2023 TIME: 11:12:54

USER:

COMMENTS: _____

** SIMULATION : Run 11

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\99cbae56-8f9b-473d-a9ec-451e2814fb79\5fd4f178
Ptotal=124.80 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.25	6.25	2.50	12.25	17.97	18.25	2.25	
0.50	1.25	6.50	2.50	12.50	17.97	18.50	2.25	
0.75	1.25	6.75	2.50	12.75	9.24	18.75	2.25	
1.00	1.25	7.00	2.50	13.00	9.24	19.00	2.25	
1.25	1.25	7.25	2.50	13.25	1.75	19.25	2.25	
1.50	1.25	7.50	2.50	13.50	1.75	19.50	2.25	
1.75	1.25	7.75	2.50	13.75	10.23	19.75	2.25	
2.00	2.25	8.00	2.50	14.00	10.23	20.00	2.25	
2.25	1.62	8.25	3.37	14.25	3.74	20.25	1.50	
2.50	1.62	8.50	3.37	14.50	3.74	20.50	1.50	
2.75	1.62	8.75	3.37	14.75	3.74	20.75	1.50	
3.00	1.62	9.00	3.37	15.00	3.74	21.00	1.50	
3.25	1.62	9.25	3.00	15.25	3.74	21.25	1.50	
3.50	1.62	9.50	3.00	15.50	3.74	21.50	1.50	
3.75	1.62	9.75	4.49	15.75	3.74	21.75	1.50	
4.00	1.62	10.00	4.49	16.00	3.74	22.00	1.50	
4.25	2.00	10.25	5.74	16.25	2.25	22.25	1.50	
4.50	2.00	10.50	5.74	16.50	2.25	22.50	1.50	
4.75	2.00	10.75	7.74	16.75	2.25	22.75	1.50	
5.00	2.00	11.00	7.74	17.00	2.25	23.00	1.50	
5.25	2.00	11.25	11.98	17.25	2.25	23.25	1.50	
5.50	2.00	11.50	11.98	17.50	2.25	23.50	1.50	
5.75	2.00	11.75	51.92	17.75	2.25	23.75	1.50	
6.00	2.00	12.00	137.78	18.00	2.25	24.00	1.50	

CALIB NASHYD (1050) Area (ha)= 4.49 Curve Number (CN)= 77.0
ID= 1 DT= 2.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	1.25	6.033	2.50	12.033	17.97	18.03	2.25	
0.067	1.25	6.067	2.50	12.067	17.97	18.07	2.25	
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25	
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25	
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25	
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25	
0.233	1.25	6.233	2.50	12.233	17.97	18.23	2.25	
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25	
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25	
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25	
0.367	1.25	6.367	2.50	12.367	17.97	18.37	2.25	
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25	
0.433	1.25	6.433	2.50	12.433	17.97	18.43	2.25	
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25	
0.500	1.25	6.500	2.50	12.500	17.96	18.50	2.25	
0.533	1.25	6.533	2.50	12.533	9.24	18.53	2.25	
0.567	1.25	6.567	2.50	12.567	9.24	18.57	2.25	
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25	
0.633	1.25	6.633	2.50	12.633	9.24	18.63	2.25	
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25	
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25	
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25	
0.767	1.25	6.767	2.50	12.767	9.24	18.77	2.25	
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25	
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25	
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25	
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25	
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25	
0.967	1.25	6.967	2.50	12.967	9.24	18.97	2.25	
1.000	1.25	7.000	2.50	13.000	9.22	19.00	2.25	
1.033	1.25	7.033	2.50	13.033	1.75	19.03	2.25	
1.067	1.25	7.067	2.50	13.067	1.75	19.07	2.25	
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25	
1.133	1.25	7.133	2.50	13.133	1.75	19.13	2.25	
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25	
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25	
1.233	1.25	7.233	2.50	13.233	1.75	19.23	2.25	
1.267	1.25	7.267	2.50	13.267	1.75	19.27	2.25	
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25	
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25	
1.367	1.25	7.367	2.50	13.367	1.75	19.37	2.25	
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25	
1.433	1.25	7.433	2.50	13.433	1.75	19.43	2.25	
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25	
1.500	1.25	7.500	2.50	13.500	1.76	19.50	2.25	
1.533	1.25	7.533	2.50	13.533	10.23	19.53	2.25	
1.567	1.25	7.567	2.50	13.567	10.23	19.57	2.25	
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25	
1.633	1.25	7.633	2.50	13.633	10.23	19.63	2.25	
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25	
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25	
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25	
1.767	1.75	7.767	2.50	13.767	10.23	19.77	2.25	
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25	
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25	
1.867	2.25	7.867	2.50	13.867	10.23	19.87	2.25	
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25	
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25	
1.967	2.25	7.967	2.50	13.967	10.23	19.97	2.25	
2.000	2.25	8.000	2.50	14.000	10.22	20.00	2.25	
2.033	1.62	8.033	3.37	14.033	3.74	20.03	1.50	
2.067	1.62	8.067	3.37	14.067	3.74	20.07	1.50	
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50	
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50	
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50	
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50	
2.233	1.62	8.233	3.37	14.233	3.74	20.23	1.50	
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50	
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50	
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50	
2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50	
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50	
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50	
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50	
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50	
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50	
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50	
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50	
2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50	
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50	
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50	
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50	
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50	
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50	
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50	
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50	

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2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50
4.967	2.00	10.967	7.74	16.967	2.25	22.97	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.033	2.00	11.033	11.98	17.033	2.25	23.03	1.50
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.233	2.00	11.233	11.98	17.233	2.25	23.23	1.50
5.267	2.00	11.267	11.98	17.267	2.25	23.27	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.367	2.00	11.367	11.98	17.367	2.25	23.37	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.433	2.00	11.433	11.98	17.433	2.25	23.43	1.50
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50
5.500	2.00	11.500	12.63	17.500	2.25	23.50	1.50
5.533	2.00	11.533	51.92	17.533	2.25	23.53	1.50
5.567	2.00	11.567	51.92	17.567	2.25	23.57	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.633	2.00	11.633	51.92	17.633	2.25	23.63	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50
5.767	2.00	11.767	94.96	17.767	2.25	23.77	1.50

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5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.833	2.00	11.833	137.78	17.833	2.25	23.83	1.50
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50
5.967	2.00	11.967	137.78	17.967	2.25	23.97	1.50
6.000	2.00	12.000	137.61	18.000	2.25	24.00	1.50

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.896 (l)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 73.340
TOTAL RAINFALL (mm)= 124.799
RUNOFF COEFFICIENT = 0.588

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0250)
ID= 1 DT= 2.0 min

Area (ha)= 4.37
Total Imp(%)= 46.00 Dir. Conn.(%)= 46.00

IMPERVIOUS PERVIOUS (l)
Surface Area (ha)= 2.01 2.36
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 178.68 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.933	1.25	6.833	2.50	12.033	17.97	18.03	2.25
0.067	1.25	6.867	2.50	12.067	17.97	18.07	2.25
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25
0.233	1.25	6.233	2.50	12.233	17.97	18.23	2.25
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25
0.367	1.25	6.367	2.50	12.367	17.97	18.37	2.25
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25
0.433	1.25	6.433	2.50	12.433	17.97	18.43	2.25
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25
0.500	1.25	6.500	2.50	12.500	17.96	18.50	2.25
0.533	1.25	6.533	2.50	12.533	9.24	18.53	2.25
0.567	1.25	6.567	2.50	12.567	9.24	18.57	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25
0.633	1.25	6.633	2.50	12.633	9.24	18.63	2.25
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25
0.767	1.25	6.767	2.50	12.767	9.24	18.77	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25
0.967	1.25	6.967	2.50	12.967	9.24	18.97	2.25
1.000	1.25	7.000	2.50	13.000	9.22	19.00	2.25
1.033	1.25	7.033	2.50	13.033	1.75	19.03	2.25
1.067	1.25	7.067	2.50	13.067	1.75	19.07	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25
1.133	1.25	7.133	2.50	13.133	1.75	19.13	2.25
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.233	1.25	7.233	2.50	13.233	1.75	19.23	2.25
1.267	1.25	7.267	2.50	13.267	1.75	19.27	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25
1.367	1.25	7.367	2.50	13.367	1.75	19.37	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.433	1.25	7.433	2.50	13.433	1.75	19.43	2.25
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25
1.500	1.25	7.500	2.50	13.500	1.76	19.50	2.25
1.533	1.25	7.533	2.50	13.533	10.23	19.53	2.25
1.567	1.25	7.567	2.50	13.567	10.23	19.57	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.633	1.25	7.633	2.50	13.633	10.23	19.63	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25

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1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25
1.767	1.75	7.767	2.50	13.767	10.23	19.77	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25
1.867	2.25	7.867	2.50	13.867	10.23	19.87	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25
1.967	2.25	7.967	2.50	13.967	10.23	19.97	2.25
2.000	2.25	8.000	2.50	14.000	10.22	20.00	2.25
2.033	1.62	8.033	3.37	14.033	3.74	20.03	1.50
2.067	1.62	8.067	3.37	14.067	3.74	20.07	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.233	1.62	8.233	3.37	14.233	3.74	20.23	1.50
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50

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4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50
4.967	2.00	10.967	7.74	16.967	2.25	22.97	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.033	2.00	11.033	11.98	17.033	2.25	23.03	1.50
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.233	2.00	11.233	11.98	17.233	2.25	23.23	1.50
5.267	2.00	11.267	11.98	17.267	2.25	23.27	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.367	2.00	11.367	11.98	17.367	2.25	23.37	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.433	2.00	11.433	11.98	17.433	2.25	23.43	1.50
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50
5.500	2.00	11.500	12.03	17.500	2.25	23.50	1.50
5.533	2.00	11.533	51.92	17.533	2.25	23.53	1.50
5.567	2.00	11.567	51.92	17.567	2.25	23.57	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.633	2.00	11.633	51.92	17.633	2.25	23.63	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50
5.767	2.00	11.767	94.96	17.767	2.25	23.77	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.833	2.00	11.833	137.78	17.833	2.25	23.83	1.50
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50
5.967	2.00	11.967	137.78	17.967	2.25	23.97	1.50
6.000	2.00	12.000	137.61	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)=	137.78	104.19
over (min)	5.00	10.00
Storage Coeff. (min)=	2.52 (ii)	9.14 (ii)
Unit Hyd. Tpeak (min)=	4.00	10.00
Unit Hyd. peak (cms)=	0.37	0.12
PEAK FLOW (cms)=	0.77	0.52
TIME TO PEAK (hrs)=	12.00	12.03
RUNOFF VOLUME (mm)=	123.30	79.67
TOTAL RAINFALL (mm)=	124.80	124.80
RUNOFF COEFFICIENT =	0.99	0.64

TOTALS

1.261 (iii)

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0018)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1050):	4.49	0.896	12.07	73.34
+ ID2= 2 (0250):	4.37	1.261	12.00	99.74
ID = 3 (0018):	8.86	2.092	12.00	86.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)	Routing time step (min)'= 2.00
IN= 2--> OUT= 1	
<----- DATA FOR SECTION (1.1) ----->	
Distance	Elevation
0.00	101.00
1.00	100.67
2.00	100.33
3.00	100.00
4.00	100.00

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5.00 100.33 0.0300 / 0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0018)	8.86	2.09	12.00	86.36	0.54
OUTFLOW: ID= 1 (0037)	8.86	1.45	12.10	86.32	0.46
					1.30

CALIB (1051)
NASHYD (1051)
ID= 1 DT= 8.0 min
Area (ha)= 50.34
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.63
Curve Number (CN)= 82.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	1.25	6.133	2.50	12.133	17.98	18.13	2.25		
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25		
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25		
0.533	1.25	6.533	2.50	12.533	15.79	18.53	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25		
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25		
1.067	1.25	7.067	2.50	13.067	5.49	19.07	2.25		
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25		
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25		
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25		
1.600	1.25	7.600	2.50	13.600	8.11	19.60	2.25		
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25		
1.867	2.12	7.867	2.50	13.867	10.23	19.87	2.25		
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25		
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50		
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50		
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50		
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50		
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50		
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50		
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50		
3.067	1.62	9.067	3.68	15.067	3.74	21.07	1.50		
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50		
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50		
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50		
3.600	1.62	9.600	4.37	15.600	3.74	21.60	1.50		
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50		
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50		
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50		
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50		
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50		
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50		
4.533	2.00	10.533	6.24	16.533	2.25	22.53	1.50		
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50		
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50		
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50		
5.067	2.00	11.067	9.86	17.067	2.25	23.07	1.50		
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50		

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5.333 2.00 | 11.333 11.98 | 17.333 2.25 | 23.33 1.50
5.467 2.00 | 11.467 11.98 | 17.467 2.25 | 23.47 1.50
5.600 2.00 | 11.600 41.93 | 17.600 2.25 | 23.60 1.50
5.733 2.00 | 11.733 51.92 | 17.733 2.25 | 23.73 1.50
5.867 2.00 | 11.867 127.04 | 17.867 2.25 | 23.87 1.50
6.000 2.00 | 12.000 137.78 | 18.000 2.25 | 24.00 1.50

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 4.738 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 81.741
TOTAL RAINFALL (mm)= 124.809
RUNOFF COEFFICIENT = 0.655

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)					
1 * 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (1051):	50.34	4.738	12.53	81.74	
+ ID2= 2 (0037):	8.86	1.445	12.10	86.32	
=====					
ID = 3 (0029):	59.20	5.607	12.40	82.43	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (0251)		
ID= 1 DT= 3.0 min	Area (ha)= 10.65	Total Imp(%)= 37.00 Dir. Conn.(%)= 37.00

			IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.94	6.71	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	266.46	220.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25		
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25		
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25		
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25		
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25		
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25		
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25		
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25		
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25		
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25		
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25		
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25		
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25		
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25		
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25		
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25		
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25		
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25		
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25		
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25		
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25		
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25		
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25		
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25		
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25		
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25		
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25		

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2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 64.05
over (min) 6.00 27.00
Storage Coeff. (min)= 3.29 (ii) 26.74 (ii)
Unit Hyd. Tpeak (min)= 6.00 27.00
Unit Hyd. peak (cms)= 0.26 0.04

HRP8-PR_50-100 YEAR-2096 IDF.OUT

TOTALS

PEAK FLOW (cms)=	1.49	0.69	1.877 (iii)
TIME TO PEAK (hrs)=	12.00	12.30	12.00
RUNOFF VOLUME (mm)=	123.30	68.45	88.75
TOTAL RAINFALL (mm)=	124.80	124.80	124.80
RUNOFF COEFFICIENT =	0.99	0.55	0.71

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0031) |

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0251):	10.65	1.877	12.00	88.75
+ ID2= 2 (0029):	59.20	5.607	12.40	82.43
=====				
ID = 3 (0031):	69.85	6.468	12.40	83.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0039) |

| IN= 2 ---> OUT= 1 |

Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.509E+02	0.0	0.27	30.87
0.14	100.14	.908E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0031)	69.85	6.47	12.40	83.39	0.99	1.03
OUTFLOW: ID= 1 (0039)	69.85	6.30	12.47	83.38	1.00	1.04

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

HRP8-PR_50-100 YEAR-2096 IDF.OUT

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25		
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25		
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25		
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25		
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25		
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25		
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25		
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25		
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25		
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25		
2.083	1.62	8.083	3.37	14.083	3.75	20.08	1.50		
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50		
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50		
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50		
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50		
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50		
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50		
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50		
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50		
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50		
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50		
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50		
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50		
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50		
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50		
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50		
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50		
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50		
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50		
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50		
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50		
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50		
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50		
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50		
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50		
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50		
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50		
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50		
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50		
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50		
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50		
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50		
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50		
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50		
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50		
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50		
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50		
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50		
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50		
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50		
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50		
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50		
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50		
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50		
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50		
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50		
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50		
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50		

Max.Eff.Inten.(mm/hr)= 137.78 80.70
over (min) 5.00 20.00
Storage Coeff. (min)= 3.68 (ii) 17.00 (iii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.25 0.06

TOTALS

PEAK FLOW (cms)= 2.64 1.07 3.419 (iii)
TIME TO PEAK (hrs)= 12.00 12.17 12.00

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RUNOFF VOLUME (mm)= 123.30 64.03 90.70
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.51 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0033) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0252): 15.48 3.419 12.00 90.70
+ ID2= 2 (0039): 69.85 6.305 12.47 83.38
=====

ID = 3 (0033): 85.33 7.420 12.00 84.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0040) |
IN= 2----> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0500
1.00 100.67 0.0500
2.00 100.33 0.0500 / 0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel
5.00 100.33 0.0300 / 0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .155E+02 0.0 0.18 26.80
0.09 100.09 .348E+02 0.0 0.27 17.93
0.14 100.14 .580E+02 0.1 0.33 14.31
0.19 100.19 .850E+02 0.1 0.39 12.22
0.24 100.24 .116E+03 0.2 0.44 10.83
0.28 100.28 .151E+03 0.3 0.49 9.80
0.33 100.33 .189E+03 0.4 0.53 9.01
0.39 100.39 .240E+03 0.5 0.61 7.82
0.44 100.44 .296E+03 0.7 0.68 7.06
0.50 100.50 .357E+03 0.9 0.73 6.52
0.55 100.55 .424E+03 1.2 0.78 6.11
0.61 100.61 .496E+03 1.4 0.83 5.79
0.66 100.66 .573E+03 1.7 0.86 5.53
0.72 100.72 .655E+03 2.1 0.90 5.32
0.78 100.78 .743E+03 2.4 0.93 5.14
0.83 100.83 .836E+03 2.8 0.96 4.98
0.89 100.89 .934E+03 3.2 0.99 4.84
0.94 100.94 .104E+04 3.7 1.01 4.72
1.00 101.00 .115E+04 4.1 1.04 4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0033) 85.33 7.42 12.00 84.72 0.98 1.03
OUTFLOW: ID= 1 (0040) 85.33 7.29 12.47 84.72 1.00 1.04

| RESERVOIR(0036) |
| IN= 2----> OUT= 1 |
DT= 4.0 min
OVERFLOW IS OFF

OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 1.5621 0.7845
0.0206 0.1029 | 3.2275 0.8011
0.0461 0.1764 | 5.2638 0.9799
0.0618 0.2539 | 7.6097 1.0811
0.0743 0.3353 | 10.2263 1.1844
0.0850 0.4205 | 13.0858 1.2900
0.0945 0.5081 | 16.1669 1.3979
0.1031 0.5980 | 19.5735 1.5082
0.1071 0.6438 | 23.5541 1.6210

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0.3892 0.6901 | 35.0828 1.9135
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0040) 85.330 7.291 12.47 84.72
OUTFLOW: ID= 1 (0036) 85.330 7.196 12.57 84.37
PEAK FLOW REDUCTION [qout/qin](%)= 98.70
TIME SHIFT OF PEAK FLOW (min)= 6.00
MAXIMUM STORAGE USED (ha.m.)= 1.0634

| CALIB |
| NASHYD (0253) | Area (ha)= 1.51 Curve Number (CN)= 75.0
| ID= 1 DT= 1.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----|
| U.H. Tp(hrs)= 0.11

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.017	1.25	6.017	2.50	12.017	18.05	18.02	2.25		
0.033	1.25	6.033	2.50	12.033	17.97	18.03	2.25		
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25		
0.067	1.25	6.067	2.50	12.067	17.97	18.07	2.25		
0.083	1.25	6.083	2.50	12.083	17.97	18.08	2.25		
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25		
0.117	1.25	6.117	2.50	12.117	17.97	18.12	2.25		
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25		
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.183	1.25	6.183	2.50	12.183	17.97	18.18	2.25		
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25		
0.217	1.25	6.217	2.50	12.217	17.97	18.22	2.25		
0.233	1.25	6.233	2.50	12.233	17.97	18.23	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25		
0.283	1.25	6.283	2.50	12.283	17.97	18.28	2.25		
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25		
0.317	1.25	6.317	2.50	12.317	17.97	18.32	2.25		
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25		
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25		
0.367	1.25	6.367	2.50	12.367	17.97	18.37	2.25		
0.383	1.25	6.383	2.50	12.383	17.97	18.38	2.25		
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25		
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25		
0.433	1.25	6.433	2.50	12.433	17.97	18.43	2.25		
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25		
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25		
0.483	1.25	6.483	2.50	12.483	17.97	18.48	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.517	1.25	6.517	2.50	12.517	9.25	18.52	2.25		
0.533	1.25	6.533	2.50	12.533	9.24	18.53	2.25		
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25		
0.567	1.25	6.567	2.50	12.567	9.24	18.57	2.25		
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25		
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25		
0.617	1.25	6.617	2.50	12.617	9.24	18.62	2.25		
0.633	1.25	6.633	2.50	12.633	9.24	18.63	2.25		
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.683	1.25	6.683	2.50	12.683	9.24	18.68	2.25		
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25		
0.717	1.25	6.717	2.50	12.717	9.24	18.72	2.25		
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.767	1.25	6.767	2.50	12.767	9.24	18.77	2.25		
0.783	1.25	6.783	2.50	12.783	9.24	18.78	2.25		
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25		
0.817	1.25	6.817	2.50	12.817	9.24	18.82	2.25		
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25		
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25		
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25		
0.883	1.25	6.883	2.50	12.883	9.24	18.88	2.25		
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25		
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25		
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25		
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25		
0.967	1.25	6.967	2.50	12.967	9.24	18.97	2.25		
0.983	1.25	6.983	2.50	12.983	9.24	18.98	2.25		
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25		
1.017	1.25	7.017	2.50	13.017	1.76	19.02	2.25		
1.033	1.25	7.033	2.50	13.033	1.75	19.03	2.25		
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25		

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1.067	1.25	7.067	2.50	13.067	1.75	19.07	2.25		
1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25		
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25		
1.117	1.25	7.117	2.50	13.117	1.75	19.12	2.25		
1.133	1.25	7.133	2.50	13.133	1.75	19.13	2.25		
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25		
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25		
1.183	1.25	7.183	2.50	13.183	1.75	19.18	2.25		
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25		
1.217	1.25	7.217	2.50	13.217	1.75	19.22	2.25		
1.233	1.25	7.233	2.50	13.233	1.75	19.23	2.25		
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25		
1.267	1.25	7.267	2.50	13.267	1.75	19.27	2.25		
1.283	1.25	7.283	2.50	13.283	1.75	19.28	2.25		
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25		
1.317	1.25	7.317	2.50	13.317	1.75	19.32	2.25		
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25		
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25		
1.367	1.25	7.367	2.50	13.367	1.75	19.37	2.25		
1.383	1.25	7.383	2.50	13.383	1.75	19.38	2.25		
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25		
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25		
1.433	1.25	7.433	2.50	13.433	1.75	19.43	2.25		
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25		
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25		
1.483	1.25	7.483	2.50	13.483	1.75	19.48	2.25		
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25		
1.517	1.25	7.517	2.50	13.517	10.22	19.52	2.25		
1.533	1.25	7.533	2.50	13.533	10.23	19.53	2.25		
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25		
1.567	1.25	7.567	2.50	13.567	10.23	19.57	2.25		
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25		
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25		
1.617	1.25	7.617	2.50	13.617	10.23	19.62	2.25		
1.633	1.25	7.633	2.50	13.633	10.23	19.63	2.25		
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25		
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25		
1.683	1.25	7.683	2.50	13.683	10.23	19.68	2.25		
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25		
1.717	1.25	7.717	2.50	13.717	10.23	19.72	2.25		
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25		
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25		
1.767	2.25	7.767	2.50	13.767	10.23	19.77	2.25		
1.783	2.25	7.783	2.50	13.783	10.23	19.78	2.25		
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25		
1.817	2.25	7.817	2.50	13.817	10.23	19.82	2.25		
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25		
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25		
1.867	2.25	7.867	2.50	13.867	10.23	19.87	2.25		
1.883	2.25	7.883	2.50	13.883	10.23	19.88	2.25		
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25		
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25		
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25		
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25		
1.967	2.25	7.967	2.50	13.967	10.23	19.97	2.25		
1.983	2.25	7.983	2.50	13.983	10.23	19.98	2.25		
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25		
2.017	1.62	8.017	3.37	14.017	3.76	20.02	1.50		
2.033	1.62	8.033	3.37	14.033	3.74	20.03	1.50		
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50		
2.067	1.62	8.067	3.37	14.067	3.74	20.07	1.50		
2.083	1.62	8.083	3.37	14.083	3.74	20.08	1.50		
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50		
2.117	1.62	8.117	3.37	14.117	3.74	20.12	1.50		
2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50		
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50		
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50		
2.183	1.62	8.183	3.37	14.183	3.74	20.18	1.50		
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50		
2.217	1.62	8.217	3.37	14.217	3.74	20.22	1.50		
2.233	1.62	8.233	3.37	14.233	3.74	20.23	1.50		
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50		
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50		
2.283	1.62	8.283	3.37	14.283	3.74	20.28	1.50		
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50		
2.317	1.62	8.317	3.37	14.317	3.74	20.32	1.50		
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50		
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50		
2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50		
2.383	1.62	8.383	3.37	14.383	3.74	20.38	1.50		
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50		
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50		
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50		
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50		
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50		
2.483	1.62	8.483	3.37	14.483	3.74	20.48	1.50		
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50		

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2.517	1.62	8.517	3.37	14.517	3.74	20.52	1.50
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.617	1.62	8.617	3.37	14.617	3.74	20.62	1.50
2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.683	1.62	8.683	3.37	14.683	3.74	20.68	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.717	1.62	8.717	3.37	14.717	3.74	20.72	1.50
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50
2.783	1.62	8.783	3.37	14.783	3.74	20.78	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.817	1.62	8.817	3.37	14.817	3.74	20.82	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50
2.883	1.62	8.883	3.37	14.883	3.74	20.88	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50
2.983	1.62	8.983	3.37	14.983	3.74	20.98	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.017	1.62	9.017	3.99	15.017	3.74	21.02	1.50
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.117	1.62	9.117	3.99	15.117	3.74	21.12	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.183	1.62	9.183	3.99	15.183	3.74	21.18	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.217	1.62	9.217	3.99	15.217	3.74	21.22	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.283	1.62	9.283	3.99	15.283	3.74	21.28	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.317	1.62	9.317	3.99	15.317	3.74	21.32	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.383	1.62	9.383	3.99	15.383	3.74	21.38	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.483	1.62	9.483	3.99	15.483	3.74	21.48	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.517	1.62	9.517	4.49	15.517	3.74	21.52	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.617	1.62	9.617	4.49	15.617	3.74	21.62	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.683	1.62	9.683	4.49	15.683	3.74	21.68	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.717	1.62	9.717	4.49	15.717	3.74	21.72	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.783	1.62	9.783	4.49	15.783	3.74	21.78	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.817	1.62	9.817	4.49	15.817	3.74	21.82	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.883	1.62	9.883	4.49	15.883	3.74	21.88	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50

HRP8-PR_50-100 YEAR-2096 IDF.OUT

3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
3.983	1.62	9.983	4.49	15.983	3.74	21.98	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.017	2.00	10.017	5.74	16.017	2.25	22.02	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.117	2.00	10.117	5.74	16.117	2.25	22.12	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.183	2.00	10.183	5.74	16.183	2.25	22.18	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.217	2.00	10.217	5.74	16.217	2.25	22.22	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.283	2.00	10.283	5.74	16.283	2.25	22.28	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.317	2.00	10.317	5.74	16.317	2.25	22.32	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.383	2.00	10.383	5.74	16.383	2.25	22.38	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.483	2.00	10.483	5.74	16.483	2.25	22.48	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.517	2.00	10.517	7.74	16.517	2.25	22.52	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.617	2.00	10.617	7.74	16.617	2.25	22.62	1.50
4.633	2.00	10.633	7.74	16.633	2.25	22.63	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.683	2.00	10.683	7.74	16.683	2.25	22.68	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.717	2.00	10.717	7.74	16.717	2.25	22.72	1.50
4.733	2.00	10.733	7.74	16.733	2.25	22.73	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.767	2.00	10.767	7.74	16.767	2.25	22.77	1.50
4.783	2.00	10.783	7.74	16.783	2.25	22.78	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.817	2.00	10.817	7.74	16.817	2.25	22.82	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.867	2.00	10.867	7.74	16.867	2.25	22.87	1.50
4.883	2.00	10.883	7.74	16.883	2.25	22.88	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50
4.933	2.00	10.933	7.74	16.933	2.25	22.93	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
4.967	2.00	10.967	7.74	16.967	2.25	22.97	1.50
4.983	2.00	10.983	7.74	16.983	2.25	22.98	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.017							

HRP8-PR_50-100 YEAR-2096 IDF.OUT												
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50					
5.433	2.00	11.433	11.98	17.433	2.25	23.43	1.50					
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50					
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50					
5.483	2.00	11.483	11.98	17.483	2.25	23.48	1.50					
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50					
5.517	2.00	11.517	51.91	17.517	2.25	23.52	1.50					
5.533	2.00	11.533	51.92	17.533	2.25	23.53	1.50					
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50					
5.567	2.00	11.567	51.92	17.567	2.25	23.57	1.50					
5.583	2.00	11.583	51.92	17.583	2.25	23.58	1.50					
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50					
5.617	2.00	11.617	51.92	17.617	2.25	23.62	1.50					
5.633	2.00	11.633	51.92	17.633	2.25	23.63	1.50					
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50					
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50					
5.683	2.00	11.683	51.92	17.683	2.25	23.68	1.50					
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50					
5.717	2.00	11.717	51.92	17.717	2.25	23.72	1.50					
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50					
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50					
5.767	2.00	11.767	137.74	17.767	2.25	23.77	1.50					
5.783	2.00	11.783	137.78	17.783	2.25	23.78	1.50					
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50					
5.817	2.00	11.817	137.78	17.817	2.25	23.82	1.50					
5.833	2.00	11.833	137.78	17.833	2.25	23.83	1.50					
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50					
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50					
5.883	2.00	11.883	137.78	17.883	2.25	23.88	1.50					
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50					
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50					
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50					
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50					
5.967	2.00	11.967	137.78	17.967	2.25	23.97	1.50					
5.983	2.00	11.983	137.78	17.983	2.25	23.98	1.50					
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50					

Unit Hyd Qpeak (cms)= 0.515

PEAK FLOW (cms)= 0.344 (1)
TIME TO PEAK (hrs)= 12.017
RUNOFF VOLUME (mm)= 58.854
TOTAL RAINFALL (mm)= 124.881
RUNOFF COEFFICIENT = 0.472

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0253):	1.51	0.344	12.02	58.85
+ ID2= 2 (0036):	85.33	7.196	12.57	84.37
=====				
ID = 3 (0035):	86.84	7.250	12.57	79.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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=====
V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\18b4af95-7c1b-43ad-8aec-1bb40ca96caf\8baf8a7c-1ad7-4d8b-ac4e-de1896332b1b\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\18b4af95-7c1b-43ad-8aec-1bb40ca96caf\8baf8a7c-1ad7-4d8b-ac4e-de1896332b1b\scenar

DATE: 03/24/2023 TIME: 11:12:55

USER: HRP8-PR_50-100 YEAR-2096 IDF.OUT

COMMENTS: _____

** SIMULATION : Run 12 **

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\99cbae56-8f9b-473d-a9ec-451e2814fb79\c7ff0caf
Ptotal=136.80 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.37	6.25	2.74	12.25	19.70	18.25	2.46
0.50	1.37	6.50	2.74	12.50	19.70	18.50	2.46
0.75	1.37	6.75	2.74	12.75	10.12	18.75	2.46
1.00	1.37	7.00	2.74	13.00	10.12	19.00	2.46
1.25	1.37	7.25	2.74	13.25	1.92	19.25	2.46
1.50	1.37	7.50	2.74	13.50	1.92	19.50	2.46
1.75	1.37	7.75	2.74	13.75	11.22	19.75	2.46
2.00	2.46	8.00	2.74	14.00	11.22	20.00	2.46
2.25	1.78	8.25	3.69	14.25	4.10	20.25	1.64
2.50	1.78	8.50	3.69	14.50	4.10	20.50	1.64
2.75	1.78	8.75	3.69	14.75	4.10	20.75	1.64
3.00	1.78	9.00	3.69	15.00	4.10	21.00	1.64
3.25	1.78	9.25	4.38	15.25	4.10	21.25	1.64
3.50	1.78	9.50	4.38	15.50	4.10	21.50	1.64
3.75	1.78	9.75	4.92	15.75	4.10	21.75	1.64
4.00	1.78	10.00	4.92	16.00	4.10	22.00	1.64
4.25	2.19	10.25	6.29	16.25	2.46	22.25	1.64
4.50	2.19	10.50	6.29	16.50	2.46	22.50	1.64
4.75	2.19	10.75	8.48	16.75	2.46	22.75	1.64
5.00	2.19	11.00	8.48	17.00	2.46	23.00	1.64
5.25	2.19	11.25	13.13	17.25	2.46	23.25	1.64
5.50	2.19	11.50	13.13	17.50	2.46	23.50	1.64
5.75	2.19	11.75	56.91	17.75	2.46	23.75	1.64
6.00	2.19	12.00	151.03	18.00	2.46	24.00	1.64

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	1.37	6.033	2.74	12.033	19.70	18.03	2.46
0.067	1.37	6.067	2.74	12.067	19.70	18.07	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.233	1.37	6.233	2.74	12.233	19.70	18.23	2.46
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.367	1.37	6.367	2.74	12.367	19.70	18.37	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46
0.500	1.37	6.500	2.74	12.500	19.68	18.50	2.46
0.533	1.37	6.533	2.74	12.533	10.12	18.53	2.46
0.567	1.37	6.567	2.74	12.567	10.12	18.57	2.46
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46
0.633	1.37	6.633	2.74	12.633	10.12	18.63	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46
0.767	1.37	6.767	2.74	12.767	10.12	18.77	2.46
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46

HRP8-PR_SR-50-100 YEAR-2096 IDF.OUT									
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46		
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46		
0.967	1.37	6.967	2.74	12.967	10.12	18.97	2.46		
1.000	1.37	7.000	2.74	13.000	10.11	19.00	2.46		
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46		
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46		
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46		
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.500	1.37	7.500	2.74	13.500	1.93	19.50	2.46		
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46		
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46		
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.767	1.92	7.767	2.74	13.767	11.22	19.77	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46		
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46		
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46		
2.000	2.46	8.000	2.74	14.000	11.20	20.00	2.46		
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64		
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64		
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64		
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64		
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64		
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64		
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64		
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64		
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64		
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64		
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64		
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64		
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64		
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64		
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64		
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64		
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64		
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64		
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64		
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64		
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64		
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64		
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64		
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64		
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64		
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64		
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64		
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64		
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64		
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64		
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64		
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64		
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64		
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64		
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64		
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64		
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64		
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64		
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64		
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64		
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64		
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64		
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64		
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64		
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64		
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64		
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64		

HRP8-PR_SR-50-100 YEAR-2096 IDF.OUT									
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64		
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64		
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64		
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64		
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64		
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64		
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64		
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64		
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64		
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64		
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64		
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64		
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64		
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64		
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64		
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64		
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64		
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64		
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64		
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64		
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64		
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64		
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64		
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64		
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64		
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64		
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64		
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64		
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64		
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64		
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64		
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64		
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64		
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64		
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64		
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64		
5.000	2.19	11.000	8.49	17.000	2.46	23.00	1.64		
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64		
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64		
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64		
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64		
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64		
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64		
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64		
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64		
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64		
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64		
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64		
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64		
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64		
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64		
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64		
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64		
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64		
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64		
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64		
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64		
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64		
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64		
5.767	2.19	11.767	104.09	17.767	2.46	23.77	1.64		
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64		
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64		
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64		
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64		
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64		
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64		
6.000	2.19	12.000	150.85	18.000	2.46	24.00	1.64		

Average Slope (%)= 2.00
Length (m)= 170.68
Mannings n = 0.013

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2.00

40.00

0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.37	6.033	2.74	12.033	19.70	18.03	2.46		
0.067	1.37	6.067	2.74	12.067	19.70	18.07	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46		
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.233	1.37	6.233	2.74	12.233	19.70	18.23	2.46		
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46		
0.367	1.37	6.367	2.74	12.367	19.70	18.37	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46		
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46		
0.500	1.37	6.500	2.74	12.500	19.68	18.50	2.46		
0.533	1.37	6.533	2.74	12.533	10.12	18.53	2.46		
0.567	1.37	6.567	2.74	12.567	10.12	18.57	2.46		
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46		
0.633	1.37	6.633	2.74	12.633	10.12	18.63	2.46		
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46		
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46		
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46		
0.767	1.37	6.767	2.74	12.767	10.12	18.77	2.46		
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46		
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46		
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46		
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46		
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46		
0.967	1.37	6.967	2.74	12.967	10.12	18.97	2.46		
1.000	1.37	7.000	2.74	13.000	10.11	19.00	2.46		
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46		
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46		
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46		
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.500	1.37	7.500	2.74	13.500	1.93	19.50	2.46		
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46		
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46		
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.767	1.92	7.767	2.74	13.767	11.22	19.77	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46		
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46		
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46		
2.000	2.46	8.000	2.74	14.000	11.20	20.00	2.46		
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64		
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64		
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64		
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64		
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64		
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64		
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64		
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64		
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64		
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64		
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64		
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64		
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64		
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64		
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64		

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2.00

40.00

0.250

2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64
5.000	2.19	11.000	8.49	17.000	2.46	23.00	1.64
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64

HRP8-PR_50-100 YEAR-2096 IDF.OUT									
5.500	2.19	11.500	13.19	17.500	2.46	23.50	1.64		
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64		
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64		
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64		
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64		
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64		
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64		
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64		
5.767	2.19	11.767	104.09	17.767	2.46	23.77	1.64		
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64		
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64		
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64		
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64		
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64		
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64		
6.000	2.19	12.000	150.85	18.000	2.46	24.00	1.64		

Max.Eff.Inten.(mm/hr)=	151.03	117.60	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.43 (ii)	8.81 (iii)	
Unit Hyd. Tpeak (min)=	4.00	10.00	
Unit Hyd. peak (cms)=	0.37	0.12	
PEAK FLOW (cms)=	0.84	0.59	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.03	1.409 (iii)
RUNOFF VOLUME (mm)=	135.30	90.25	12.00
TOTAL RAINFALL (mm)=	136.80	136.80	110.98
RUNOFF COEFFICIENT =	0.99	0.66	136.80
			0.81

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1050):	4.49	1.021	12.07	83.64
+ ID2= 2 (0250):	4.37	1.409	12.00	110.98
=====				
ID = 3 (0018):	8.86	2.359	12.00	97.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)	
IN= 2---> OUT= 1	Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.359E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

HRP8-PR_50-100 YEAR-2096 IDF.OUT						
<---- hydrograph ---->			<-pipe / channel-->			
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0018)	8.86	2.36	12.00	97.12	0.58	1.49
OUTFLOW: ID= 1 (0037)	8.86	1.65	12.10	97.08	0.49	1.35

CALIB						
NASHYD (1051)	Area	(ha)=	50.34	Curve Number	(CN)=	82.0
ID= 1 DT= 8.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=		0.63			

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46		
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.533	1.37	6.533	2.74	12.533	17.31	18.53	2.46		
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46		
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46		
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46		
1.067	1.37	7.067	2.74	13.067	6.02	19.07	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.600	1.37	7.600	2.74	13.600	8.89	19.60	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.867	2.33	7.867	2.74	13.867	11.22	19.87	2.46		
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46		
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64		
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64		
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64		
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64		
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64		
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64		
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64		
3.067	1.78	9.067	4.04	15.067	4.10	21.07	1.64		
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64		
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64		
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64		
3.600	1.78	9.600	4.79	15.600	4.10	21.60	1.64		
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64		
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64		
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64		
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64		
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64		
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64		
4.533	2.19	10.533	6.84	16.533	2.46	22.53	1.64		
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64		
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64		
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64		
5.067	2.19	11.067	10.81	17.067	2.46	23.07	1.64		
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64		
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64		
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64		
5.600	2.19	11.600	45.96	17.600	2.46	23.60	1.64		
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64		
5.867	2.19	11.867	139.26	17.867	2.46	23.87	1.64		
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64		

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 5.367 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 92.607
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.677

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1051):	50.34	5.367	12.53	92.61
+ ID2= 2 (0037):	8.86	1.652	12.10	97.08
=====				
ID = 3 (0029):	59.20	6.346	12.40	93.28

HRP8-PR_50-100 YEAR-2096 IDF.OUT

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 | CALIB |
 | STANDHYD (0251) | Area (ha)= 10.65
 | ID= 1 DT= 3.0 min | Total Imp(%)= 37.00 Dir. Conn.(%)= 37.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.94	6.71
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	266.46	220.00
Mannings n	=	0.013
		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	18.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	18.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	18.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	18.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	18.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	18.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	18.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	18.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64

3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)=	151.03	73.33
over (min)	6.00	27.00
Storage Coeff. (min)=	3.17 (ii)	25.39 (ii)
Unit Hyd. Tpeak (min)=	6.00	27.00
Unit Hyd. peak (cms)=	0.27	0.04

PEAK FLOW (cms)=	1.64	0.81	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.30	2.095 (iii)
RUNOFF VOLUME (mm)=	135.30	78.20	99.33
TOTAL RAINFALL (mm)=	136.80	136.80	136.80
RUNOFF COEFFICIENT =	0.99	0.57	0.73

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 72.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 | ADD HYD (0031) |
 | 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
1.78 8.950 4.10 20.95 1.64
 ID1= 1 (0251): 10.65 2.095 12.00 99.33
 + ID2= 2 (0029): 59.20 6.346 12.40 93.28

 ID = 3 (0031): 69.85 7.340 12.30 94.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP8-PR_50-100 YEAR-2096 IDF.OUT

```
-----
| ROUTE CHN( 0039)|
| IN= 2--> OUT= 1 |
-----
Routing time step (min)'= 2.00

<----- DATA FOR SECTION ( 1.1) ----->
Distance      Elevation      Manning
0.00          101.00        0.0500
1.00          100.67        0.0500
2.00          100.33        0.0500 /0.0300 Main Channel
3.00          100.00        0.0300 Main Channel
4.00          100.00        0.0300 Main Channel
5.00          100.33        0.0300 /0.0500 Main Channel
6.00          100.67        0.0500
7.00          101.00        0.0500
```

```
<----- TRAVEL TIME TABLE ----->
DEPTH      ELEV      VOLUME      FLOW RATE      VELOCITY      TRAV.TIME
(m)         (m)         (cu.m.)      (cms)          (m/s)         (min)
0.05 100.05 .266E+02 0.0 0.18 46.14
0.09 100.09 .599E+02 0.0 0.27 30.87
0.14 100.14 .998E+02 0.1 0.33 24.63
0.19 100.19 .140E+03 0.1 0.39 21.04
0.24 100.24 .206E+03 0.2 0.44 18.63
0.28 100.28 .259E+03 0.3 0.49 16.87
0.33 100.33 .326E+03 0.4 0.53 15.51
0.39 100.39 .413E+03 0.5 0.61 13.47
0.44 100.44 .510E+03 0.7 0.68 12.15
0.50 100.50 .615E+03 0.9 0.73 11.22
0.55 100.55 .729E+03 1.2 0.78 10.52
0.61 100.61 .853E+03 1.4 0.83 9.97
0.66 100.66 .985E+03 1.7 0.86 9.53
0.72 100.72 .113E+04 2.1 0.90 9.16
0.78 100.78 .128E+04 2.4 0.93 8.84
0.83 100.83 .144E+04 2.8 0.96 8.57
0.89 100.89 .161E+04 3.2 0.99 8.34
0.94 100.94 .179E+04 3.7 1.01 8.13
1.00 101.00 .198E+04 4.1 1.04 7.94
```

```
**** WARNING: TRAVEL TIME TABLE EXCEEDED
<----- hydrograph -----> <-pipe / channel->
AREA      QPEAK      TPEAK      R.V.      MAX DEPTH      MAX VEL
(ha)      (cms)      (hrs)      (mm)      (m)      (m/s)
INFLOW : ID= 2 ( 0031) 69.85 7.34 12.30 94.20 0.99 1.03
OUTFLOW: ID= 1 ( 0039) 69.85 7.15 12.47 94.19 1.00 1.04
```

```
-----
| CALIB
| STANDHYD ( 0252)|
| ID= 1 DT= 5.0 min|
-----
Area (ha)= 15.48
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS      PERVIOUS (l)
Surface Area (ha)= 6.97 8.51
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 321.25 100.00
Mannings n = 0.013 0.250
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

```
----- TRANSFORMED HYETOGRAPH -----
TIME      RAIN      TIME      RAIN      TIME      RAIN      TIME      RAIN
hrs      mm/hr      hrs      mm/hr      ' hrs      mm/hr      hrs      mm/hr
0.083 1.37 | 6.083 2.74 | 12.083 19.71 | 18.08 2.46
0.167 1.37 | 6.167 2.74 | 12.167 19.70 | 18.17 2.46
0.250 1.37 | 6.250 2.74 | 12.250 19.70 | 18.25 2.46
0.333 1.37 | 6.333 2.74 | 12.333 19.70 | 18.33 2.46
0.417 1.37 | 6.417 2.74 | 12.417 19.70 | 18.42 2.46
0.500 1.37 | 6.500 2.74 | 12.500 19.70 | 18.50 2.46
0.583 1.37 | 6.583 2.74 | 12.583 18.12 | 18.58 2.46
0.667 1.37 | 6.667 2.74 | 12.667 18.12 | 18.67 2.46
0.750 1.37 | 6.750 2.74 | 12.750 18.12 | 18.75 2.46
0.833 1.37 | 6.833 2.74 | 12.833 18.12 | 18.83 2.46
0.917 1.37 | 6.917 2.74 | 12.917 18.12 | 18.92 2.46
1.000 1.37 | 7.000 2.74 | 13.000 18.12 | 19.00 2.46
1.083 1.37 | 7.083 2.74 | 13.083 1.92 | 19.08 2.46
1.167 1.37 | 7.167 2.74 | 13.167 1.92 | 19.17 2.46
1.250 1.37 | 7.250 2.74 | 13.250 1.92 | 19.25 2.46
1.333 1.37 | 7.333 2.74 | 13.333 1.92 | 19.33 2.46
1.417 1.37 | 7.417 2.74 | 13.417 1.92 | 19.42 2.46
1.500 1.37 | 7.500 2.74 | 13.500 1.92 | 19.50 2.46
1.583 1.37 | 7.583 2.74 | 13.583 11.22 | 19.58 2.46
1.667 1.37 | 7.667 2.74 | 13.667 11.22 | 19.67 2.46
1.750 1.37 | 7.750 2.74 | 13.750 11.22 | 19.75 2.46
```

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HRP8-PR_50-100 YEAR-2096 IDF.OUT
1.833 2.46 | 7.833 2.74 | 13.833 11.22 | 19.83 2.46
1.917 2.46 | 7.917 2.74 | 13.917 11.22 | 19.92 2.46
2.000 2.46 | 8.000 2.74 | 14.000 11.22 | 20.00 2.46
2.083 1.78 | 8.083 3.69 | 14.083 4.11 | 20.08 1.64
2.167 1.78 | 8.167 3.69 | 14.167 4.10 | 20.17 1.64
2.250 1.78 | 8.250 3.69 | 14.250 4.10 | 20.25 1.64
2.333 1.78 | 8.333 3.69 | 14.333 4.10 | 20.33 1.64
2.417 1.78 | 8.417 3.69 | 14.417 4.10 | 20.42 1.64
2.500 1.78 | 8.500 3.69 | 14.500 4.10 | 20.50 1.64
2.583 1.78 | 8.583 3.69 | 14.583 4.10 | 20.58 1.64
2.667 1.78 | 8.667 3.69 | 14.667 4.10 | 20.67 1.64
2.750 1.78 | 8.750 3.69 | 14.750 4.10 | 20.75 1.64
2.833 1.78 | 8.833 3.69 | 14.833 4.10 | 20.83 1.64
2.917 1.78 | 8.917 3.69 | 14.917 4.10 | 20.92 1.64
3.000 1.78 | 9.000 3.69 | 15.000 4.10 | 21.00 1.64
3.083 1.78 | 9.083 4.38 | 15.083 4.10 | 21.08 1.64
3.167 1.78 | 9.167 4.38 | 15.167 4.10 | 21.17 1.64
3.250 1.78 | 9.250 4.38 | 15.250 4.10 | 21.25 1.64
3.333 1.78 | 9.333 4.38 | 15.333 4.10 | 21.33 1.64
3.417 1.78 | 9.417 4.38 | 15.417 4.10 | 21.42 1.64
3.500 1.78 | 9.500 4.38 | 15.500 4.10 | 21.50 1.64
3.583 1.78 | 9.583 4.92 | 15.583 4.10 | 21.58 1.64
3.667 1.78 | 9.667 4.92 | 15.667 4.10 | 21.67 1.64
3.750 1.78 | 9.750 4.92 | 15.750 4.10 | 21.75 1.64
3.833 1.78 | 9.833 4.92 | 15.833 4.10 | 21.83 1.64
3.917 1.78 | 9.917 4.92 | 15.917 4.10 | 21.92 1.64
4.000 1.78 | 10.000 4.92 | 16.000 4.10 | 22.00 1.64
4.083 2.19 | 10.083 6.29 | 16.083 2.46 | 22.08 1.64
4.167 2.19 | 10.167 6.29 | 16.167 2.46 | 22.17 1.64
4.250 2.19 | 10.250 6.29 | 16.250 2.46 | 22.25 1.64
4.333 2.19 | 10.333 6.29 | 16.333 2.46 | 22.33 1.64
4.417 2.19 | 10.417 6.29 | 16.417 2.46 | 22.42 1.64
4.500 2.19 | 10.500 6.29 | 16.500 2.46 | 22.50 1.64
4.583 2.19 | 10.583 8.48 | 16.583 2.46 | 22.58 1.64
4.667 2.19 | 10.667 8.48 | 16.667 2.46 | 22.67 1.64
4.750 2.19 | 10.750 8.48 | 16.750 2.46 | 22.75 1.64
4.833 2.19 | 10.833 8.48 | 16.833 2.46 | 22.83 1.64
4.917 2.19 | 10.917 8.48 | 16.917 2.46 | 22.92 1.64
5.000 2.19 | 11.000 8.48 | 17.000 2.46 | 23.00 1.64
5.083 2.19 | 11.083 13.13 | 17.083 2.46 | 23.08 1.64
5.167 2.19 | 11.167 13.13 | 17.167 2.46 | 23.17 1.64
5.250 2.19 | 11.250 13.13 | 17.250 2.46 | 23.25 1.64
5.333 2.19 | 11.333 13.13 | 17.333 2.46 | 23.33 1.64
5.417 2.19 | 11.417 13.13 | 17.417 2.46 | 23.42 1.64
5.500 2.19 | 11.500 13.13 | 17.500 2.46 | 23.50 1.64
5.583 2.19 | 11.583 56.90 | 17.583 2.46 | 23.58 1.64
5.667 2.19 | 11.667 56.91 | 17.667 2.46 | 23.67 1.64
5.750 2.19 | 11.750 56.91 | 17.750 2.46 | 23.75 1.64
5.833 2.19 | 11.833 151.02 | 17.833 2.46 | 23.83 1.64
5.917 2.19 | 11.917 151.03 | 17.917 2.46 | 23.92 1.64
6.000 2.19 | 12.000 151.03 | 18.000 2.46 | 24.00 1.64
```

```
Max.Eff.Inten.(mm/hr)= 151.03 92.60
over (min) 5.00 20.00
Storage Coeff. (min)= 3.54 (ii) 16.16 (iii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.26 0.06
*TOTALS*
PEAK FLOW (cms)= 2.90 1.25 3.819 (iii)
TIME TO PEAK (hrs)= 12.00 12.17 12.00
RUNOFF VOLUME (mm)= 135.30 73.40 101.25
TOTAL RAINFALL (mm)= 136.80 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.54 0.74
```

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
-----
| ADD HYD ( 0033)|
| 1 + 2 = 3 |
-----
AREA      QPEAK      TPEAK      R.V.
(ha)      (cms)      (hrs)      (mm)
ID1= 1 ( 0252): 15.48 3.819 12.00 101.25
+ ID2= 2 ( 0039): 69.85 7.153 12.47 94.19
=====
ID = 3 ( 0033): 85.33 8.328 12.00 95.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-----
| ROUTE CHN( 0040)|
```


HRP8-PR_50-100 YEAR-2096 IDF.OUT
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 /0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 /0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.296E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53
0.72	100.72	.655E+03	2.1	0.90	5.22
0.78	100.78	.743E+03	2.4	0.93	5.14
0.83	100.83	.836E+03	2.8	0.96	4.98
0.89	100.89	.934E+03	3.2	0.99	4.84
0.94	100.94	.104E+04	3.7	1.01	4.72
1.00	101.00	.115E+04	4.1	1.04	4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED					
<--- hydrograph --->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0033)	85.33	8.33	12.00	95.49	0.98
OUTFLOW: ID= 1 (0040)	85.33	8.27	12.43	95.49	1.00

OVERFLOW IS OFF				
<--- hydrograph --->				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	85.330	8.267	12.43	95.49
OUTFLOW: ID= 1 (0036)	85.330	8.168	12.57	95.14
PEAK FLOW REDUCTION [Qout/ Qin](%)= 98.81				
TIME SHIFT OF PEAK FLOW (min)= 8.00				
MAXIMUM STORAGE USED (ha.m.)= 1.1034				

CALIB				
NASHYD (0253)				
ID= 1 DT= 1.0 min	Area	(ha)=	1.51	Curve Number (CN)= 75.0
	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.11		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	1.37	6.017	2.74	12.017	19.79	18.02	2.46		
0.033	1.37	6.033	2.74	12.033	19.79	18.03	2.46		
0.050	1.37	6.050	2.74	12.050	19.79	18.05	2.46		

HRP8-PR_50-100 YEAR-2096 IDF.OUT									
0.067	1.37	6.067	2.74	12.067	19.79	18.07	2.46		
0.083	1.37	6.083	2.74	12.083	19.79	18.08	2.46		
0.100	1.37	6.100	2.74	12.100	19.79	18.10	2.46		
0.117	1.37	6.117	2.74	12.117	19.79	18.12	2.46		
0.133	1.37	6.133	2.74	12.133	19.79	18.13	2.46		
0.150	1.37	6.150	2.74	12.150	19.79	18.15	2.46		
0.167	1.37	6.167	2.74	12.167	19.79	18.17	2.46		
0.183	1.37	6.183	2.74	12.183	19.79	18.18	2.46		
0.200	1.37	6.200	2.74	12.200	19.79	18.20	2.46		
0.217	1.37	6.217	2.74	12.217	19.79	18.22	2.46		
0.233	1.37	6.233	2.74	12.233	19.79	18.23	2.46		
0.250	1.37	6.250	2.74	12.250	19.79	18.25	2.46		
0.267	1.37	6.267	2.74	12.267	19.79	18.27	2.46		
0.283	1.37	6.283	2.74	12.283	19.79	18.28	2.46		
0.300	1.37	6.300	2.74	12.300	19.79	18.30	2.46		
0.317	1.37	6.317	2.74	12.317	19.79	18.32	2.46		
0.333	1.37	6.333	2.74	12.333	19.79	18.33	2.46		
0.350	1.37	6.350	2.74	12.350	19.79	18.35	2.46		
0.367	1.37	6.367	2.74	12.367	19.79	18.37	2.46		
0.383	1.37	6.383	2.74	12.383	19.79	18.38	2.46		
0.400	1.37	6.400	2.74	12.400	19.79	18.40	2.46		
0.417	1.37	6.417	2.74	12.417	19.79	18.42	2.46		
0.433	1.37	6.433	2.74	12.433	19.79	18.43	2.46		
0.450	1.37	6.450	2.74	12.450	19.79	18.45	2.46		
0.467	1.37	6.467	2.74	12.467	19.79	18.47	2.46		
0.483	1.37	6.483	2.74	12.483	19.79	18.48	2.46		
0.500	1.37	6.500	2.74	12.500	19.79	18.50	2.46		
0.517	1.37	6.517	2.74	12.517	10.13	18.52	2.46		
0.533	1.37	6.533	2.74	12.533	10.12	18.53	2.46		
0.550	1.37	6.550	2.74	12.550	10.12	18.55	2.46		
0.567	1.37	6.567	2.74	12.567	10.12	18.57	2.46		
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46		
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46		
0.617	1.37	6.617	2.74	12.617	10.12	18.62	2.46		
0.633	1.37	6.633	2.74	12.633	10.12	18.63	2.46		
0.650	1.37	6.650	2.74	12.650	10.12	18.65	2.46		
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46		
0.683	1.37	6.683	2.74	12.683	10.12	18.68	2.46		
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46		
0.717	1.37	6.717	2.74	12.717	10.12	18.72	2.46		
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46		
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46		
0.767	1.37	6.767	2.74	12.767	10.12	18.77	2.46		
0.783	1.37	6.783	2.74	12.783	10.12	18.78	2.46		
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46		
0.817	1.37	6.817	2.74	12.817	10.12	18.82	2.46		
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46		
0.850	1.37	6.850	2.74	12.850	10.12	18.85	2.46		
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46		
0.883	1.37	6.883	2.74	12.883	10.12	18.88	2.46		
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46		
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46		
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46		
0.950	1.37	6.950	2.74	12.950	10.12	18.95	2.46		
0.967	1.37	6.967	2.74	12.967	10.12	18.97	2.46		
0.983	1.37	6.983	2.74	12.983	10.12	18.98	2.46		
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46		
1.017	1.37	7.017	2.74	13.017	1.93	19.02	2.46		
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46		
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46		
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46		
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.117	1.37	7.117	2.74	13.117	1.92	19.12	2.46		
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46		
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46		
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46		
1.183	1.37	7.183	2.74	13.183	1.92	19.18	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.217	1.37	7.217	2.74	13.217	1.92	19.22	2.46		
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46		
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46		
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46		
1.283	1.37	7.283	2.74	13.283	1.92	19.28	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.317	1.37	7.317	2.74	13.317	1.92	19.32	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46		
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46		
1.383	1.37	7.383	2.74	13.383	1.92	19.38	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46		
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46		
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.483	1.37	7.483	2.74	13.483	1.92	19.48	2.46		
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46		

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1.517	1.37	7.517	2.74	13.517	11.20	19.52	2.46
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.617	1.37	7.617	2.74	13.617	11.22	19.62	2.46
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.683	1.37	7.683	2.74	13.683	11.22	19.68	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.717	1.37	7.717	2.74	13.717	11.22	19.72	2.46
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.767	2.46	7.767	2.74	13.767	11.22	19.77	2.46
1.783	2.46	7.783	2.74	13.783	11.22	19.78	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.817	2.46	7.817	2.74	13.817	11.22	19.82	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46
1.883	2.46	7.883	2.74	13.883	11.22	19.88	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46
1.983	2.46	7.983	2.74	13.983	11.22	19.98	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.017	1.78	8.017	3.69	14.017	4.10	20.02	1.64
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64
2.050	1.78	8.050	3.69	14.050	4.10	20.05	1.64
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.117	1.78	8.117	3.69	14.117	4.10	20.12	1.64
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.183	1.78	8.183	3.69	14.183	4.10	20.18	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.217	1.78	8.217	3.69	14.217	4.10	20.22	1.64
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64
2.283	1.78	8.283	3.69	14.283	4.10	20.28	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.317	1.78	8.317	3.69	14.317	4.10	20.32	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64
2.383	1.78	8.383	3.69	14.383	4.10	20.38	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64
2.483	1.78	8.483	3.69	14.483	4.10	20.48	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.517	1.78	8.517	3.69	14.517	4.10	20.52	1.64
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.617	1.78	8.617	3.69	14.617	4.10	20.62	1.64
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.683	1.78	8.683	3.69	14.683	4.10	20.68	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.717	1.78	8.717	3.69	14.717	4.10	20.72	1.64
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64
2.783	1.78	8.783	3.69	14.783	4.10	20.78	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.817	1.78	8.817	3.69	14.817	4.10	20.82	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64
2.883	1.78	8.883	3.69	14.883	4.10	20.88	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64

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2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64
2.983	1.78	8.983	3.69	14.983	4.10	20.98	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.017	1.78	9.017	4.38	15.017	4.10	21.02	1.64
3.033	1.78	9.033	4.38	15.033	4.10	21.03	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.067	1.78	9.067	4.38	15.067	4.10	21.07	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.117	1.78	9.117	4.38	15.117	4.10	21.12	1.64
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.183	1.78	9.183	4.38	15.183	4.10	21.18	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.217	1.78	9.217	4.38	15.217	4.10	21.22	1.64
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64
3.283	1.78	9.283	4.38	15.283	4.10	21.28	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.317	1.78	9.317	4.38	15.317	4.10	21.32	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.383	1.78	9.383	4.38	15.383	4.10	21.38	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.483	1.78	9.483	4.38	15.483	4.10	21.48	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.517	1.78	9.517	4.92	15.517	4.10	21.52	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.617	1.78	9.617	4.92	15.617	4.10	21.62	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.683	1.78	9.683	4.92	15.683	4.10	21.68	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.717	1.78	9.717	4.92	15.717	4.10	21.72	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.783	1.78	9.783	4.92	15.783	4.10	21.78	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.817	1.78	9.817	4.92	15.817	4.10	21.82	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.883	1.78	9.883	4.92	15.883	4.10	21.88	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
3.983	1.78	9.983	4.92	15.983	4.10	21.98	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.017	2.19	10.017	6.29	16.017	2.46	22.02	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.117	2.19	10.117	6.29	16.117	2.46	22.12	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.183	2.19	10.183	6.29	16.183	2.46	22.18	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.217	2.19	10.217	6.29	16.217	2.46	22.22	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.283	2.19	10.283	6.29	16.283	2.46	22.28	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.317	2.19	10.317	6.29	16.317	2.46	22.32	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.383	2.19	10.383	6.29	16.383	2.46	22.38	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64

HRP8-PR_50-100 YEAR-2096 IDF.OUT

4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.483	2.19	10.483	6.29	16.483	2.46	22.48	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.517	2.19	10.517	8.48	16.517	2.46	22.52	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.617	2.19	10.617	8.48	16.617	2.46	22.62	1.64
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.683	2.19	10.683	8.48	16.683	2.46	22.68	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.717	2.19	10.717	8.48	16.717	2.46	22.72	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64
4.783	2.19	10.783	8.48	16.783	2.46	22.78	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.817	2.19	10.817	8.48	16.817	2.46	22.82	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.883	2.19	10.883	8.48	16.883	2.46	22.88	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64
4.983	2.19	10.983	8.48	16.983	2.46	22.98	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.017	2.19	11.017	13.13	17.017	2.46	23.02	1.64
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.117	2.19	11.117	13.13	17.117	2.46	23.12	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.183	2.19	11.183	13.13	17.183	2.46	23.18	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.217	2.19	11.217	13.13	17.217	2.46	23.22	1.64
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.283	2.19	11.283	13.13	17.283	2.46	23.28	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.317	2.19	11.317	13.13	17.317	2.46	23.32	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64
5.383	2.19	11.383	13.13	17.383	2.46	23.38	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.483	2.19	11.483	13.13	17.483	2.46	23.48	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.517	2.19	11.517	56.90	17.517	2.46	23.52	1.64
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64
5.583	2.19	11.583	56.91	17.583	2.46	23.58	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.617	2.19	11.617	56.91	17.617	2.46	23.62	1.64
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.683	2.19	11.683	56.91	17.683	2.46	23.68	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.717	2.19	11.717	56.91	17.717	2.46	23.72	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.767	2.19	11.767	150.98	17.767	2.46	23.77	1.64
5.783	2.19	11.783	151.03	17.783	2.46	23.78	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.817	2.19	11.817	151.03	17.817	2.46	23.82	1.64
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64

HRP8-PR_50-100 YEAR-2096 IDF.OUT

5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64
5.883	2.19	11.883	151.03	17.883	2.46	23.88	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64
5.983	2.19	11.983	151.03	17.983	2.46	23.98	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 0.515

PEAK FLOW (cms)= 0.393 (l)
TIME TO PEAK (hrs)= 12.017
RUNOFF VOLUME (mm)= 67.524
TOTAL RAINFALL (mm)= 136.801
RUNOFF COEFFICIENT = 0.494

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0253):	1.51	0.393	12.02	67.52
+ ID2= 2 (0036):	85.33	8.168	12.57	95.14
ID = 3 (0035):	86.84	8.232	12.53	90.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

HRP9-PR_50-100 YEAR-2096 IDF.OUT

V V I SSSS U U A L (v 6.1.2002)

V V I SS U U A A L

V V I SS U U A A A A L

V V I SS U U A A L

V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM

O O T T T H H Y Y M M O O

O O T T H H Y M M O O

000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat

Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\69a0bb1a-75dd-40df-9c76-3831b05749c5\scenar

Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\69a0bb1a-75dd-40df-9c76-3831b05749c5\scenar

DATE: 03/24/2023 TIME: 11:24:09

USER:

COMMENTS:

** SIMULATION : Run 11

MASS STORM

Filename: C:\Users\AbirA\AppData\Local\Temp\

f673c41a-2fd8-494e-bcbe-152552a0bc89\5fdf4178

Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs											
Mass curve time step = 15.00 min											
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN			
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr			
0.25	1.25	6.25	2.50	12.25	17.97	18.25	2.25				
0.50	1.25	6.50	2.50	12.50	17.97	18.50	2.25				
0.75	1.25	6.75	2.50	12.75	9.24	18.75	2.25				
1.00	1.25	7.00	2.50	13.00	9.24	19.00	2.25				
1.25	1.25	7.25	2.50	13.25	1.75	19.25	2.25				
1.50	1.25	7.50	2.50	13.50	1.75	19.50	2.25				
1.75	1.25	7.75	2.50	13.75	10.23	19.75	2.25				
2.00	2.25	8.00	2.50	14.00	10.23	20.00	2.25				
2.25	1.62	8.25	3.37	14.25	3.74	20.25	1.50				
2.50	1.62	8.50	3.37	14.50	3.74	20.50	1.50				
2.75	1.62	8.75	3.37	14.75	3.74	20.75	1.50				
3.00	1.62	9.00	3.37	15.00	3.74	21.00	1.50				
3.25	1.62	9.25	3.00	15.25	3.74	21.25	1.50				
3.50	1.62	9.50	3.00	15.50	3.74	21.50	1.50				
3.75	1.62	9.75	4.49	15.75	3.74	21.75	1.50				
4.00	1.62	10.00	4.49	16.00	3.74	22.00	1.50				
4.25	2.00	10.25	5.74	16.25	2.25	22.25	1.50				
4.50	2.00	10.50	5.74	16.50	2.25	22.50	1.50				
4.75	2.00	10.75	7.74	16.75	2.25	22.75	1.50				
5.00	2.00	11.00	7.74	17.00	2.25	23.00	1.50				
5.25	2.00	11.25	11.98	17.25	2.25	23.25	1.50				
5.50	2.00	11.50	11.98	17.50	2.25	23.50	1.50				
5.75	2.00	11.75	51.92	17.75	2.25	23.75	1.50				
6.00	2.00	12.00	137.78	18.00	2.25	24.00	1.50				

CALIB

NASHYD (1060)

Area (ha)= 51.71

Curve Number (CN)= 82.0

Ia (mm)= 5.00

of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.48

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25	
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25	
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25	
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25	
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25	
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25	
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25	
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25	
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25	
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25	
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25	
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25	
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25	
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25	
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25	
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25	
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25	
1.800	1.75	7.800	2.50	13.800	10.23	19.80	2.25	
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25	
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25	
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50	
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50	
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50	
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50	
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50	
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50	
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50	
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50	
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50	
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50	
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50	
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50	
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50	
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50	
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50	
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50	
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50	
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50	
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50	
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50	
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50	
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50	
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50	
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50	
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50	
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50	
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50	
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50	
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50	
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50	
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50	
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50	
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50	
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50	
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50	
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50	
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50	
5.800	2.00	11.800	94.86	17.800	2.25	23.80	1.50	
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50	
6.000	2.00	12.000	137.77	18.000	2.25	24.00	1.50	

Unit Hyd Ppeak (cms)= 4.149

PEAK FLOW (cms)= 5.959 (1)

TIME TO PEAK (hrs)= 12.300

RUNOFF VOLUME (mm)= 81.741

TOTAL RAINFALL (mm)= 124.800

RUNOFF COEFFICIENT = 0.655

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

STANDHYD (0260)

Area (ha)= 9.02

Total Imp(%)= 55.00

Dir. Conn.(%)= 55.00

IMPERVIOUS

PERVIOUS (1)

Surface Area (ha)= 4.96

Dep. Storage (mm)= 1.50

Average Slope (%)= 2.00

Length (m)= 245.22

Mannings n = 0.013

0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP9-PR_50-100 YEAR-2096 IDF.OUT

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.25	6.050	2.50	12.050	17.97	18.05	2.25
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25
0.150	1.25	6.150	2.50	12.150	17.97	18.15	2.25
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25
0.350	1.25	6.350	2.50	12.350	17.97	18.35	2.25
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25
0.450	1.25	6.450	2.50	12.450	17.97	18.45	2.25
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25
0.550	1.25	6.550	2.50	12.550	9.24	18.55	2.25
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25
0.650	1.25	6.650	2.50	12.650	9.24	18.65	2.25
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25
0.850	1.25	6.850	2.50	12.850	9.24	18.85	2.25
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25
0.950	1.25	6.950	2.50	12.950	9.24	18.95	2.25
1.000	1.25	7.000	2.50	13.000	9.23	19.00	2.25
1.050	1.25	7.050	2.50	13.050	1.75	19.05	2.25
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25
1.150	1.25	7.150	2.50	13.150	1.75	19.15	2.25
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25
1.350	1.25	7.350	2.50	13.350	1.75	19.35	2.25
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25
1.450	1.25	7.450	2.50	13.450	1.75	19.45	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.550	1.25	7.550	2.50	13.550	10.23	19.55	2.25
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25
1.650	1.25	7.650	2.50	13.650	10.23	19.65	2.25
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25
1.850	2.25	7.850	2.50	13.850	10.23	19.85	2.25
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25
1.950	2.25	7.950	2.50	13.950	10.23	19.95	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.050	1.62	8.050	3.37	14.050	3.74	20.05	1.50
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50
2.150	1.62	8.150	3.37	14.150	3.74	20.15	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.350	1.62	8.350	3.37	14.350	3.74	20.35	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.450	1.62	8.450	3.37	14.450	3.74	20.45	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.550	1.62	8.550	3.37	14.550	3.74	20.55	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.650	1.62	8.650	3.37	14.650	3.74	20.65	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.850	1.62	8.850	3.37	14.850	3.74	20.85	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.950	1.62	8.950	3.37	14.950	3.74	20.95	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.050	1.62	9.050	3.99	15.050	3.74	21.05	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.150	1.62	9.150	3.99	15.150	3.74	21.15	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.350	1.62	9.350	3.99	15.350	3.74	21.35	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.450	1.62	9.450	3.99	15.450	3.74	21.45	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.550	1.62	9.550	4.49	15.550	3.74	21.55	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.650	1.62	9.650	4.49	15.650	3.74	21.65	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.850	1.62	9.850	4.49	15.850	3.74	21.85	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.950	1.62	9.950	4.49	15.950	3.74	21.95	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.050	2.00	10.050	5.74	16.050	2.25	22.05	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.150	2.00	10.150	5.74	16.150	2.25	22.15	1.50

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4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.350	2.00	10.350	5.74	16.350	2.25	22.35	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.450	2.00	10.450	5.74	16.450	2.25	22.45	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.550	2.00	10.550	7.74	16.550	2.25	22.55	1.50
4.600	2.00	10.600	7.74	16.600	2.25	22.60	1.50
4.650	2.00	10.650	7.74	16.650	2.25	22.65	1.50
4.700	2.00	10.700	7.74	16.700	2.25	22.70	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.800	2.00	10.800	7.74	16.800	2.25	22.80	1.50
4.850	2.00	10.850	7.74	16.850	2.25	22.85	1.50
4.900	2.00	10.900	7.74	16.900	2.25	22.90	1.50
4.950	2.00	10.950	7.74	16.950	2.25	22.95	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.050	2.00	11.050	11.98	17.050	2.25	23.05	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.150	2.00	11.150	11.98	17.150	2.25	23.15	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.350	2.00	11.350	11.98	17.350	2.25	23.35	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.450	2.00	11.450	11.98	17.450	2.25	23.45	1.50
5.500	2.00	11.500	12.00	17.500	2.25	23.50	1.50
5.550	2.00	11.550	51.92	17.550	2.25	23.55	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.650	2.00	11.650	51.92	17.650	2.25	23.65	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.750	2.00	11.750	51.96	17.750	2.25	23.75	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.850	2.00	11.850	137.78	17.850	2.25	23.85	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.950	2.00	11.950	137.78	17.950	2.25	23.95	1.50
6.000	2.00	12.000	137.71	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 75.30
over (min) 6.00 9.00
Storage Coeff. (min)= 3.13 (ii) 8.86 (ii)
Unit Hyd. Tpeak (min)= 6.00 9.00
Unit Hyd. peak (cms)= 0.27 0.13

TOTALS

PEAK FLOW (cms)= 1.88 0.66 2.522 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 123.30 57.26 93.58
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.46 0.75

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1	2	3	4	5
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (1060):	51.71	5.959	12.30	81.74
+ ID2= 2 (0260):	9.02	2.522	12.00	93.58
ID = 3 (0003):	60.73	6.527	12.05	83.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0009)			
OVERFLOW IS OFF			
IN= 2--> OUT= 1	OUTFLOW	STORAGE	OUTFLOW
DT= 5.0 min	(cms)	(ha.m.)	(cms)
			STORAGE
			(ha.m.)
0.0000	0.0000	0.4500	0.5700
0.0200	0.0400	0.9300	0.5750
0.0350	0.1540	1.5000	0.6500
0.0450	0.2340	2.0000	0.7300
0.0540	0.3160	2.5000	1.0200
0.0610	0.4000	7.7000	1.2000
0.0680	0.5000	0.0000	0.0000

INFLOW : ID= 2 (0003)	AREA	QPEAK	TPEAK	R.V.
OUTFLOW: ID= 1 (0009)	(ha)	(cms)	(hrs)	(mm)
	60.730	6.527	12.05	83.50
	60.730	5.813	12.50	83.49

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PEAK FLOW REDUCTION [Qout/Qin](%)= 89.05
TIME SHIFT OF PEAK FLOW (min)= 27.00
MAXIMUM STORAGE USED (ha.m.)= 1.0653

CALIB
STANDHYD (0261)
ID= 1 DT= 2.0 min

Area (ha)= 2.94
Total Imp(%)= 41.00
Dir. Conn.(%)= 41.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.73
Dep. Storage (mm)= 5.00
Average Slope (%)= 2.00
Length (m)= 140.00
Mannings n = 0.013

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	1.25	6.033	2.50	12.033	17.97	18.03	2.25		
0.067	1.25	6.067	2.50	12.067	17.97	18.07	2.25		
0.100	1.25	6.100	2.50	12.100	17.97	18.10	2.25		
0.133	1.25	6.133	2.50	12.133	17.97	18.13	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.200	1.25	6.200	2.50	12.200	17.97	18.20	2.25		
0.233	1.25	6.233	2.50	12.233	17.97	18.23	2.25		
0.267	1.25	6.267	2.50	12.267	17.97	18.27	2.25		
0.300	1.25	6.300	2.50	12.300	17.97	18.30	2.25		
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25		
0.367	1.25	6.367	2.50	12.367	17.97	18.37	2.25		
0.400	1.25	6.400	2.50	12.400	17.97	18.40	2.25		
0.433	1.25	6.433	2.50	12.433	17.97	18.43	2.25		
0.467	1.25	6.467	2.50	12.467	17.97	18.47	2.25		
0.500	1.25	6.500	2.50	12.500	17.96	18.50	2.25		
0.533	1.25	6.533	2.50	12.533	9.24	18.53	2.25		
0.567	1.25	6.567	2.50	12.567	9.24	18.57	2.25		
0.600	1.25	6.600	2.50	12.600	9.24	18.60	2.25		
0.633	1.25	6.633	2.50	12.633	9.24	18.63	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.700	1.25	6.700	2.50	12.700	9.24	18.70	2.25		
0.733	1.25	6.733	2.50	12.733	9.24	18.73	2.25		
0.767	1.25	6.767	2.50	12.767	9.24	18.77	2.25		
0.800	1.25	6.800	2.50	12.800	9.24	18.80	2.25		
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25		
0.867	1.25	6.867	2.50	12.867	9.24	18.87	2.25		
0.900	1.25	6.900	2.50	12.900	9.24	18.90	2.25		
0.933	1.25	6.933	2.50	12.933	9.24	18.93	2.25		
0.967	1.25	6.967	2.50	12.967	9.24	18.97	2.25		
1.000	1.25	7.000	2.50	13.000	9.22	19.00	2.25		
1.033	1.25	7.033	2.50	13.033	1.75	19.03	2.25		
1.067	1.25	7.067	2.50	13.067	1.75	19.07	2.25		
1.100	1.25	7.100	2.50	13.100	1.75	19.10	2.25		
1.133	1.25	7.133	2.50	13.133	1.75	19.13	2.25		
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25		
1.200	1.25	7.200	2.50	13.200	1.75	19.20	2.25		
1.233	1.25	7.233	2.50	13.233	1.75	19.23	2.25		
1.267	1.25	7.267	2.50	13.267	1.75	19.27	2.25		
1.300	1.25	7.300	2.50	13.300	1.75	19.30	2.25		
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25		
1.367	1.25	7.367	2.50	13.367	1.75	19.37	2.25		
1.400	1.25	7.400	2.50	13.400	1.75	19.40	2.25		
1.433	1.25	7.433	2.50	13.433	1.75	19.43	2.25		
1.467	1.25	7.467	2.50	13.467	1.75	19.47	2.25		
1.500	1.25	7.500	2.50	13.500	1.76	19.50	2.25		
1.533	1.25	7.533	2.50	13.533	10.23	19.53	2.25		
1.567	1.25	7.567	2.50	13.567	10.23	19.57	2.25		
1.600	1.25	7.600	2.50	13.600	10.23	19.60	2.25		
1.633	1.25	7.633	2.50	13.633	10.23	19.63	2.25		
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25		
1.700	1.25	7.700	2.50	13.700	10.23	19.70	2.25		
1.733	1.25	7.733	2.50	13.733	10.23	19.73	2.25		
1.767	1.75	7.767	2.50	13.767	10.23	19.77	2.25		
1.800	2.25	7.800	2.50	13.800	10.23	19.80	2.25		
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25		
1.867	2.25	7.867	2.50	13.867	10.23	19.87	2.25		
1.900	2.25	7.900	2.50	13.900	10.23	19.90	2.25		
1.933	2.25	7.933	2.50	13.933	10.23	19.93	2.25		
1.967	2.25	7.967	2.50	13.967	10.23	19.97	2.25		
2.000	2.25	8.000	2.50	14.000	10.22	20.00	2.25		
2.033	1.62	8.033	3.37	14.033	3.74	20.03	1.50		
2.067	1.62	8.067	3.37	14.067	3.74	20.07	1.50		
2.100	1.62	8.100	3.37	14.100	3.74	20.10	1.50		

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2.133	1.62	8.133	3.37	14.133	3.74	20.13	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.200	1.62	8.200	3.37	14.200	3.74	20.20	1.50
2.233	1.62	8.233	3.37	14.233	3.74	20.23	1.50
2.267	1.62	8.267	3.37	14.267	3.74	20.27	1.50
2.300	1.62	8.300	3.37	14.300	3.74	20.30	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.367	1.62	8.367	3.37	14.367	3.74	20.37	1.50
2.400	1.62	8.400	3.37	14.400	3.74	20.40	1.50
2.433	1.62	8.433	3.37	14.433	3.74	20.43	1.50
2.467	1.62	8.467	3.37	14.467	3.74	20.47	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.533	1.62	8.533	3.37	14.533	3.74	20.53	1.50
2.567	1.62	8.567	3.37	14.567	3.74	20.57	1.50
2.600	1.62	8.600	3.37	14.600	3.74	20.60	1.50
2.633	1.62	8.633	3.37	14.633	3.74	20.63	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.700	1.62	8.700	3.37	14.700	3.74	20.70	1.50
2.733	1.62	8.733	3.37	14.733	3.74	20.73	1.50
2.767	1.62	8.767	3.37	14.767	3.74	20.77	1.50
2.800	1.62	8.800	3.37	14.800	3.74	20.80	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.867	1.62	8.867	3.37	14.867	3.74	20.87	1.50
2.900	1.62	8.900	3.37	14.900	3.74	20.90	1.50
2.933	1.62	8.933	3.37	14.933	3.74	20.93	1.50
2.967	1.62	8.967	3.37	14.967	3.74	20.97	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.033	1.62	9.033	3.99	15.033	3.74	21.03	1.50
3.067	1.62	9.067	3.99	15.067	3.74	21.07	1.50
3.100	1.62	9.100	3.99	15.100	3.74	21.10	1.50
3.133	1.62	9.133	3.99	15.133	3.74	21.13	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.200	1.62	9.200	3.99	15.200	3.74	21.20	1.50
3.233	1.62	9.233	3.99	15.233	3.74	21.23	1.50
3.267	1.62	9.267	3.99	15.267	3.74	21.27	1.50
3.300	1.62	9.300	3.99	15.300	3.74	21.30	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.367	1.62	9.367	3.99	15.367	3.74	21.37	1.50
3.400	1.62	9.400	3.99	15.400	3.74	21.40	1.50
3.433	1.62	9.433	3.99	15.433	3.74	21.43	1.50
3.467	1.62	9.467	3.99	15.467	3.74	21.47	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.533	1.62	9.533	4.49	15.533	3.74	21.53	1.50
3.567	1.62	9.567	4.49	15.567	3.74	21.57	1.50
3.600	1.62	9.600	4.49	15.600	3.74	21.60	1.50
3.633	1.62	9.633	4.49	15.633	3.74	21.63	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.700	1.62	9.700	4.49	15.700	3.74	21.70	1.50
3.733	1.62	9.733	4.49	15.733	3.74	21.73	1.50
3.767	1.62	9.767	4.49	15.767	3.74	21.77	1.50
3.800	1.62	9.800	4.49	15.800	3.74	21.80	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.867	1.62	9.867	4.49	15.867	3.74	21.87	1.50
3.900	1.62	9.900	4.49	15.900	3.74	21.90	1.50
3.933	1.62	9.933	4.49	15.933	3.74	21.93	1.50
3.967	1.62	9.967	4.49	15.967	3.74	21.97	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.033	2.00	10.033	5.74	16.033	2.25	22.03	1.50
4.067	2.00	10.067	5.74	16.067	2.25	22.07	1.50
4.100	2.00	10.100	5.74	16.100	2.25	22.10	1.50
4.133	2.00	10.133	5.74	16.133	2.25	22.13	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.200	2.00	10.200	5.74	16.200	2.25	22.20	1.50
4.233	2.00	10.233	5.74	16.233	2.25	22.23	1.50
4.267	2.00	10.267	5.74	16.267	2.25	22.27	1.50
4.300	2.00	10.300	5.74	16.300	2.25	22.30	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.367	2.00	10.367	5.74	16.367	2.25	22.37	1.50
4.400	2.00	10.400	5.74	16.400	2.25	22.40	1.50
4.433	2.00	10.433	5.74	16.433	2.25	22.43	1.50
4.467	2.00	10.467	5.74	16.467	2.25	22.47	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.533	2.00	10.533	7.74	16.533	2.25	22.53	1.50
4.567	2.00	10.567	7.74	16.567	2.25	22.57	1.50</

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5.033	2.00	11.033	11.98	17.033	2.25	23.03	1.50
5.067	2.00	11.067	11.98	17.067	2.25	23.07	1.50
5.100	2.00	11.100	11.98	17.100	2.25	23.10	1.50
5.133	2.00	11.133	11.98	17.133	2.25	23.13	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.200	2.00	11.200	11.98	17.200	2.25	23.20	1.50
5.233	2.00	11.233	11.98	17.233	2.25	23.23	1.50
5.267	2.00	11.267	11.98	17.267	2.25	23.27	1.50
5.300	2.00	11.300	11.98	17.300	2.25	23.30	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.367	2.00	11.367	11.98	17.367	2.25	23.37	1.50
5.400	2.00	11.400	11.98	17.400	2.25	23.40	1.50
5.433	2.00	11.433	11.98	17.433	2.25	23.43	1.50
5.467	2.00	11.467	11.98	17.467	2.25	23.47	1.50
5.500	2.00	11.500	12.03	17.500	2.25	23.50	1.50
5.533	2.00	11.533	51.92	17.533	2.25	23.53	1.50
5.567	2.00	11.567	51.92	17.567	2.25	23.57	1.50
5.600	2.00	11.600	51.92	17.600	2.25	23.60	1.50
5.633	2.00	11.633	51.92	17.633	2.25	23.63	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.700	2.00	11.700	51.92	17.700	2.25	23.70	1.50
5.733	2.00	11.733	51.92	17.733	2.25	23.73	1.50
5.767	2.00	11.767	94.96	17.767	2.25	23.77	1.50
5.800	2.00	11.800	137.78	17.800	2.25	23.80	1.50
5.833	2.00	11.833	137.78	17.833	2.25	23.83	1.50
5.867	2.00	11.867	137.78	17.867	2.25	23.87	1.50
5.900	2.00	11.900	137.78	17.900	2.25	23.90	1.50
5.933	2.00	11.933	137.78	17.933	2.25	23.93	1.50
5.967	2.00	11.967	137.78	17.967	2.25	23.97	1.50
6.000	2.00	12.000	137.61	18.000	2.25	24.00	1.50

Max.Eff.Inten.(mm/hr)= 137.78 88.16
over (min) 5.00 10.00
Storage Coeff. (min)= 2.23 (ii) 9.42 (ii)
Unit Hyd. Tpeak (min)= 4.00 10.00
Unit Hyd. peak (cms)= 0.39 0.12

TOTALS
PEAK FLOW (cms)= 0.46 0.31 0.750 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 123.30 65.66 89.29
TOTAL RAINFALL (mm)= 124.80 124.80 124.80
RUNOFF COEFFICIENT = 0.99 0.53 0.72

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN= 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0261):	2.94	0.756	12.00	89.29	
+ ID2= 2 (0009):	60.73	5.813	12.50	83.49	
=====					
ID = 3 (0005):	63.67	5.954	12.50	83.67	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0262)	Area	(ha)=	1.61	Curve Number	(CN)= 75.0
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
-----	U.H. Tp(hrs)=		0.40		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.083	1.25	6.083	2.50	12.083	17.98	18.08	2.25		
0.167	1.25	6.167	2.50	12.167	17.97	18.17	2.25		
0.250	1.25	6.250	2.50	12.250	17.97	18.25	2.25		
0.333	1.25	6.333	2.50	12.333	17.97	18.33	2.25		
0.417	1.25	6.417	2.50	12.417	17.97	18.42	2.25		
0.500	1.25	6.500	2.50	12.500	17.97	18.50	2.25		
0.583	1.25	6.583	2.50	12.583	9.24	18.58	2.25		
0.667	1.25	6.667	2.50	12.667	9.24	18.67	2.25		
0.750	1.25	6.750	2.50	12.750	9.24	18.75	2.25		
0.833	1.25	6.833	2.50	12.833	9.24	18.83	2.25		
0.917	1.25	6.917	2.50	12.917	9.24	18.92	2.25		
1.000	1.25	7.000	2.50	13.000	9.24	19.00	2.25		

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1.083	1.25	7.083	2.50	13.083	1.75	19.08	2.25
1.167	1.25	7.167	2.50	13.167	1.75	19.17	2.25
1.250	1.25	7.250	2.50	13.250	1.75	19.25	2.25
1.333	1.25	7.333	2.50	13.333	1.75	19.33	2.25
1.417	1.25	7.417	2.50	13.417	1.75	19.42	2.25
1.500	1.25	7.500	2.50	13.500	1.75	19.50	2.25
1.583	1.25	7.583	2.50	13.583	10.23	19.58	2.25
1.667	1.25	7.667	2.50	13.667	10.23	19.67	2.25
1.750	1.25	7.750	2.50	13.750	10.23	19.75	2.25
1.833	2.25	7.833	2.50	13.833	10.23	19.83	2.25
1.917	2.25	7.917	2.50	13.917	10.23	19.92	2.25
2.000	2.25	8.000	2.50	14.000	10.23	20.00	2.25
2.083	1.62	8.083	3.37	14.083	3.75	20.00	1.50
2.167	1.62	8.167	3.37	14.167	3.74	20.17	1.50
2.250	1.62	8.250	3.37	14.250	3.74	20.25	1.50
2.333	1.62	8.333	3.37	14.333	3.74	20.33	1.50
2.417	1.62	8.417	3.37	14.417	3.74	20.42	1.50
2.500	1.62	8.500	3.37	14.500	3.74	20.50	1.50
2.583	1.62	8.583	3.37	14.583	3.74	20.58	1.50
2.667	1.62	8.667	3.37	14.667	3.74	20.67	1.50
2.750	1.62	8.750	3.37	14.750	3.74	20.75	1.50
2.833	1.62	8.833	3.37	14.833	3.74	20.83	1.50
2.917	1.62	8.917	3.37	14.917	3.74	20.92	1.50
3.000	1.62	9.000	3.37	15.000	3.74	21.00	1.50
3.083	1.62	9.083	3.99	15.083	3.74	21.08	1.50
3.167	1.62	9.167	3.99	15.167	3.74	21.17	1.50
3.250	1.62	9.250	3.99	15.250	3.74	21.25	1.50
3.333	1.62	9.333	3.99	15.333	3.74	21.33	1.50
3.417	1.62	9.417	3.99	15.417	3.74	21.42	1.50
3.500	1.62	9.500	3.99	15.500	3.74	21.50	1.50
3.583	1.62	9.583	4.49	15.583	3.74	21.58	1.50
3.667	1.62	9.667	4.49	15.667	3.74	21.67	1.50
3.750	1.62	9.750	4.49	15.750	3.74	21.75	1.50
3.833	1.62	9.833	4.49	15.833	3.74	21.83	1.50
3.917	1.62	9.917	4.49	15.917	3.74	21.92	1.50
4.000	1.62	10.000	4.49	16.000	3.74	22.00	1.50
4.083	2.00	10.083	5.74	16.083	2.25	22.08	1.50
4.167	2.00	10.167	5.74	16.167	2.25	22.17	1.50
4.250	2.00	10.250	5.74	16.250	2.25	22.25	1.50
4.333	2.00	10.333	5.74	16.333	2.25	22.33	1.50
4.417	2.00	10.417	5.74	16.417	2.25	22.42	1.50
4.500	2.00	10.500	5.74	16.500	2.25	22.50	1.50
4.583	2.00	10.583	7.74	16.583	2.25	22.58	1.50
4.667	2.00	10.667	7.74	16.667	2.25	22.67	1.50
4.750	2.00	10.750	7.74	16.750	2.25	22.75	1.50
4.833	2.00	10.833	7.74	16.833	2.25	22.83	1.50
4.917	2.00	10.917	7.74	16.917	2.25	22.92	1.50
5.000	2.00	11.000	7.74	17.000	2.25	23.00	1.50
5.083	2.00	11.083	11.98	17.083	2.25	23.08	1.50
5.167	2.00	11.167	11.98	17.167	2.25	23.17	1.50
5.250	2.00	11.250	11.98	17.250	2.25	23.25	1.50
5.333	2.00	11.333	11.98	17.333	2.25	23.33	1.50
5.417	2.00	11.417	11.98	17.417	2.25	23.42	1.50
5.500	2.00	11.500	11.98	17.500	2.25	23.50	1.50
5.583	2.00	11.583	51.91	17.583	2.25	23.58	1.50
5.667	2.00	11.667	51.92	17.667	2.25	23.67	1.50
5.750	2.00	11.750	51.92	17.750	2.25	23.75	1.50
5.833	2.00	11.833	137.77	17.833	2.25	23.83	1.50
5.917	2.00	11.917	137.78	17.917	2.25	23.92	1.50
6.000	2.00	12.000	137.78	18.000	2.25	24.00	1.50

Unit Hyd Qpeak (cms)= 0.155

PEAK FLOW (cms)= 0.179 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 70.183
TOTAL RAINFALL (mm)= 124.800
RUNOFF COEFFICIENT = 0.562

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0262):	1.61	0.179	12.25	70.18	
+ ID2= 2 (0005):	63.67	5.954	12.50	83.67	
=====					
ID = 3 (0007):	65.28	6.104	12.50	83.34	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\0e448a20-50e0-4171-8581-62dd966336f5\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\0e448a20-50e0-4171-8581-62dd966336f5\scenar

DATE: 03/24/2023 TIME: 11:24:09

USER:

COMMENTS: _____

** SIMULATION : Run 12 **

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\
	f673c41a-2fd8-494e-bcbe-152552a8bc89\c7ff0caf
Ptotal=136.80 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.37	6.25	2.74	12.25	19.70	18.25	2.46	
0.50	1.37	6.50	2.74	12.50	19.70	18.50	2.46	
0.75	1.37	6.75	2.74	12.75	18.12	18.75	2.46	
1.00	1.37	7.00	2.74	13.00	19.12	19.00	2.46	
1.25	1.37	7.25	2.74	13.25	1.92	19.25	2.46	
1.50	1.37	7.50	2.74	13.50	1.92	19.50	2.46	
1.75	1.37	7.75	2.74	13.75	11.22	19.75	2.46	
2.00	2.46	8.00	2.74	14.00	11.22	20.00	2.46	
2.25	1.78	8.25	3.69	14.25	4.10	20.25	1.64	
2.50	1.78	8.50	3.69	14.50	4.10	20.50	1.64	
2.75	1.78	8.75	3.69	14.75	4.10	20.75	1.64	
3.00	1.78	9.00	3.69	15.00	4.10	21.00	1.64	
3.25	1.78	9.25	4.38	15.25	4.10	21.25	1.64	
3.50	1.78	9.50	4.38	15.50	4.10	21.50	1.64	
3.75	1.78	9.75	4.92	15.75	4.10	21.75	1.64	
4.00	1.78	10.00	4.92	16.00	4.10	22.00	1.64	
4.25	2.19	10.25	6.29	16.25	2.46	22.25	1.64	
4.50	2.19	10.50	6.29	16.50	2.46	22.50	1.64	
4.75	2.19	10.75	8.48	16.75	2.46	22.75	1.64	
5.00	2.19	11.00	8.48	17.00	2.46	23.00	1.64	
5.25	2.19	11.25	13.13	17.25	2.46	23.25	1.64	
5.50	2.19	11.50	13.13	17.50	2.46	23.50	1.64	
5.75	2.19	11.75	56.91	17.75	2.46	23.75	1.64	
6.00	2.19	12.00	151.03	18.00	2.46	24.00	1.64	

NOTE: RAINFALL WAS TRANSFORMED TO 6.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46	
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46	
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46	
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46	
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46	
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46	
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46	
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46	
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46	
1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46	
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46	
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46	
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46	
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46	
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46	
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46	
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46	
1.800	1.92	7.800	2.74	13.800	11.22	19.80	2.46	
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46	
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46	
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64	
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64	
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64	
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64	
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64	
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64	
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64	
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64	
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64	
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64	
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64	
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64	
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64	
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64	
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64	
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64	
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64	
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64	
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64	
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64	
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64	
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64	
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64	
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64	
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64	
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64	
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64	
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64	
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64	
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64	
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64	
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64	
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64	
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64	
5.500	2.19	11.500	13.14	17.500	2.46	23.50	1.64	
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64	
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64	
5.800	2.19	11.800	103.98	17.800	2.46	23.80	1.64	
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64	
6.000	2.19	12.000	151.02	18.000	2.46	24.00	1.64	

Unit Hyd Qpeak (cms)= 4.149

PEAK FLOW (cms)= 6.754 (i)
TIME TO PEAK (hrs)= 12.300
RUNOFF VOLUME (mm)= 92.607
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.677

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	9.02
STANDHYD (0260)	Total Imp(%)=	55.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	55.00

Surface Area (ha)=	4.96	PERVIOUS (i)	4.06
Dep. Storage (mm)=	1.50		5.00
Average Slope (%)=	2.00		2.00
Length (m)=	245.22		40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP9-PR_50-100 YEAR-2096 IDF.OUT

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.37	6.050	2.74	12.050	19.70	18.05	2.46
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46
0.150	1.37	6.150	2.74	12.150	19.70	18.15	2.46
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46
0.350	1.37	6.350	2.74	12.350	19.70	18.35	2.46
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46
0.450	1.37	6.450	2.74	12.450	19.70	18.45	2.46
0.500	1.37	6.500	2.74	12.500	19.69	18.50	2.46
0.550	1.37	6.550	2.74	12.550	18.12	18.55	2.46
0.600	1.37	6.600	2.74	12.600	18.12	18.60	2.46
0.650	1.37	6.650	2.74	12.650	18.12	18.65	2.46
0.700	1.37	6.700	2.74	12.700	18.12	18.70	2.46
0.750	1.37	6.750	2.74	12.750	18.12	18.75	2.46
0.800	1.37	6.800	2.74	12.800	18.12	18.80	2.46
0.850	1.37	6.850	2.74	12.850	18.12	18.85	2.46
0.900	1.37	6.900	2.74	12.900	18.12	18.90	2.46
0.950	1.37	6.950	2.74	12.950	18.12	18.95	2.46
1.000	1.37	7.000	2.74	13.000	18.12	19.00	2.46
1.050	1.37	7.050	2.74	13.050	1.92	19.05	2.46
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46
1.150	1.37	7.150	2.74	13.150	1.92	19.15	2.46
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46
1.350	1.37	7.350	2.74	13.350	1.92	19.35	2.46
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46
1.450	1.37	7.450	2.74	13.450	1.92	19.45	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.550	1.37	7.550	2.74	13.550	11.22	19.55	2.46
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46
1.650	1.37	7.650	2.74	13.650	11.22	19.65	2.46
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46
1.850	2.46	7.850	2.74	13.850	11.22	19.85	2.46
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46
1.950	2.46	7.950	2.74	13.950	11.22	19.95	2.46
2.000	2.46	8.000	2.74	14.000	11.21	20.00	2.46
2.050	2.78	8.050	3.69	14.050	4.10	20.05	1.64
2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.150	1.78	8.150	3.69	14.150	4.10	20.15	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.350	1.78	8.350	3.69	14.350	4.10	20.35	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.450	1.78	8.450	3.69	14.450	4.10	20.45	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.550	1.78	8.550	3.69	14.550	4.10	20.55	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.650	1.78	8.650	3.69	14.650	4.10	20.65	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.850	1.78	8.850	3.69	14.850	4.10	20.85	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.950	1.78	8.950	3.69	14.950	4.10	20.95	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.050	1.78	9.050	4.38	15.050	4.10	21.05	1.64
3.100	1.78	9.100	4.38	15.100	4.10	21.10	1.64
3.150	1.78	9.150	4.38	15.150	4.10	21.15	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.350	1.78	9.350	4.38	15.350	4.10	21.35	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.450	1.78	9.450	4.38	15.450	4.10	21.45	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.550	1.78	9.550	4.92	15.550	4.10	21.55	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.650	1.78	9.650	4.92	15.650	4.10	21.65	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.850	1.78	9.850	4.92	15.850	4.10	21.85	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.950	1.78	9.950	4.92	15.950	4.10	21.95	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.050	2.19	10.050	6.29	16.050	2.46	22.05	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64

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4.150	2.19	10.150	6.29	16.150	2.46	22.15	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.350	2.19	10.350	6.29	16.350	2.46	22.35	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.450	2.19	10.450	6.29	16.450	2.46	22.45	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.550	2.19	10.550	8.48	16.550	2.46	22.55	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.650	2.19	10.650	8.48	16.650	2.46	22.65	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.850	2.19	10.850	8.48	16.850	2.46	22.85	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.950	2.19	10.950	8.48	16.950	2.46	22.95	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.050	2.19	11.050	13.13	17.050	2.46	23.05	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.150	2.19	11.150	13.13	17.150	2.46	23.15	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.350	2.19	11.350	13.13	17.350	2.46	23.35	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.450	2.19	11.450	13.13	17.450	2.46	23.45	1.64
5.500	2.19	11.500	13.16	17.500	2.46	23.50	1.64
5.550	2.19	11.550	56.91	17.550	2.46	23.55	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.650	2.19	11.650	56.91	17.650	2.46	23.65	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.750	2.19	11.750	56.96	17.750	2.46	23.75	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.850	2.19	11.850	151.03	17.850	2.46	23.85	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.950	2.19	11.950	151.03	17.950	2.46	23.95	1.64
6.000	2.19	12.000	150.96	18.000	2.46	24.00	1.64
Max.Eff.Inten.(mm/hr)= 151.03 86.94							
over (min) 6.00 9.00							
Storage Coeff. (min)= 3.01 (ii) 8.54 (ii)							
Unit Hyd. Tpeak (min)= 6.00 9.00							
Unit Hyd. peak (cms)= 0.27 0.13							
TOTALS							
PEAK FLOW (cms)= 2.06 0.77 2.818 (iii)							
TIME TO PEAK (hrs)= 12.00 12.05 12.00							
RUNOFF VOLUME (mm)= 135.30 66.14 104.18							
TOTAL RAINFALL (mm)= 136.80 136.80 136.80							
RUNOFF COEFFICIENT = 0.99 0.48 0.76							
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:							
CN* = 66.0 Ia = Dep. Storage (Above)							
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.							
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

ADD HYD (0003)							
1 + 2 = 3							

ID1= 1 (1060):		51.71	6.754	12.30	92.61		
+ ID2= 2 (0260):		9.02	2.818	12.00	104.18		
=====							
ID = 3 (0003):		60.73	7.383	12.05	94.33		

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.							

RESERVOIR(0009)							
IN= 2--> OUT= 1							
DT= 5.0 min							

OUTFLOW		STORAGE	OUTFLOW		STORAGE		
(cms)		(ha.,mm)	(cms)		(ha.,mm)		
0.0000		0.0000	0.4500		0.5700		
0.0200		0.0400	0.9300		0.5750		
0.0350		0.1540	1.5000		0.6500		
0.0450		0.2340	2.6000		0.7300		
0.0540		0.3160	5.2000		1.0200		
0.0610		0.4000	7.7000		1.2000		
0.0680		0.5000	0.0000		0.0000		

AREA		QPEAK	TPEAK		R.V.		
(ha.)		(cms)	(hrs)		(mm)		
60.730		7.383	12.05		94.33		
INFLOW : ID= 2 (0003)							

OUTFLOW: ID= 1 (0009) 60.730 6.691 12.50 94.32

PEAK FLOW REDUCTION [Qout/Qin](%)= 90.63
TIME SHIFT OF PEAK FLOW (min)= 27.00
MAXIMUM STORAGE USED (ha.m.)= 1.1276

CALIB
STANDHYD (0261)
ID= 1 DT= 2.0 min

Area (ha)= 2.94
Total Imp(%)= 41.00
Dir. Conn.(%)= 41.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.21 1.73
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 140.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	1.37	6.033	2.74	12.033	19.70	18.03	2.46		
0.067	1.37	6.067	2.74	12.067	19.70	18.07	2.46		
0.100	1.37	6.100	2.74	12.100	19.70	18.10	2.46		
0.133	1.37	6.133	2.74	12.133	19.70	18.13	2.46		
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46		
0.200	1.37	6.200	2.74	12.200	19.70	18.20	2.46		
0.233	1.37	6.233	2.74	12.233	19.70	18.23	2.46		
0.267	1.37	6.267	2.74	12.267	19.70	18.27	2.46		
0.300	1.37	6.300	2.74	12.300	19.70	18.30	2.46		
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46		
0.367	1.37	6.367	2.74	12.367	19.70	18.37	2.46		
0.400	1.37	6.400	2.74	12.400	19.70	18.40	2.46		
0.433	1.37	6.433	2.74	12.433	19.70	18.43	2.46		
0.467	1.37	6.467	2.74	12.467	19.70	18.47	2.46		
0.500	1.37	6.500	2.74	12.500	19.60	18.50	2.46		
0.533	1.37	6.533	2.74	12.533	10.12	18.53	2.46		
0.567	1.37	6.567	2.74	12.567	10.12	18.57	2.46		
0.600	1.37	6.600	2.74	12.600	10.12	18.60	2.46		
0.633	1.37	6.633	2.74	12.633	10.12	18.63	2.46		
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46		
0.700	1.37	6.700	2.74	12.700	10.12	18.70	2.46		
0.733	1.37	6.733	2.74	12.733	10.12	18.73	2.46		
0.767	1.37	6.767	2.74	12.767	10.12	18.77	2.46		
0.800	1.37	6.800	2.74	12.800	10.12	18.80	2.46		
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46		
0.867	1.37	6.867	2.74	12.867	10.12	18.87	2.46		
0.900	1.37	6.900	2.74	12.900	10.12	18.90	2.46		
0.933	1.37	6.933	2.74	12.933	10.12	18.93	2.46		
0.967	1.37	6.967	2.74	12.967	10.12	18.97	2.46		
1.000	1.37	7.000	2.74	13.000	10.11	19.00	2.46		
1.033	1.37	7.033	2.74	13.033	1.92	19.03	2.46		
1.067	1.37	7.067	2.74	13.067	1.92	19.07	2.46		
1.100	1.37	7.100	2.74	13.100	1.92	19.10	2.46		
1.133	1.37	7.133	2.74	13.133	1.92	19.13	2.46		
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46		
1.200	1.37	7.200	2.74	13.200	1.92	19.20	2.46		
1.233	1.37	7.233	2.74	13.233	1.92	19.23	2.46		
1.267	1.37	7.267	2.74	13.267	1.92	19.27	2.46		
1.300	1.37	7.300	2.74	13.300	1.92	19.30	2.46		
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46		
1.367	1.37	7.367	2.74	13.367	1.92	19.37	2.46		
1.400	1.37	7.400	2.74	13.400	1.92	19.40	2.46		
1.433	1.37	7.433	2.74	13.433	1.92	19.43	2.46		
1.467	1.37	7.467	2.74	13.467	1.92	19.47	2.46		
1.500	1.37	7.500	2.74	13.500	1.93	19.50	2.46		
1.533	1.37	7.533	2.74	13.533	11.22	19.53	2.46		
1.567	1.37	7.567	2.74	13.567	11.22	19.57	2.46		
1.600	1.37	7.600	2.74	13.600	11.22	19.60	2.46		
1.633	1.37	7.633	2.74	13.633	11.22	19.63	2.46		
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46		
1.700	1.37	7.700	2.74	13.700	11.22	19.70	2.46		
1.733	1.37	7.733	2.74	13.733	11.22	19.73	2.46		
1.767	1.92	7.767	2.74	13.767	11.22	19.77	2.46		
1.800	2.46	7.800	2.74	13.800	11.22	19.80	2.46		
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46		
1.867	2.46	7.867	2.74	13.867	11.22	19.87	2.46		
1.900	2.46	7.900	2.74	13.900	11.22	19.90	2.46		
1.933	2.46	7.933	2.74	13.933	11.22	19.93	2.46		
1.967	2.46	7.967	2.74	13.967	11.22	19.97	2.46		
2.000	2.46	8.000	2.74	14.000	11.20	20.00	2.46		
2.033	1.78	8.033	3.69	14.033	4.10	20.03	1.64		
2.067	1.78	8.067	3.69	14.067	4.10	20.07	1.64		

HRP9-PR_50-100 YEAR-2096 IDF.OUT

2.100	1.78	8.100	3.69	14.100	4.10	20.10	1.64
2.133	1.78	8.133	3.69	14.133	4.10	20.13	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.200	1.78	8.200	3.69	14.200	4.10	20.20	1.64
2.233	1.78	8.233	3.69	14.233	4.10	20.23	1.64
2.267	1.78	8.267	3.69	14.267	4.10	20.27	1.64
2.300	1.78	8.300	3.69	14.300	4.10	20.30	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.367	1.78	8.367	3.69	14.367	4.10	20.37	1.64
2.400	1.78	8.400	3.69	14.400	4.10	20.40	1.64
2.433	1.78	8.433	3.69	14.433	4.10	20.43	1.64
2.467	1.78	8.467	3.69	14.467	4.10	20.47	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.533	1.78	8.533	3.69	14.533	4.10	20.53	1.64
2.567	1.78	8.567	3.69	14.567	4.10	20.57	1.64
2.600	1.78	8.600	3.69	14.600	4.10	20.60	1.64
2.633	1.78	8.633	3.69	14.633	4.10	20.63	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.700	1.78	8.700	3.69	14.700	4.10	20.70	1.64
2.733	1.78	8.733	3.69	14.733	4.10	20.73	1.64
2.767	1.78	8.767	3.69	14.767	4.10	20.77	1.64
2.800	1.78	8.800	3.69	14.800	4.10	20.80	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.867	1.78	8.867	3.69	14.867	4.10	20.87	1.64
2.900	1.78	8.900	3.69	14.900	4.10	20.90	1.64
2.933	1.78	8.933	3.69	14.933	4.10	20.93	1.64
2.967	1.78	8.967	3.69	14.967	4.10	20.97	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.133	1.78	9.133	4.38	15.133	4.10	21.13	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.200	1.78	9.200	4.38	15.200	4.10	21.20	1.64
3.233	1.78	9.233	4.38	15.233	4.10	21.23	1.64
3.267	1.78	9.267	4.38	15.267	4.10	21.27	1.64
3.300	1.78	9.300	4.38	15.300	4.10	21.30	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.367	1.78	9.367	4.38	15.367	4.10	21.37	1.64
3.400	1.78	9.400	4.38	15.400	4.10	21.40	1.64
3.433	1.78	9.433	4.38	15.433	4.10	21.43	1.64
3.467	1.78	9.467	4.38	15.467	4.10	21.47	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.533	1.78	9.533	4.92	15.533	4.10	21.53	1.64
3.567	1.78	9.567	4.92	15.567	4.10	21.57	1.64
3.600	1.78	9.600	4.92	15.600	4.10	21.60	1.64
3.633	1.78	9.633	4.92	15.633	4.10	21.63	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.700	1.78	9.700	4.92	15.700	4.10	21.70	1.64
3.733	1.78	9.733	4.92	15.733	4.10	21.73	1.64
3.767	1.78	9.767	4.92	15.767	4.10	21.77	1.64
3.800	1.78	9.800	4.92	15.800	4.10	21.80	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.867	1.78	9.867	4.92	15.867	4.10	21.87	1.64
3.900	1.78	9.900	4.92	15.900	4.10	21.90	1.64
3.933	1.78	9.933	4.92	15.933	4.10	21.93	1.64
3.967	1.78	9.967	4.92	15.967	4.10	21.97	1.64
4.000	1.78	10.000	4.93	16.000	4.10	22.00	1.64
4.033	2.19	10.033	6.29	16.033	2.46	22.03	1.64
4.067	2.19	10.067	6.29	16.067	2.46	22.07	1.64
4.100	2.19	10.100	6.29	16.100	2.46	22.10	1.64
4.133	2.19	10.133	6.29	16.133	2.46	22.13	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.200	2.19	10.200	6.29	16.200	2.46	22.20	1.64
4.233	2.19	10.233	6.29	16.233	2.46	22.23	1.64
4.267	2.19	10.267	6.29	16.267	2.46	22.27	1.64
4.300	2.19	10.300	6.29	16.300	2.46	22.30	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.367	2.19	10.367	6.29	16.367	2.46	22.37	1.64
4.400	2.19	10.400	6.29	16.400	2.46	22.40	1.64
4.433	2.19	10.433	6.29	16.433	2.46	22.43	1.64
4.467	2.19	10.467	6.29	16.467	2.46	22.47	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.533	2.19	10.533	8.48	16.533	2.46	22.53	1.64
4.567	2.19	10.567	8.48	16.567	2.46	22.57	1.64
4.600	2.19	10.600	8.48	16.600	2.46	22.60	1.64
4.633	2.19	10.633	8.48	16.633	2.46	22.63	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.700	2.19	10.700	8.48	16.700	2.46	22.70	1.64
4.733	2.19	10.733	8.48	16.733	2.46	22.73	1.64
4.767	2.19	10.767	8.48	16.767	2.46	22.77	1.64
4.800	2.19	10.800	8.48	16.800	2.46	22.80	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.867	2.19	10.867	8.48	16.867	2.46	22.87	1.64
4.900	2.19	10.900	8.48	16.900	2.46	22.90	1.64
4.933	2.19	10.933	8.48	16.933	2.46	22.93	1.64
4.967	2.19	10.967	8.48	16.967	2.46	22.97	1.64

HRP9-PR_50-100 YEAR-2096 IDF.OUT

5.000	2.19	11.000	8.49	17.000	2.46	23.00	1.64
5.033	2.19	11.033	13.13	17.033	2.46	23.03	1.64
5.067	2.19	11.067	13.13	17.067	2.46	23.07	1.64
5.100	2.19	11.100	13.13	17.100	2.46	23.10	1.64
5.133	2.19	11.133	13.13	17.133	2.46	23.13	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.200	2.19	11.200	13.13	17.200	2.46	23.20	1.64
5.233	2.19	11.233	13.13	17.233	2.46	23.23	1.64
5.267	2.19	11.267	13.13	17.267	2.46	23.27	1.64
5.300	2.19	11.300	13.13	17.300	2.46	23.30	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.367	2.19	11.367	13.13	17.367	2.46	23.37	1.64
5.400	2.19	11.400	13.13	17.400	2.46	23.40	1.64
5.433	2.19	11.433	13.13	17.433	2.46	23.43	1.64
5.467	2.19	11.467	13.13	17.467	2.46	23.47	1.64
5.500	2.19	11.500	13.19	17.500	2.46	23.50	1.64
5.533	2.19	11.533	56.91	17.533	2.46	23.53	1.64
5.567	2.19	11.567	56.91	17.567	2.46	23.57	1.64
5.600	2.19	11.600	56.91	17.600	2.46	23.60	1.64
5.633	2.19	11.633	56.91	17.633	2.46	23.63	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.700	2.19	11.700	56.91	17.700	2.46	23.70	1.64
5.733	2.19	11.733	56.91	17.733	2.46	23.73	1.64
5.767	2.19	11.767	104.09	17.767	2.46	23.77	1.64
5.800	2.19	11.800	151.03	17.800	2.46	23.80	1.64
5.833	2.19	11.833	151.03	17.833	2.46	23.83	1.64
5.867	2.19	11.867	151.03	17.867	2.46	23.87	1.64
5.900	2.19	11.900	151.03	17.900	2.46	23.90	1.64
5.933	2.19	11.933	151.03	17.933	2.46	23.93	1.64
5.967	2.19	11.967	151.03	17.967	2.46	23.97	1.64
6.000	2.19	12.000	150.85	18.000	2.46	24.00	1.64

Max.Eff.Inten.(mm/hr)= 151.03 100.86
over (min) 5.00 10.00
Storage Coeff. (min)= 2.15 (ii) 9.08 (ii)
Unit Hyd. Tpeak (min)= 4.00 10.00
Unit Hyd. peak (cms)= 0.39 0.12

PEAK FLOW (cms)= 0.50 0.36 0.850 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 135.30 75.33 99.92
TOTAL RAINFALL (mm)= 136.80 136.80 136.80
RUNOFF COEFFICIENT = 0.99 0.55 0.73

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0005)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0261):	2.94	0.850	12.00	99.92
+ ID2= 2 (0009):	60.73	6.691	12.50	94.32
ID = 3 (0005):	63.67	6.848	12.50	94.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0262)
ID= 1 DT= 5.0 min

Area	(ha)=	1.61	Curve Number (CN)=	75.0
Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.40			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.37	6.083	2.74	12.083	19.71	18.08	2.46
0.167	1.37	6.167	2.74	12.167	19.70	18.17	2.46
0.250	1.37	6.250	2.74	12.250	19.70	18.25	2.46
0.333	1.37	6.333	2.74	12.333	19.70	18.33	2.46
0.417	1.37	6.417	2.74	12.417	19.70	18.42	2.46
0.500	1.37	6.500	2.74	12.500	19.70	18.50	2.46
0.583	1.37	6.583	2.74	12.583	10.12	18.58	2.46
0.667	1.37	6.667	2.74	12.667	10.12	18.67	2.46
0.750	1.37	6.750	2.74	12.750	10.12	18.75	2.46
0.833	1.37	6.833	2.74	12.833	10.12	18.83	2.46
0.917	1.37	6.917	2.74	12.917	10.12	18.92	2.46

HRP9-PR_50-100 YEAR-2096 IDF.OUT

1.000	1.37	7.000	2.74	13.000	10.12	19.00	2.46
1.083	1.37	7.083	2.74	13.083	1.92	19.08	2.46
1.167	1.37	7.167	2.74	13.167	1.92	19.17	2.46
1.250	1.37	7.250	2.74	13.250	1.92	19.25	2.46
1.333	1.37	7.333	2.74	13.333	1.92	19.33	2.46
1.417	1.37	7.417	2.74	13.417	1.92	19.42	2.46
1.500	1.37	7.500	2.74	13.500	1.92	19.50	2.46
1.583	1.37	7.583	2.74	13.583	11.22	19.58	2.46
1.667	1.37	7.667	2.74	13.667	11.22	19.67	2.46
1.750	1.37	7.750	2.74	13.750	11.22	19.75	2.46
1.833	2.46	7.833	2.74	13.833	11.22	19.83	2.46
1.917	2.46	7.917	2.74	13.917	11.22	19.92	2.46
2.000	2.46	8.000	2.74	14.000	11.22	20.00	2.46
2.083	1.78	8.083	3.69	14.083	4.10	20.08	1.64
2.167	1.78	8.167	3.69	14.167	4.10	20.17	1.64
2.250	1.78	8.250	3.69	14.250	4.10	20.25	1.64
2.333	1.78	8.333	3.69	14.333	4.10	20.33	1.64
2.417	1.78	8.417	3.69	14.417	4.10	20.42	1.64
2.500	1.78	8.500	3.69	14.500	4.10	20.50	1.64
2.583	1.78	8.583	3.69	14.583	4.10	20.58	1.64
2.667	1.78	8.667	3.69	14.667	4.10	20.67	1.64
2.750	1.78	8.750	3.69	14.750	4.10	20.75	1.64
2.833	1.78	8.833	3.69	14.833	4.10	20.83	1.64
2.917	1.78	8.917	3.69	14.917	4.10	20.92	1.64
3.000	1.78	9.000	3.69	15.000	4.10	21.00	1.64
3.083	1.78	9.083	4.38	15.083	4.10	21.08	1.64
3.167	1.78	9.167	4.38	15.167	4.10	21.17	1.64
3.250	1.78	9.250	4.38	15.250	4.10	21.25	1.64
3.333	1.78	9.333	4.38	15.333	4.10	21.33	1.64
3.417	1.78	9.417	4.38	15.417	4.10	21.42	1.64
3.500	1.78	9.500	4.38	15.500	4.10	21.50	1.64
3.583	1.78	9.583	4.92	15.583	4.10	21.58	1.64
3.667	1.78	9.667	4.92	15.667	4.10	21.67	1.64
3.750	1.78	9.750	4.92	15.750	4.10	21.75	1.64
3.833	1.78	9.833	4.92	15.833	4.10	21.83	1.64
3.917	1.78	9.917	4.92	15.917	4.10	21.92	1.64
4.000	1.78	10.000	4.92	16.000	4.10	22.00	1.64
4.083	2.19	10.083	6.29	16.083	2.46	22.08	1.64
4.167	2.19	10.167	6.29	16.167	2.46	22.17	1.64
4.250	2.19	10.250	6.29	16.250	2.46	22.25	1.64
4.333	2.19	10.333	6.29	16.333	2.46	22.33	1.64
4.417	2.19	10.417	6.29	16.417	2.46	22.42	1.64
4.500	2.19	10.500	6.29	16.500	2.46	22.50	1.64
4.583	2.19	10.583	8.48	16.583	2.46	22.58	1.64
4.667	2.19	10.667	8.48	16.667	2.46	22.67	1.64
4.750	2.19	10.750	8.48	16.750	2.46	22.75	1.64
4.833	2.19	10.833	8.48	16.833	2.46	22.83	1.64
4.917	2.19	10.917	8.48	16.917	2.46	22.92	1.64
5.000	2.19	11.000	8.48	17.000	2.46	23.00	1.64
5.083	2.19	11.083	13.13	17.083	2.46	23.08	1.64
5.167	2.19	11.167	13.13	17.167	2.46	23.17	1.64
5.250	2.19	11.250	13.13	17.250	2.46	23.25	1.64
5.333	2.19	11.333	13.13	17.333	2.46	23.33	1.64
5.417	2.19	11.417	13.13	17.417	2.46	23.42	1.64
5.500	2.19	11.500	13.13	17.500	2.46	23.50	1.64
5.583	2.19	11.583	56.90	17.583	2.46	23.58	1.64
5.667	2.19	11.667	56.91	17.667	2.46	23.67	1.64
5.750	2.19	11.750	56.91	17.750	2.46	23.75	1.64
5.833	2.19	11.833	151.02	17.833	2.46	23.83	1.64
5.917	2.19	11.917	151.03	17.917	2.46	23.92	1.64
6.000	2.19	12.000	151.03	18.000	2.46	24.00	1.64

Unit Hyd Qpeak (cms)= 0.155

PEAK FLOW (cms)= 0.205 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 80.238
TOTAL RAINFALL (mm)= 136.800
RUNOFF COEFFICIENT = 0.587

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0262):	1.61	0.205	12.25	80.24
+ ID2= 2 (0005):	63.67	6.848	12.50	94.49
ID = 3 (0007):	65.28	7.019	12.50	94.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

E

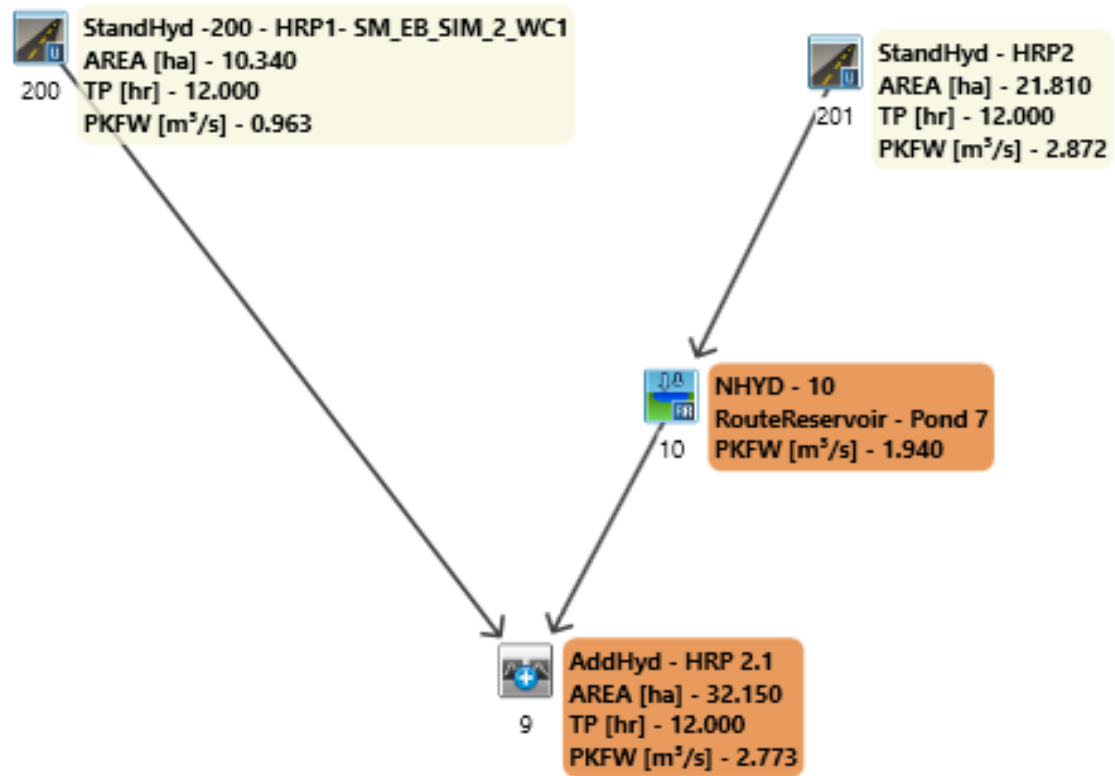
Hydrology – Proposed Condition VO Output – with SWM

- E.1 VO Schematics
- E.2 VO Output 2-year to 100-year
- E.3 VO Output 25 mm Storm

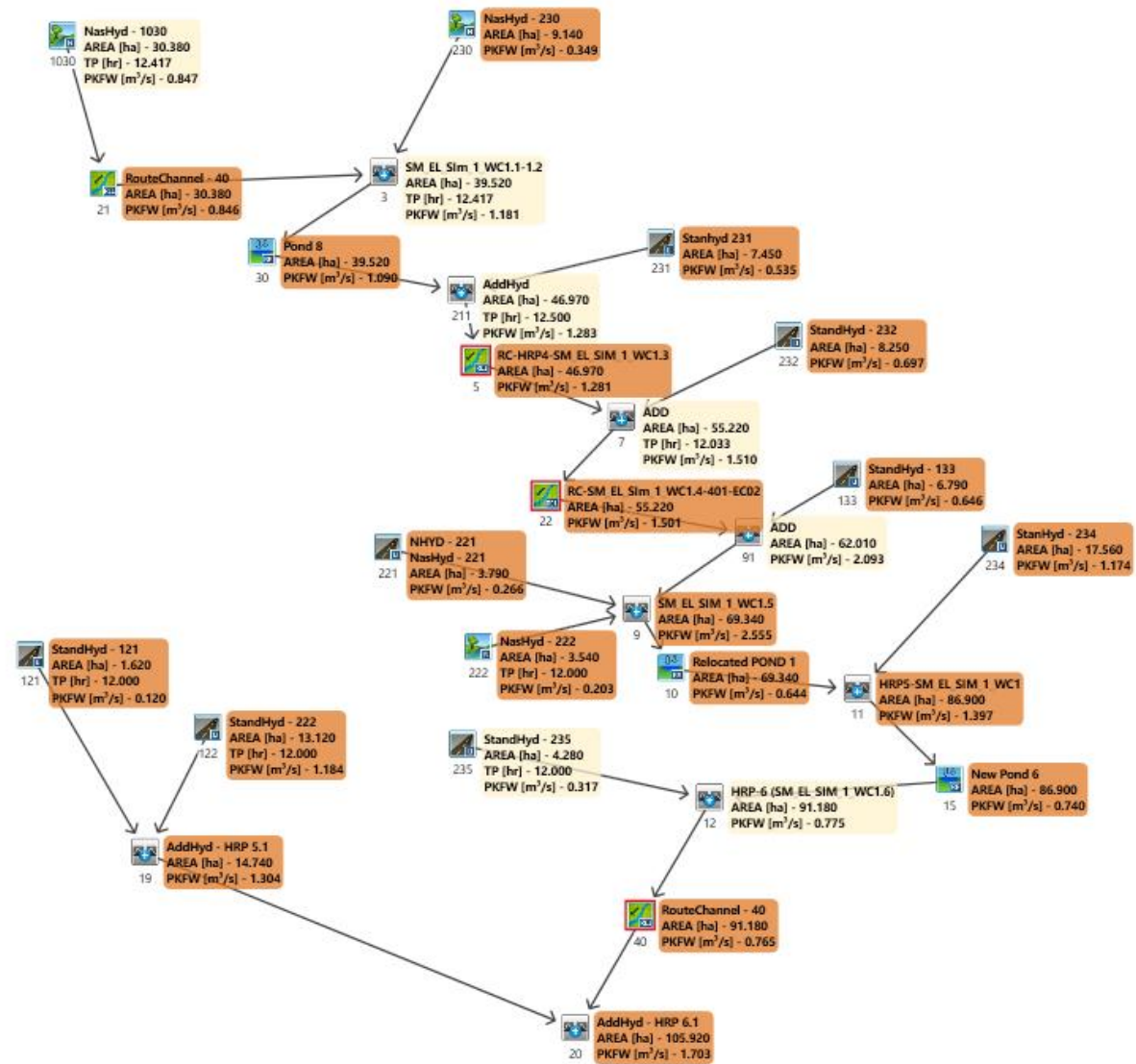


E.1 VO Schematics

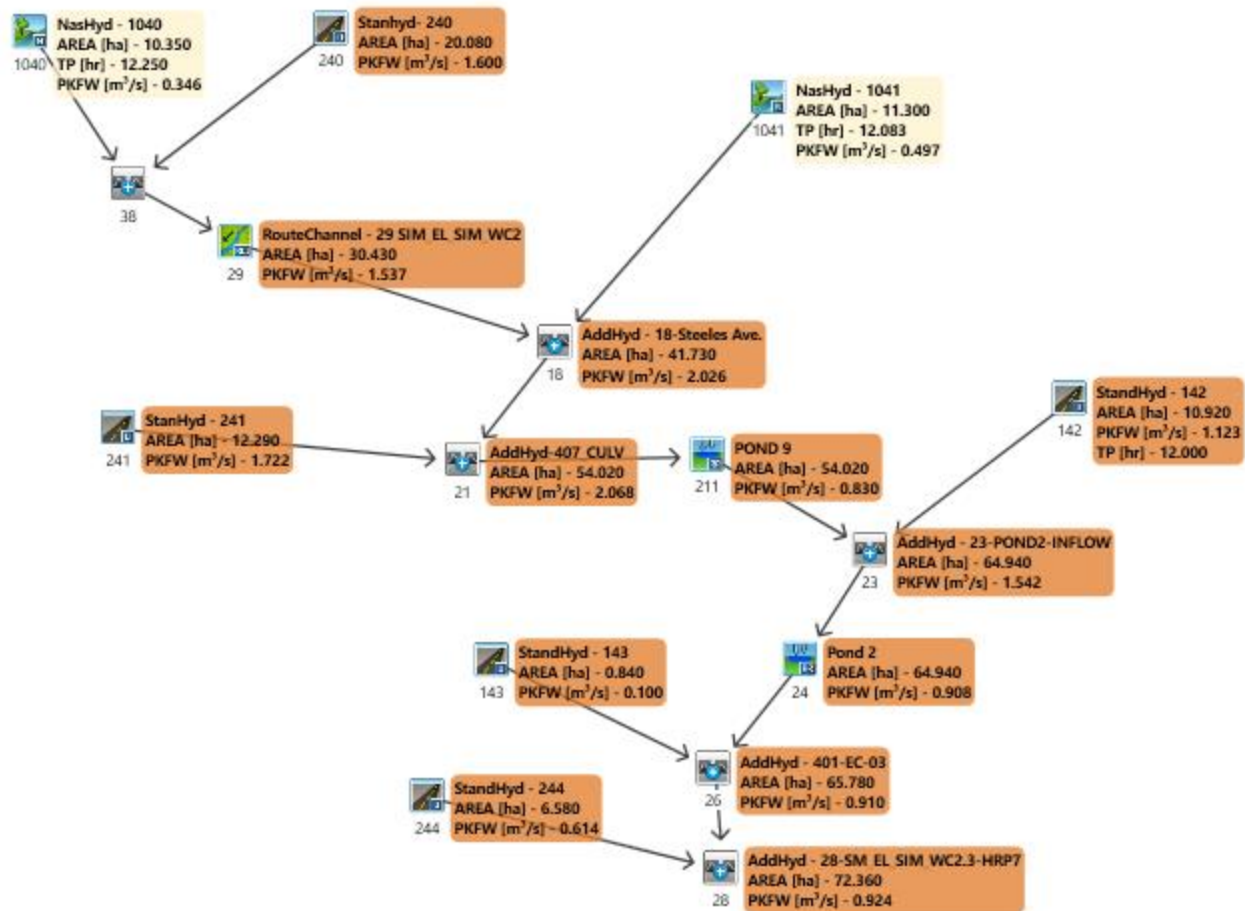




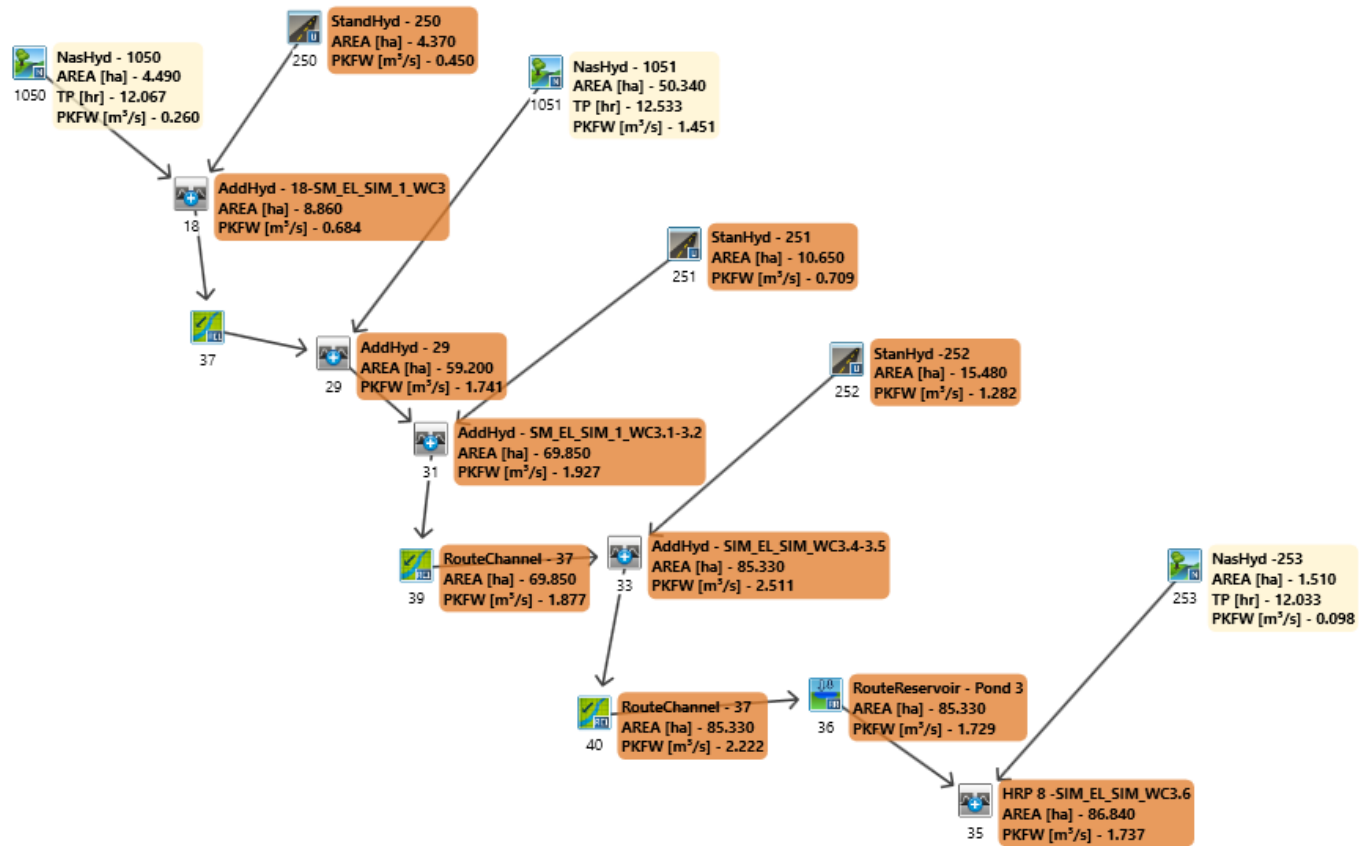
Scenario: HRP2_PR-SWM



Scenario: HRP6.1-PR-SWM



Scenario: HRP7-PR-SWM



Scenario: HRP8-PR-SWM

E.2 VO Output 2-year to 100-year



V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\NH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\92cada6f-3309-4902-b2f9-7ccd9f1df669\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\NH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\92cada6f-3309-4902-b2f9-7ccd9f1df669\scenar

DATE: 03/24/2023 TIME: 09:53:10

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\fd91974f-0077-48bb-8c70-470436a90b7a\571fbdef
Ptotal= 57.60 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

CALIB
STANDHYD (0200) Area (ha)= 10.34
ID= 1 DT= 3.0 min Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.17	5.17
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	0.40
Length (m)=	262.55	40.00
Mannings n	=	0.013
		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04	
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04	
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04	
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04	
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04	
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04	
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04	
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04	
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04	
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04	
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04	
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04	
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04	
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04	
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04	
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04	
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04	
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04	
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04	
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04	
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04	
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04	
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04	
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04	
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04	
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04	
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04	
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04	
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04	
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04	
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04	
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04	
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69	
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69	
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69	
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69	
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69	
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69	
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69	
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69	
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69	
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69	
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69	
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69	
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69	
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69	
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69	
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69	
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69	
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69	
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69	
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69	
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69	
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69	
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69	
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69	
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69	
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69	
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69	
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69	
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69	
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69	
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69	
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69	
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69	
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69	

HRP2_PR-SWM_2-100 YEAR.OUT

4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 18.47
over (min) 6.00 27.00
Storage Coeff. (min)= 4.44 (ii) 26.92 (ii)
Unit Hyd. Tpeak (min)= 6.00 27.00
Unit Hyd. peak (cms)= 0.22 0.64

TOTALS

PEAK FLOW (cms)= 0.88 0.15 0.963 (iii)
TIME TO PEAK (hrs)= 12.00 12.35 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 38.21
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.66

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0201) | Area (ha)= 21.81
| ID= 1 DT= 4.0 min | Total Imp(%)= 70.00 Dir. Conn.(%)= 70.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	15.27	6.54
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	381.31	40.00
Manning's n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	0.58	6.067	1.15	12.067	8.30	18.067	1.04		
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04		
0.533	0.58	6.533	1.15	12.533	6.28	18.53	1.04		

HRP2_PR-SWM_2-100 YEAR.OUT

0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04
1.533	0.58	7.533	1.15	13.533	2.76	19.53	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04
1.800	0.92	7.800	1.15	13.800	4.72	19.80	1.04
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69
3.533	0.75	9.533	1.96	15.533	1.73	21.53	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69
4.533	0.92	10.533	3.11	16.533	1.04	22.53	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69
5.533	0.92	11.533	14.74	17.533	1.04	23.53	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69
5.800	0.92	11.800	53.68	17.800	1.04	23.80	0.69
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 26.28
over (min) 5.00 12.00
Storage Coeff. (min)= 5.55 (ii) 11.58 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00

Unit Hyd. peak (cms)= 0.22 0.10
PEAK FLOW (cms)= 2.57 0.32
TIME TO PEAK (hrs)= 12.00 12.07
RUNOFF VOLUME (mm)= 56.10 20.32
TOTAL RAINFALL (mm)= 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35

HRP2_PR-SWM_2-100 YEAR.OUT

TOTALS
2.872 (iii)
12.00
45.37
57.60
0.70

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0010)				
IN= 2---> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				
OUTFLOW	STORAGE	OUTFLOW	STORAGE	
(cms)	(ha.m.)	(cms)	(ha.m.)	
0.0000	0.0000	3.3540	0.2580	
0.0000	0.0000	4.4590	0.2991	
1.9670	0.1600	5.1190	0.3310	
2.9090	0.2200	5.7930	0.3620	
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0201)	21.810	2.872	12.00	45.37
OUTFLOW: ID= 1 (0010)	21.810	1.940	12.07	45.37
PEAK FLOW REDUCTION [Qout/Qin](%)= 67.55				
TIME SHIFT OF PEAK FLOW (min)= 4.00				
MAXIMUM STORAGE USED (ha.m.)= 0.1600				

ADD HYD (0009)				
1 + 2 = 3				
ID1= 1 (0010):	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0010):	21.81	1.940	12.07	45.37
+ ID2= 2 (0200):	10.34	0.963	12.00	38.21
=====				
ID = 3 (0009):	32.15	2.773	12.00	43.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\d9dbcbc3-a02b-4177-b0f7-1f551118acb2\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\d9dbcbc3-a02b-4177-b0f7-1f551118acb2\scenar

DATE: 03/24/2023 TIME: 09:53:10

USER:

COMMENTS:

** SIMULATION : Run 02 **

HRP2_PR-SWM_2-100 YEAR.OUT

MASS STORM
Filename: C:\Users\AbirA\AppData\Local\Temp\fd91974f-0077-48bb-8c70-470436a90b7a\fb8e60ca
Comments: Mass 24-Hour SCS Type II Design Storm

Total= 76.80 mm											
Duration of storm = 24.00 hrs											
Mass curve time step = 15.00 min											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.25	0.77	6.25	1.54	12.25	11.06	18.25	1.38				
0.50	0.77	6.50	1.54	12.50	11.06	18.50	1.38				
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38				
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38				
1.25	0.77	7.25	1.54	13.25	1.00	19.25	1.38				
1.50	0.77	7.50	1.54	13.50	1.00	19.50	1.38				
1.75	0.77	7.75	1.54	13.75	6.30	19.75	1.38				
2.00	1.38	8.00	1.54	14.00	6.30	20.00	1.38				
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92				
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92				
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92				
3.00	1.00	9.00	2.07	15.00	2.30	21.00	0.92				
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92				
3.50	1.00	9.50	2.46	15.50	2.30	21.50	0.92				
3.75	1.00	9.75	2.76	15.75	2.30	21.75	0.92				
4.00	1.00	10.00	2.76	16.00	2.30	22.00	0.92				
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92				
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92				
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92				
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92				
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92				
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92				
5.75	1.23	11.75	31.95	17.75	1.38	23.75	0.92				
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92				

CALIB
STANDHYD (0200)
ID= 1 DT= 3.0 min
Area (ha)= 10.34
Total Imp(%)= 50.00
Dir. Conn.(%)= 50.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 5.17		5.17
Dep. Storage	(mm)= 1.50		1.50
Average Slope	(%)= 2.00		0.40
Length	(m)= 262.55		40.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38				
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38				
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38				
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38				
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38				
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38				
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38				
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38				
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38				
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38				
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38				
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38				
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38				
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38				
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38				
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38				
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38				
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38				
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38				
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38				
1.050	0.77	7.050	1.54	13.050	1.00	19.05	1.38				
1.100	0.77	7.100	1.54	13.100	1.00	19.10	1.38				
1.150	0.77	7.150	1.54	13.150	1.00	19.15	1.38				
1.200	0.77	7.200	1.54	13.200	1.00	19.20	1.38				
1.250	0.77	7.250	1.54	13.250	1.00	19.25	1.38				
1.300	0.77	7.300	1.54	13.300	1.00	19.30	1.38				
1.350	0.77	7.350	1.54	13.350	1.00	19.35	1.38				
1.400	0.77	7.400	1.54	13.400	1.00	19.40	1.38				
1.450	0.77	7.450	1.54	13.450	1.00	19.45	1.38				
1.500	0.77	7.500	1.54	13.500	1.00	19.50	1.38				
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38				
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38				

HRP2_PR-SWM_2-100 YEAR.OUT											
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38				
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38				
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38				
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38				
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38				
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38				
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38				
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38				
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92				
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92				
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92				
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92				
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92				
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92				
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92				
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92				
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92				
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92				
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92				
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92				
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92				
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92				
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92				
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92				
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92				
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92				
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92				
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92				
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92				
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92				
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92				
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92				
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92				
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92				
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92				
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92				
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92				
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92				
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92				
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92				
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92				
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92				
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92				
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92				
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92				
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92				
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92				
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92				
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92				
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92				
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92				
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92				
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92				
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92				
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92				
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92				
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92				
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92				
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92				
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92				
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92				
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92				
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92				
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92				
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92				
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92				
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92				
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92				
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92				
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92				
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92				
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92				
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92				
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92				
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92				
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92				
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92				
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92				
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92				
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92				
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92				
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92				
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92				
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92				
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92				
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92				
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92				

HRP2_PR-SWM_2-100 YEAR.OUT						
6.000	1.23	12.000	84.75	18.000	1.38	24.00 0.92
Max.Eff.Inten.(mm/hr)=	84.79	36.09				
	over (min)	6.00				
Storage Coeff. (min)=	3.96 (ii)	21.15 (ii)				
Unit Hyd. Tpeak (min)=	6.00	24.00				
Unit Hyd. peak (cms)=	0.24	0.05				
TOTALS						
PEAK FLOW (cms)=	1.19	0.28	1.358 (iii)			
TIME TO PEAK (hrs)=	12.00	12.25				
RUNOFF VOLUME (mm)=	75.38	53.93				
TOTAL RAINFALL (mm)=	76.80	76.80	76.80			
RUNOFF COEFFICIENT =	0.98	0.42	0.70			

HRP2_PR-SWM_2-100 YEAR.OUT

3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.267	1.00	9.267	2.46	15.267	2.30	21.27	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92
3.533	1.00	9.533	2.61	15.533	2.30	21.53	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92
4.533	1.23	10.533	4.15	16.533	1.38	22.53	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.533	1.23	11.533	19.66	17.533	1.38	23.53	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.800	1.23	11.800	71.57	17.800	1.38	23.80	0.92
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)=	84.79	42.25
over (min)	5.00	12.00
Storage Coeff. (min)=	4.95 (ii)	10.32 (ii)
Unit Hyd. Tpeak (min)=	4.00	12.00
Unit Hyd. peak (cms)=	0.24	0.10
		TOTALS
PEAK FLOW (cms)=	3.48	0.55
TIME TO PEAK (hrs)=	12.00	12.07
RUNOFF VOLUME (mm)=	75.30	32.57
TOTAL RAINFALL (mm)=	76.80	76.80
RUNOFF COEFFICIENT =	0.98	0.42
		0.81

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

OVERFLOW IS OFF				
RESERVOIR(0010)				
IN= 2--> OUT= 1				
DT= 5.0 min				
OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
0.0000	0.0000	3.3540	0.2580	
0.0000	0.0000	4.4590	0.2991	
1.9670	0.1600	5.1190	0.3310	
2.9090	0.2200	5.7930	0.3620	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
INFLOW : ID= 2 (0201)	21.810	3.986	12.00	62.48
OUTFLOW: ID= 1 (0010)	21.810	2.814	12.07	62.48
PEAK FLOW REDUCTION [Qout/Qin](%)=	70.59			
TIME SHIFT OF PEAK FLOW (min)=	4.00			
MAXIMUM STORAGE USED (ha.m.)=	0.2195			

HRP2_PR-SWM_2-100 YEAR.OUT

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0010):	21.81	2.814	12.07	62.48
+ ID2= 2 (0200):	10.34	1.358	12.00	53.93
ID = 3 (0009):	32.15	4.007	12.00	59.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\991128ff-e962-404b-ba67-3272a6f2f9e0\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\991128ff-e962-404b-ba67-3272a6f2f9e0\scenar

DATE: 03/24/2023 TIME: 09:53:10

USER:

COMMENTS:

** SIMULATION : Run 03 **

MASS STORM
Filename: C:\Users\AbirA\AppData\Local\Temp\fd91974f-0077-48bb-8c70-470436a90b7a\1913d010
Ptotal= 88.00 mm
Comments: Mass 24-Hour SCS Type II Design Storm
Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07

HRP2_PR-SWM_2-100 YEAR.OUT

CALIB			
STANDHYD (0200)	Area (ha)= 10.34		
ID= 1 DT= 3.0 min	Total Imp(%)= 50.00	Dir. Conn.(%)= 50.00	

Surface Area	(ha)= 5.17	5.17
Dep. Storage	(mm)= 1.50	1.50
Average Slope	(%)= 2.00	0.40
Length	(m)= 262.55	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.050	0.89	6.950	1.78	12.050	12.79	18.05	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07		

3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)=	98.04	51.50
over (min)	6.00	21.00
Storage Coeff. (min)=	3.73 (ii)	18.65 (iii)
Unit Hyd. Tpeak (min)=	6.00	21.00
Unit Hyd. peak (cms)=	0.25	0.06
		TOTALS
PEAK FLOW (cms)=	1.38	0.39
TIME TO PEAK (hrs)=	12.00	12.20
RUNOFF VOLUME (mm)=	87.30	40.96
TOTAL RAINFALL (mm)=	88.00	88.00
RUNOFF COEFFICIENT =	0.98	0.46
		0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 72.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0201)	Area (ha)= 21.81		
ID= 1 DT= 4.0 min	Total Imp(%)= 70.00	Dir. Conn.(%)= 70.00	

Surface Area	(ha)= 15.27	6.54
Dep. Storage	(mm)= 1.50	1.50
Average Slope	(%)= 2.00	2.00
Length	(m)= 381.31	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

HRP2_PR-SWM_2-100 YEAR.OUT

HRP2_PR-SWM_2-100 YEAR.OUT

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	0.89	6.067	1.78	12.067	12.89	18.07	1.60		
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60		
0.533	0.89	6.533	1.78	12.533	9.68	18.53	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.533	0.89	7.533	1.78	13.533	4.26	19.53	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.800	1.42	7.800	1.78	13.800	7.28	19.80	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07		
3.533	1.15	9.533	3.02	15.533	2.66	21.53	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07		
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07		
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07		
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07		
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07		
4.533	1.42	10.533	4.80	16.533	1.60	22.53	1.07		
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07		
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07		
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07		
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07		
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07		
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07		
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07		
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07		
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07		
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07		
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07		
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07		

5.533	1.42	11.533	22.73	17.533	1.60	23.53	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07
5.800	1.42	11.800	82.75	17.800	1.60	23.80	1.07
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.06

Max.Eff.Inten.(mm/hr)=	98.04	53.17	
over (min)	5.00	12.00	
Storage Coeff. (min)=	4.67 (ii)	9.74 (iii)	
Unit Hyd. Tpeak (min)=	4.00	12.00	
Unit Hyd. peak (cms)=	0.24	0.11	
PEAK FLOW (cms)=	4.04	0.70	4.703 (iii)
TIME TO PEAK (hrs)=	12.00	12.07	12.00
RUNOFF VOLUME (mm)=	87.30	40.96	73.40
TOTAL RAINFALL (mm)=	88.80	88.80	88.80
RUNOFF COEFFICIENT =	0.98	0.46	0.83

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 72.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0010)				OVERFLOW IS OFF			
IN= 2--> OUT= 1							
DT= 5.0 min							
		OUTFLOW	STORAGE			OUTFLOW	STORAGE
		(cms)	(ha.m.)			(cms)	(ha.m.)
		0.0000	0.0000			3.3540	0.2580
		0.0000	0.0000			4.4590	0.2991
		1.9670	0.1600			5.1190	0.3310
		2.9090	0.2200			5.7930	0.3620
		AREA	QPEAK			TPEAK	R.V.
		(ha)	(cms)			(hrs)	(mm)
INFLOW : ID= 2 (0201)		21.810	4.703			12.00	73.40
OUTFLOW: ID= 1 (0010)		21.810	3.272			12.07	73.40

PEAK FLOW REDUCTION [Qout/Qin](%)= 69.58
 TIME SHIFT OF PEAK FLOW (min)= 4.00
 MAXIMUM STORAGE USED (ha.m.)= 0.2575

ADD HYD (0009)							
1 + 2 = 3							
		AREA	QPEAK			TPEAK	R.V.
		(ha)	(cms)			(hrs)	(mm)
ID1= 1 (0010):		21.81	3.272			12.07	73.40
+ ID2= 2 (0200):		10.34	1.637			12.00	64.13
ID = 3 (0009):		32.15	4.764			12.00	70.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\vo1n.dat
 Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\40b87cda-0869-48d8-9325-a363f65bc63b\scenar
 Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\40b87cda-0869-48d8-9325-a363f65bc63b\scenar

DATE: 03/24/2023

TIME: 09:53:10

HRP2_PR-SWM_2-100 YEAR.OUT

USER:

COMMENTS: _____

** SIMULATION : Run 04 **

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\
| | fd91974f-0077-48bb-8c70-470436a90b7a\cdfb3d47
| Ptotal=103.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86	
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86	
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86	
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86	
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86	
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86	
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86	
2.00	1.86	8.00	2.06	14.00	8.46	20.00	1.86	
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24	
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24	
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24	
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24	
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24	
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24	
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24	
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24	
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24	
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24	
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24	
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24	
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24	
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24	
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24	
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24	

| CALIB |
| STANDHYD (0200) | Area (ha)= 10.34
| ID= 1 DT= 3.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.17	5.17
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	0.40
Length (m)=	262.55	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86	
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86	
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86	
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86	
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86	
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86	
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86	
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86	
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86	
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86	
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86	
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86	
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86	
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86	
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86	
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86	
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86	
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86	
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86	

1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86	
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86	
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86	
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86	
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86	
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86	
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86	
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86	
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86	
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86	
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86	
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86	
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86	
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86	
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86	
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86	
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86	
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86	
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86	
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86	
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86	
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24	
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24	
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24	
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24	
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24	
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24	
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24	
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24	
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24	
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24	
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24	
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24	
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24	
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24	
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24	
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24	
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24	
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24	
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24	
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24	
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24	
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24	
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24	
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24	
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24	
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24	
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24	
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24	
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24	
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24	
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24	
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24	
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24	
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24	
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24	
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24	
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24	
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24	
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24	
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24	
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24	
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24	
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24	
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24	
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24	
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24	
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24	
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24	
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24	
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24	
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24	
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24	
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24	
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24	
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24	
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24	
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24	
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24	
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24	
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24	
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24	
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24	
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24	
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24	
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24	
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24	

HRP2_PR-SWM_2-100 YEAR.OUT									
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		
Max.Eff.Inten.(mm/hr)=	113.93	65.04							
over (min)	6.00	18.00							
Storage Coeff. (min)=	3.51 (ii)	17.10 (ii)							
Unit Hyd. Tpeak (min)=	6.00	18.00							
Unit Hyd. peak (cms)=	0.25	0.06							
PEAK FLOW (cms)=	1.61	0.52							
TIME TO PEAK (hrs)=	12.00	12.15	12.00						
RUNOFF VOLUME (mm)=	181.70	51.59	76.64						
TOTAL RAINFALL (mm)=	183.20	103.20	103.20						
RUNOFF COEFFICIENT =	0.99	0.50	0.74						

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (0010)	Area (ha)=	21.81			
ID= 1 DT= 4.0 min	Total Imp(%)=	70.00	Dir. Conn.(%)=	70.00	
	IMPERVIOUS	PERVIOUS (i)			
Surface Area (ha)=	15.27	6.54			
Dep. Storage (mm)=	1.50	1.50			
Average Slope (%)=	2.00	2.00			
Length (m)=	381.31	40.00			
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs	mm/hr	
0.067	1.03	6.067	2.06	12.067	14.87	18.07	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.533	1.03	6.533	2.06	12.533	11.25	18.53	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.067	1.03	7.067	2.06	13.067	1.45	19.07	1.86		
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86		
1.533	1.03	7.533	2.06	13.533	4.95	19.53	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86		
1.800	1.03	7.800	2.06	13.800	8.46	19.80	1.86		
1.867	1.03	7.867	2.06	13.867	8.46	19.87	1.86		
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		

HRP2_PR-SWM_2-100 YEAR.OUT									
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.533	1.34	9.533	3.51	15.533	3.10	21.53	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24		
4.533	1.65	10.533	5.57	16.533	1.86	22.53	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24		
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24		
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24		
5.533	1.65	11.533	26.42	17.533	1.86	23.53	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24		
5.800	1.65	11.800	96.17	17.800	1.86	23.80	1.24		
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24		
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24		
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)=	113.93	66.99			
over (min)	5.00	12.00			
Storage Coeff. (min)=	4.40 (ii)	9.17 (ii)			
Unit Hyd. Tpeak (min)=	4.00	12.00			
Unit Hyd. peak (cms)=	0.25	0.11			
PEAK FLOW (cms)=	4.72	0.90			
TIME TO PEAK (hrs)=	12.00	12.07			
RUNOFF VOLUME (mm)=	181.70	51.59	86.67		
TOTAL RAINFALL (mm)=	183.20	103.20	103.20		
RUNOFF COEFFICIENT =	0.99	0.50	0.84		

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0010)		OVERFLOW IS OFF			
IN= 2--> OUT= 1					
DT= 5.0 min					
	OUTFLOW	STORAGE		OUTFLOW	STORAGE
	(cms)	(ha.m.)		(cms)	(ha.m.)
	0.0000	0.0000		3.3540	0.2580
	0.0000	0.0000		4.4500	0.2901
	1.9670	0.1600		5.1190	0.3310
	2.9090	0.2200		5.7930	0.3620

HRP2_PR-SWM_2-100 YEAR.OUT
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0201) 21.810 5.578 12.00 86.67
OUTFLOW: ID= 1 (0010) 21.810 4.148 12.07 86.67

PEAK FLOW REDUCTION [Qout/Qin](%)= 74.36
TIME SHIFT OF PEAK FLOW (min)= 4.00
MAXIMUM STORAGE USED (ha.m.)= 0.2991

ADD HYD (0009)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0010): 21.81 4.148 12.07 86.67
+ ID2= 2 (0200): 10.34 1.996 12.00 76.64
ID = 3 (0009): 32.15 5.923 12.00 83.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voim.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\627cfdf62-c14f-4d58-b655-5c26b344a827\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\627cfdf62-c14f-4d58-b655-5c26b344a827\scenar

DATE: 03/24/2023 TIME: 09:53:10

USER:

COMMENTS:

** SIMULATION : Run 05 **

MASS STORM
Filename: C:\Users\AbirA\AppData\Local\Temp\fd91974f-0077-48bb-8c70-470436a90b7a\95accb52
Ptotal=115.20 mm
Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' hrs	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.15	6.25	2.30	12.25	16.50	18.25	2.07	
0.50	1.15	6.50	2.30	12.50	16.50	18.50	2.07	
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07	
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07	
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07	
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07	
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07	
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07	
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38	
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38	
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38	
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38	
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38	
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38	
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38	

4.00	1.50	10.00	4.15	16.00	HRP2_PR-SWM_2-100 YEAR.OUT
4.25	1.84	10.25	5.30	16.25	3.46 22.00 1.38
4.50	1.84	10.50	5.30	16.50	2.07 22.25 1.38
4.75	1.84	10.75	7.14	16.75	2.07 22.50 1.38
5.00	1.84	11.00	7.14	17.00	2.07 22.75 1.38
5.25	1.84	11.25	11.06	17.25	2.07 23.00 1.38
5.50	1.84	11.50	11.06	17.50	2.07 23.25 1.38
5.75	1.84	11.75	47.92	17.75	2.07 23.50 1.38
6.00	1.84	12.00	127.18	18.00	2.07 23.75 1.38

CALIB
STANDHYD (0200)
ID= 1 DT= 3.0 min
Area (ha)= 10.34
Total Imp(%)= 50.00
Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.17	5.17
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	0.40
Length (m)=	262.55	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' hrs	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.15	6.050	2.30	12.050	16.50	18.05	2.07	
0.100	1.15	6.100	2.30	12.100	16.50	18.10	2.07	
0.150	1.15	6.150	2.30	12.150	16.50	18.15	2.07	
0.200	1.15	6.200	2.30	12.200	16.50	18.20	2.07	
0.250	1.15	6.250	2.30	12.250	16.50	18.25	2.07	
0.300	1.15	6.300	2.30	12.300	16.50	18.30	2.07	
0.350	1.15	6.350	2.30	12.350	16.50	18.35	2.07	
0.400	1.15	6.400	2.30	12.400	16.50	18.40	2.07	
0.450	1.15	6.450	2.30	12.450	16.50	18.45	2.07	
0.500	1.15	6.500	2.30	12.500	16.50	18.50	2.07	
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07	
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07	
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07	
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07	
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07	
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07	
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07	
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07	
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07	
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07	
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07	
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07	
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07	
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07	
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07	
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07	
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07	
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07	
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07	
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07	
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07	
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07	
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07	
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07	
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07	
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07	
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07	
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07	
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07	
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07	
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38	
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38	
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38	
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38	
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38	
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38	
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38	
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38	
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38	
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38	
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38	
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38	
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38	
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38	
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38	
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38	
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38	
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38	

HRP2_PR-SWM_2-100 YEAR.OUT

HRP2_PR-SWM_2-100 YEAR.OUT

2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38
Max.Eff.Inten.(mm/hr)= 127.18 76.00							
over (min) 6.00 18.00							
Storage Coeff. (min)= 3.36 (ii) 16.08 (iii)							
Unit Hyd. Tpeak (min)= 6.00 18.00							
Unit Hyd. peak (cms)= 0.26 0.07							
TOTALS							
PEAK FLOW (cms)= 1.80 0.64 2.275 (iii)							
TIME TO PEAK (hrs)= 12.00 12.15 12.00							
RUNOFF VOLUME (mm)= 113.70 60.84 87.27							
TOTAL RAINFALL (mm)= 115.20 115.20 115.20							
RUNOFF COEFFICIENT = 0.99 0.53 0.76							
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:							
CN* = 72.0 Ia = Dep. Storage (Above)							
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL							
THAN TIME STORAGE COEFFICIENT							
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

CALIB							
STANDHYD (0201) Area (ha)= 21.81							
ID= 1 DT= 4.0 min Total Imp(%)= 70.00 Dir. Conn.(%)= 70.00							

		IMPERVIOUS		PERVIOUS (1)															
Surface Area	(ha)=	15.27	6.54																
Dep. Storage	(mm)=	1.50	1.50																
Average Slope	(%)=	2.00	2.00																
Length	(m)=	381.31	40.00																
Mannings n	=	0.013	0.250																
NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.																			

---- TRANSFORMED HYETOGRAPH ----																			
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN										
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr	hrs	mm/hr										
0.067	1.15	6.067	2.30	12.067	16.60	18.07	2.07												
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07												
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07												
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07												
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07												
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07												
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07												
0.533	1.15	6.533	2.30	12.533	12.56	18.53	2.07												
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07												
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07												
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07												
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07												
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07												
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07												
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07												
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07												
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07												
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07												
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07												
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07												
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07												
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07												
1.533	1.15	7.533	2.30	13.533	5.53	19.53	2.07												
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07												
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07												
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07												
1.800	1.84	7.800	2.30	13.800	9.45	19.80	2.07												
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07												
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07												
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07												
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38												
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38												
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38												
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38												
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38												
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38												
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38												
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38												
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38												
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38												
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38												
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38												
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38												
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38												
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38												
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38												
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38												
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38												
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38												
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38												
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38												
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38												
3.533	1.50	9.533	5.92	15.533	3.46	21.53	1.38												
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38												
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38												
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38												
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38												
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38												
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38												
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38												
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38												
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38												
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38												
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38												
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38												
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38												
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38												
4.533	1.84	10.533	6.22	16.533	2.07	22.53	1.38												
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38												
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38												
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38												
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38												
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38												

HRP2_PR-SWM_2-100 YEAR.OUT									
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38		
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38		
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38		
5.533	1.84	11.533	29.49	17.533	2.07	23.53	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38		
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38		
5.800	1.84	11.800	107.36	17.800	2.07	23.80	1.38		
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38		
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38		
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38		

Max.Eff.Inten.(mm/hr)=	127.18	78.97	
over (min)	5.00	12.00	
Storage Coeff. (min)=	4.21 (ii)	8.78 (ii)	
Unit Hyd. Tpeak (min)=	4.00	12.00	
Unit Hyd. peak (cms)=	0.26	0.11	
		TOTALS	
PEAK FLOW (cms)=	5.29	1.08	6.319 (iii)
TIME TO PEAK (hrs)=	12.00	12.07	
RUNOFF VOLUME (mm)=	113.70	60.84	97.84
TOTAL RAINFALL (mm)=	115.20	115.20	115.20
RUNOFF COEFFICIENT =	0.99	0.53	0.85

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0010) OVERFLOW IS OFF					
IN= 2--> OUT= 1					
DT= 5.0 min					
		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	3.3540	0.2580
		0.0000	0.0000	4.4590	0.2991
		1.9670	0.1600	5.1190	0.3310
		2.9090	0.2200	5.7930	0.3620
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0201)		21.810	6.319	12.00	97.84
OUTFLOW: ID= 1 (0010)		21.810	4.808	12.07	97.84
PEAK FLOW REDUCTION [Qout/Qin](%)= 76.09					
TIME SHIFT OF PEAK FLOW (min)= 4.00					
MAXIMUM STORAGE USED (ha.m.)= 0.3310					

ADD HYD (0009)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0010):		21.81	4.808	12.07	97.84
+ ID2= 2 (0200):		10.34	2.275	12.00	87.27
=====					
ID = 3 (0009):		32.15	6.998	12.00	94.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V	V	I	SSSS	U	U	A	L	(v 6.1.2002)
V	V	I	SS	U	U	A	A	L
V	V	I	SS	U	U	AAAA	L	
V	V	I	SS	U	U	A	A	L
VV	I	SSSS	UUUU	A	A	LLLL		
000	TTTT	TTTT	H	H	Y	Y	M	000 TM
0	0	T	T	H	H	Y	Y	MM MM 0 0
0	0	T	T	H	H	Y	M	M 0 0
000	T	T	H	H	Y	M	M	000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\vojin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\b5e6c018-9177-4d2c-bca4-b581b0b5ef77\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\b5e6c018-9177-4d2c-bca4-b581b0b5ef77\scenar

DATE: 03/24/2023 TIME: 09:53:10

USER:

COMMENTS: _____

** SIMULATION : Run 06

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\fd91974f-0077-48bb-8c70-470436a90b7a\2985551a
Ptotal=127.20 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53

CALIB	Area (ha)= 10.34
STANDHYD (0200)	Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00
ID= 1 DT= 3.0 min	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.17	5.17
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	0.40
Length	(m)=	262.55	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29

HRP2_PR-SWM_2-100 YEAR.OUT									
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	18.43	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	18.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	18.43	19.65	2.29		
1.700	1.27	7.700	2.54	13.700	18.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	18.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	18.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	18.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	18.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	18.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	18.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		

HRP2_PR-SWM_2-100 YEAR.OUT									
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53		
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53		
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53		
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53		
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53		
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53		
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53		
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53		
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53		
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53		
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53		
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53		
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53		

Max.Eff.Inten.(mm/hr)=	140.43	91.28	
over (min)	6.00	18.00	
Storage Coeff. (min)=	3.23 (ii)	15.10 (ii)	
Unit Hyd. Tpeak (min)=	6.00	18.00	
Unit Hyd. peak (cms)=	0.26	0.07	
PEAK FLOW (cms)=	1.99	0.76	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.15	2.562 (iii)
RUNOFF VOLUME (mm)=	125.70	70.39	12.00
TOTAL RAINFALL (mm)=	127.20	127.20	98.04
RUNOFF COEFFICIENT =	0.99	0.55	127.20
			0.77

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0201)	Area (ha)=	21.81	
ID= 1 DT= 4.0 min	Total Imp(%)=	70.00	Dir. Conn.(%)= 70.00

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	15.27	6.54		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	381.31	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	1.27	6.067	2.54	12.067	18.33	18.07	2.29		
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29		
0.533	1.27	6.533	2.54	12.533	13.87	18.53	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29		
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29		
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29		
1.533	1.27	7.533	2.54	13.533	6.10	19.53	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP6.1-PR-SWM_2-100 YEAR.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
V V I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\NH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\2be775c4-9e70-4a3a-b04f-7c16fb526f12\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\NH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\2be775c4-9e70-4a3a-b04f-7c16fb526f12\scenar

DATE: 03/24/2023 TIME: 10:37:49

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\aa5f3685-1a4d-466b-8f88-d1f0e08ee45b\571fbdef
Ptotal= 57.60 mm Comments: Mass 24-Hour SCS Type-II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

CALIB NASHYD (1030) Area (ha)= 30.38 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69	
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69	
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69	
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69	
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69	
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69	
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69	
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69	
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69	
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69	
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69	
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69	
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69	
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69	
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69	
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69	
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69	
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69	
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69	
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69	
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69	
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69	
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69	
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69	
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69	
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69	
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69	
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69	
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69	
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69	
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69	
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69	
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69	
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69	
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69	
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69	
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69	
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69	

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 0.847 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 21.535
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.374

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0021)|

HRP6.1-PR-SWM_2-100 YEAR.OUT

| IN= 2----> OUT= 1 | Routing time step (min)'= 4.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning	
0.00	101.00	0.0000	
1.00	100.67	0.0000	
2.00	100.33	0.0000 /0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 /0.0000	Main Channel
6.00	100.67	0.0000	
7.00	101.00	0.0000	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.145E+02	0.0	0.34	13.16
0.09	100.09	.327E+02	0.1	0.51	8.00
0.14	100.14	.545E+02	0.1	0.64	7.02
0.19	100.19	.800E+02	0.2	0.75	6.00
0.24	100.24	.109E+03	0.3	0.85	5.31
0.28	100.28	.142E+03	0.5	0.94	4.81
0.33	100.33	.178E+03	0.7	1.02	4.42
0.39	100.39	.226E+03	1.0	1.17	3.84
0.44	100.44	.279E+03	1.3	1.30	3.47
0.50	100.50	.336E+03	1.7	1.40	3.21
0.55	100.55	.399E+03	2.2	1.49	3.02
0.61	100.61	.466E+03	2.7	1.57	2.87
0.66	100.66	.539E+03	3.3	1.63	2.75
0.72	100.72	.616E+03	3.9	1.69	2.66
0.78	100.78	.690E+03	4.5	1.75	2.58
0.83	100.83	.766E+03	5.2	1.80	2.51
0.89	100.89	.879E+03	6.0	1.84	2.45
0.94	100.94	.977E+03	6.8	1.88	2.39
1.00	101.00	.108E+04	7.7	1.92	2.35

<---- hydrograph ----> <-pipe / channel->

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (1030)	30.38	0.85	12.42	21.54	0.36
OUTFLOW: ID= 1 (0021)	30.38	0.85	12.42	21.54	0.36

CALIB					
NASHYD (0230)	Area (ha)=	9.14	Curve Number (CN)=	82.0	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.42			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.58	6.083	1.15	12.083	0.30	18.08	1.04
0.167	0.58	6.167	1.15	12.167	0.29	18.17	1.04
0.250	0.58	6.250	1.15	12.250	0.29	18.25	1.04
0.333	0.58	6.333	1.15	12.333	0.29	18.33	1.04
0.417	0.58	6.417	1.15	12.417	0.29	18.42	1.04
0.500	0.58	6.500	1.15	12.500	0.29	18.50	1.04
0.583	0.58	6.583	1.15	12.583	0.28	18.58	1.04
0.667	0.58	6.667	1.15	12.667	0.26	18.67	1.04
0.750	0.58	6.750	1.15	12.750	0.26	18.75	1.04
0.833	0.58	6.833	1.15	12.833	0.26	18.83	1.04
0.917	0.58	6.917	1.15	12.917	0.26	18.92	1.04
1.000	0.58	7.000	1.15	13.000	0.26	19.00	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	0.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	0.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	0.72	19.75	1.04
1.833	1.04	7.833	1.15	13.833	0.72	19.83	1.04
1.917	1.04	7.917	1.15	13.917	0.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	0.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69

2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW (cms)=	0.349 (1)
TIME TO PEAK (hrs)=	12.250
RUNOFF VOLUME (mm)=	25.531
TOTAL RAINFALL (mm)=	57.600
RUNOFF COEFFICIENT	= 0.443

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0021):	30.38	0.846	12.42	21.54
+ ID2= 2 (0230):	9.14	0.349	12.25	25.53
ID = 3 (0003):	39.52	1.181	12.42	22.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.00000	0.0000	2.7760	0.2010
	1.0940	0.0700	3.2380	0.2400
	1.8140	0.1110	3.7590	0.2830
	2.2340	0.1460	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0003)	39.520	1.181	12.42	22.46
OUTFLOW: ID= 1 (0030)	39.520	1.090	12.58	22.46
	PEAK FLOW REDUCTION [Qout/Qin](%)=	92.32		
	TIME SHIFT OF PEAK FLOW (min)=	10.00		
	MAXIMUM STORAGE USED (ha.m.)=	0.0699		

HRP6.1-PR-SWM_2-100 YEAR.OUT

CALIB			
STANDHYD (0231)	Area (ha)=	7.45	
ID= 1 DT= 2.0 min	Total Imp(%)=	24.00	Dir. Conn.(%)= 24.00

Surface Area	(ha)=	1.79	5.66
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	1.10
Length	(m)=	222.86	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04
1.767	0.81	7.767	1.15	13.767	4.72	19.77	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69

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2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69

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5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 36.03
over (min) 5.00 18.00
Storage Coeff. (min)= 4.02 (ii) 16.72 (ii)
Unit Hyd. Tpeak (min)= 4.00 18.00
Unit Hyd. peak (cms)= 0.28 0.07

PEAK FLOW (cms)= 0.31 0.32 0.535 (iii)
TIME TO PEAK (hrs)= 12.00 12.17 12.00
RUNOFF VOLUME (mm)= 56.10 28.13 34.85
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.49 0.60

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0211)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0231):	7.45	0.535	12.00	34.85
+ ID2= 2 (0030):	39.52	1.090	12.58	22.46
=====				
ID = 3 (0211):	46.97	1.283	12.50	24.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)
IN= 2----> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.485E+01	0.0	0.34	4.39
0.09	100.09	.109E+02	0.1	0.51	2.93
0.14	100.14	.182E+02	0.1	0.64	2.34
0.19	100.19	.267E+02	0.2	0.75	2.00
0.24	100.24	.364E+02	0.3	0.85	1.77
0.28	100.28	.473E+02	0.5	0.94	1.60
0.33	100.33	.594E+02	0.7	1.02	1.47
0.39	100.39	.753E+02	1.0	1.17	1.28
0.44	100.44	.928E+02	1.3	1.30	1.16
0.50	100.50	.112E+03	1.7	1.40	1.07
0.55	100.55	.133E+03	2.2	1.49	1.01
0.61	100.61	.155E+03	2.7	1.57	0.96
0.66	100.66	.180E+03	3.3	1.63	0.92

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0.72	100.72	.205E+03	3.9	1.69	0.89
0.78	100.78	.233E+03	4.5	1.75	0.86
0.83	100.83	.262E+03	5.2	1.80	0.84
0.89	100.89	.293E+03	6.0	1.84	0.82
0.94	100.94	.326E+03	6.8	1.89	0.80
1.00	101.00	.360E+03	7.7	1.92	0.78

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0211) 46.97 1.28 12.50 24.42 0.43 1.28
OUTFLOW: ID= 1 (0005) 46.97 1.28 12.53 24.42 0.43 1.27

CALIB
STANDHYD (0232)
ID= 1 DT= 3.0 min
Area (ha)= 8.25
Total Imp(%)= 39.00
Dir. Conn.(%)= 39.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.22 5.83
Dep. Storage (mm)= 15.00 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 234.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		

HRP6.1-PR-SWM_2-100 YEAR.OUT

2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 25.28
over (min) 6.00 18.00
Storage Coeff. (min)= 4.15 (ii) 16.38 (iii)
Unit Hyd. Tpeak (min)= 6.00 18.00
Unit Hyd. peak (cms)= 0.23 0.07

TOTALS
PEAK FLOW (cms)= 0.55 0.20 0.697 (iii)
TIME TO PEAK (hrs)= 12.00 12.15 12.00
RUNOFF VOLUME (mm)= 42.60 20.32 29.01
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.74 0.35 0.50

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-PR-SWM_2-100 YEAR.OUT

ADD HYD (0007)
1 * 2 = 3

AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0232):	8.25	0.697	12.00	29.01
+ ID2= 2 (0005):	46.97	1.281	12.53	24.42
=====				
ID = 3 (0007):	55.22	1.510	12.03	25.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2--> OUT= 1

Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning
0.00	101.00	0.0800
1.00	100.67	0.0800
2.00	100.33	0.0800 / 0.0350
3.00	100.00	0.0350
4.00	100.00	0.0350
5.00	100.33	0.0350 / 0.0800
6.00	100.67	0.0800
7.00	101.00	0.0800

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

<---- hydrograph ----> <-pipe / channel->

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0007)	55.22	1.51	12.03	25.11	0.47	1.34
OUTFLOW: ID= 1 (0022)	55.22	1.50	12.03	25.11	0.46	1.34

CALIB
STANDHYD (0133)
ID= 1 DT= 3.0 min

Area (ha)= 6.79
Total Imp(%)= 47.00 Dir. Conn.(%)= 47.00

Surface Area	(ha)=	IMPERVIOUS	PERVIOUS (i)
Dep. Storage	(mm)=	3.19	3.60
Average Slope	(%)=	15.00	1.50
Length	(m)=	2.00	2.00
Mannings n	=	212.76	40.00
		0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04	
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04	
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04	
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04	
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04	
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04	
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04	
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04	
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04	

HRP6.1-PR-SWM.2-100 YEAR.OUT									
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		

HRP6.1-PR-SWM.2-100 YEAR.OUT									
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69		
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69		
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69		
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69		
Max.Eff.Inten.(mm/hr)= 63.59 18.99									
over (min) 6.00 15.00									
Storage Coeff. (min)= 3.91 (ii) 12.79 (ii)									
Unit Hyd. Tpeak (min)= 6.00 15.00									
Unit Hyd. peak (cms)= 0.24 0.08									
TOTALS									
PEAK FLOW (cms)= 0.55 0.12 0.646 (iii)									
TIME TO PEAK (hrs)= 12.00 12.10 12.00									
RUNOFF VOLUME (mm)= 42.60 14.86 27.90									
TOTAL RAINFALL (mm)= 57.60 57.60 57.60									
RUNOFF COEFFICIENT = 0.74 0.26 0.48									

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0091)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0133):	6.79	0.646	12.00	27.90
+ ID2= 2 (0022):	55.22	1.501	12.03	25.11
=====				
ID = 3 (0091):	62.01	2.093	12.03	25.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0222)	Area	(ha)=	3.54	Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.15				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----	

HRP6_1-PR-SWM_2-100 YEAR.OUT

1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.203 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 20.040
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.348

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0221)	
ID= 1 DT= 5.0 min	
Area (ha)= 3.79	
Total Imp(%)= 27.00	Dir. Conn.(%)= 27.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.02	2.77
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	158.95	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		

HRP6_1-PR-SWM_2-100 YEAR.OUT

0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 27.56
over (min) 5.00 20.00
Storage Coeff. (min)= 3.28 (ii) 15.10 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.27 0.07

TOTALS
PEAK FLOW (cms)= 0.18 0.12 0.266 (iii)
TIME TO PEAK (hrs)= 12.00 12.17 12.00
RUNOFF VOLUME (mm)= 56.10 21.54 30.87
TOTAL RAINFALL (mm)= 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.37 0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 77.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

HRP6.1-PR-SWM_2-100 YEAR.OUT

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0221):	3.79	0.266	12.00	30.87
+ ID2= 2 (0222):	3.54	0.203	12.00	20.04
=====				
ID = 3 (0009):	7.33	0.469	12.00	25.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0009)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID= 3 (0009):	7.33	0.469	12.00	25.64
+ ID2= 2 (0091):	62.01	2.093	12.03	25.41
=====				
ID = 1 (0009):	69.34	2.555	12.00	25.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)				
IN= 2--> OUT= 1				
DT= 4.0 min				

	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	3.2510	1.2500
	0.6750	0.7720	3.7840	1.3920
	1.6680	1.0110	4.5560	1.5300
	2.4150	1.1310	0.0000	0.0000
=====				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0009)	69.340	2.555	12.00	25.44
OUTFLOW: ID= 1 (0010)	69.340	0.644	13.43	25.43

PEAK FLOW REDUCTION [Qout/qin](%)= 25.21
TIME SHIFT OF PEAK FLOW (min)= 06.00
MAXIMUM STORAGE USED (ha.m.)= 0.7369

CALIB				
STANDHYD (0234)				
ID= 1 DT= 3.0 min				

	Area	(ha)=	17.56	
	Total Imp(%)=	28.00	Dir. Conn.(%)=	28.00

	IMPERVIOUS	PERVIOUS (l)		
Surface Area	(ha)=	4.92	12.64	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	342.15	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		

HRP6.1-PR-SWM_2-100 YEAR.OUT

1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69

HRP6.1-PR-SWM.2-100 YEAR.OUT									
5.450	0.92	[11.450	5.53	[17.450	1.04		23.45	0.69	
5.500	0.92	[11.500	5.54	[17.500	1.04		23.50	0.69	
5.550	0.92	[11.550	23.96	[17.550	1.04		23.55	0.69	
5.600	0.92	[11.600	23.96	[17.600	1.04		23.60	0.69	
5.650	0.92	[11.650	23.96	[17.650	1.04		23.65	0.69	
5.700	0.92	[11.700	23.96	[17.700	1.04		23.70	0.69	
5.750	0.92	[11.750	23.98	[17.750	1.04		23.75	0.69	
5.800	0.92	[11.800	63.59	[17.800	1.04		23.80	0.69	
5.850	0.92	[11.850	63.59	[17.850	1.04		23.85	0.69	
5.900	0.92	[11.900	63.59	[17.900	1.04		23.90	0.69	
5.950	0.92	[11.950	63.59	[17.950	1.04		23.95	0.69	
6.000	0.92	[12.000	63.56	[18.000	1.04		24.00	0.69	

Max.Eff.Inten.(mm/hr)= 63.59 25.29
over (min) 6.00 18.00
Storage Coeff. (min)= 5.20 (ii) 17.44 (ii)
Unit Hyd. T.peak (min)= 6.00 18.00
Unit Hyd. peak (cms)= 0.20 0.06

PEAK FLOW (cms)= 0.82 0.49 1.174 (iii)
TIME TO PEAK (hrs)= 12.00 12.15 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 30.34
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.53

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0010):	69.34	0.644	13.43	25.43
+ ID2= 2 (0234):	17.56	1.174	12.00	30.34
=====				
ID = 3 (0011):	86.90	1.397	12.00	26.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)				
OVERFLOW IS OFF				
IN= 2--> OUT= 1				
DT= 3.0 min				
OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
0.0000	0.0000	3.4620	0.6060	
0.7430	0.2200	4.3720	0.6120	
1.6740	0.3940	5.3540	0.6210	
2.5260	0.4950	0.0000	0.0000	

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0011)	86.900	1.397	12.00
OUTFLOW: ID= 1 (0015)	86.900	0.740	13.20

PEAK FLOW REDUCTION [Qout/Qin](%)= 52.96
TIME SHIFT OF PEAK FLOW (min)= 72.00
MAXIMUM STORAGE USED (ha.m.)= 0.2191

CALIB			
STANDHYD (0235)			
ID= 1 DT= 2.0 min	Area (ha)= 4.28	Total Imp(%)= 30.00	Dir. Conn.(%)= 30.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	1.28	3.00	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	168.92	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04

HRP6.1-PR-SWM.2-100 YEAR.OUT							
0.167	0.58		6.167	1.15		12.167	8.29
0.200	0.58		6.200	1.15		12.200	8.29
0.233	0.58		6.233	1.15		12.233	8.29
0.267	0.58		6.267	1.15		12.267	8.29
0.300	0.58		6.300	1.15		12.300	8.29
0.333	0.58		6.333	1.15		12.333	8.29
0.367	0.58		6.367	1.15		12.367	8.29
0.400	0.58		6.400	1.15		12.400	8.29
0.433	0.58		6.433	1.15		12.433	8.29
0.467	0.58		6.467	1.15		12.467	8.29
0.500	0.58		6.500	1.15		12.500	8.29
0.533	0.58		6.533	1.15		12.533	4.26
0.567	0.58		6.567	1.15		12.567	4.26
0.600	0.58		6.600	1.15		12.600	4.26
0.633	0.58		6.633	1.15		12.633	4.26
0.667	0.58		6.667	1.15		12.667	4.26
0.700	0.58		6.700	1.15		12.700	4.26
0.733	0.58		6.733	1.15		12.733	4.26
0.767	0.58		6.767	1.15		12.767	4.26
0.800	0.58		6.800	1.15		12.800	4.26
0.833	0.58		6.833	1.15		12.833	4.26
0.867	0.58		6.867	1.15		12.867	4.26
0.900	0.58		6.900	1.15		12.900	4.26
0.933	0.58		6.933	1.15		12.933	4.26
0.967	0.58		6.967	1.15		12.967	4.26
1.000	0.58		7.000	1.15		13.000	4.26
1.033	0.58		7.033	1.15		13.033	0.81
1.067	0.58		7.067	1.15		13.067	0.81
1.100	0.58		7.100	1.15		13.100	0.81
1.133	0.58		7.133	1.15		13.133	0.81
1.167	0.58		7.167	1.15		13.167	0.81
1.200	0.58		7.200	1.15		13.200	0.81
1.233	0.58		7.233	1.15		13.233	0.81
1.267	0.58		7.267	1.15		13.267	0.81
1.300	0.58		7.300	1.15		13.300	0.81
1.333	0.58		7.333	1.15		13.333	0.81
1.367	0.58		7.367	1.15		13.367	0.81
1.400	0.58		7.400	1.15		13.400	0.81
1.433	0.58		7.433	1.15		13.433	0.81
1.467	0.58		7.467	1.15		13.467	0.81
1.500	0.58		7.500	1.15		13.500	0.81
1.533	0.58		7.533	1.15		13.533	4.72
1.567	0.58		7.567	1.15		13.567	4.72
1.600	0.58		7.600	1.15		13.600	4.72
1.633	0.58		7.633	1.15		13.633	4.72
1.667	0.58		7.667	1.15		13.667	4.72
1.700	0.58		7.700	1.15		13.700	4.72
1.733	0.58		7.733	1.15		13.733	4.72
1.767	0.81		7.767	1.15		13.767	4.72
1.800	1.04		7.800	1.15		13.800	4.72
1.833	1.04		7.833	1.15		13.833	4.72
1.867	1.04		7.867	1.15		13.867	4.72
1.900	1.04		7.900	1.15		13.900	4.72
1.933	1.04		7.933	1.15		13.933	4.72
1.967	1.04		7.967	1.15		13.967	4.72
2.000	1.04		8.000	1.15		14.000	4.72
2.033	0.75		8.033	1.56		14.033	1.73
2.067	0.75		8.067	1.56		14.067	1.73
2.100	0.75		8.100	1.56		14.100	1.73
2.133	0.75		8.133	1.56		14.133	1.73
2.167	0.75		8.167	1.56		14.167	1.73
2.200	0.75		8.200	1.56		14.200	1.73
2.233	0.75		8.233	1.56		14.233	1.73
2.267	0.75		8.267	1.56		14.267	1.73
2.300	0.75		8.300	1.56		14.300	1.73
2.333	0.75		8.333	1.56		14.333	1.73
2.367	0.75		8.367	1.56		14.367	1.73
2.400	0.75		8.400	1.56		14.400	1.73
2.433	0.75		8.433	1.56		14.433	1.73
2.467	0.75		8.467	1.56		14.467	1.73
2.500	0.75		8.500	1.56		14.500	1.73
2.533	0.75		8.533	1.56		14.533	1.73
2.567	0.75		8.567	1.56		14.567	1.73
2.600	0.75		8.600	1.56		14.600	1.73
2.633	0.75		8.633	1.56		14.633	1.73
2.667	0.75		8.667	1.56		14.667	1.73
2.700	0.75		8.700	1.56		14.700	1.73
2.733	0.75		8.733	1.56		14.733	1.73
2.767	0.75		8.767	1.56		14.767	1.73
2.800	0.75		8.800	1.56		14.800	1.73
2.833	0.75		8.833	1.56		14.833	1.73
2.867	0.75		8.867	1.56		14.867	1.73
2.900	0.75		8.900	1.56		14.900	1.73
2.933	0.75		8.933	1.56		14.933	1.73
2.967	0.75		8.967	1.56		14.967	1.73
3.000	0.75		9.000	1.56		15.000	1.73
3.033	0.75		9.033	1.84		15.033	1.73

HRP6.1-PR-SWM_2-100 YEAR.OUT

3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69

HRP6.1-PR-SWM_2-100 YEAR.OUT

5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 over 25.62
Storage Coeff. (min)= 3.41 (ii) 15.58 (iii)
Unit Hyd. Tpeak (min)= 4.00 16.00
Unit Hyd. peak (cms)= 0.31 0.07

TOTALS
PEAK FLOW (cms)= 0.22 0.12 0.317 (iii)
TIME TO PEAK (hrs)= 12.00 12.13 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 31.05
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.54

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0012) |
1 + 2 = 3
ID1= 1 (0015): 86.90 0.740 13.20 26.42
+ ID2= 2 (0235): 4.28 0.317 12.00 31.05

ID = 3 (0012): 91.18 0.775 13.00 26.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0040) |
IN= 2--> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0000
1.00 100.67 0.0000
2.00 100.33 0.0000 / 0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 / 0.0000 Main Channel
6.00 100.67 0.0000
7.00 101.00 0.0000

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .590E+02 0.0 0.34 53.30
0.09 100.09 .133E+03 0.1 0.51 35.70
0.14 100.14 .221E+03 0.1 0.64 28.48
0.19 100.19 .324E+03 0.2 0.75 24.33
0.24 100.24 .442E+03 0.3 0.85 21.55
0.28 100.28 .575E+03 0.5 0.94 19.51
0.33 100.33 .723E+03 0.7 1.02 17.94
0.39 100.39 .916E+03 1.0 1.17 15.58
0.44 100.44 .113E+04 1.3 1.30 14.08
0.50 100.50 .136E+04 1.7 1.40 13.03
0.55 100.55 .162E+04 2.2 1.49 12.25
0.61 100.61 .189E+04 2.7 1.57 11.65
0.66 100.66 .218E+04 3.3 1.63 11.17
0.72 100.72 .250E+04 3.9 1.69 10.77
0.78 100.78 .283E+04 4.5 1.75 10.45
0.83 100.83 .319E+04 5.2 1.80 10.17
0.89 100.89 .357E+04 6.0 1.84 9.92
0.94 100.94 .396E+04 6.8 1.88 9.71
1.00 101.00 .438E+04 7.7 1.92 9.52

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0012) 91.18 0.77 13.00 26.64 0.35 1.06
OUTFLOW: ID= 1 (0040) 91.18 0.76 13.07 26.64 0.35 1.06

| CALIB |
| STANDHYD (0121) |
ID= 1 DT= 3.0 min
Area (ha)= 1.62
Total Imp(%)= 28.00 Dir. Conn.(%)= 28.00

HRP6.1-PR-SWM_2-100 YEAR.OUT

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.45	1.17
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	103.92	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69

HRP6.1-PR-SWM_2-100 YEAR.OUT							
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 25.28
over (min) 6.00 15.00
Storage Coeff. (min)= 2.55 (ii) 14.78 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08
PEAK FLOW (cms)= 0.08 0.05 0.120 (iii)
TIME TO PEAK (hrs)= 12.00 12.15 12.00
RUNOFF VOLUME (mm)= 56.10 20.32 30.33
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.35 0.53

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (0122)		Area (ha)= 13.12			
ID= 1 DT= 3.0 min		Total Imp(%)= 44.00		Dir. Conn.(%)= 44.00	
		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	5.77		7.35	
Dep. Storage	(mm)=	1.50		1.50	
Average Slope	(%)=	2.00		2.00	
Length	(m)=	295.75		40.00	
Mannings n	=	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04

HRP6.1-PR-SWM.2-100 YEAR.OUT												
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04					
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04					
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04					
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04					
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04					
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04					
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04					
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04					
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04					
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04					
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04					
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04					
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04					
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04					
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04					
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04					
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04					
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04					
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04					
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04					
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04					
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04					
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04					
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04					
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04					
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04					
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04					
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04					
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04					
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04					
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04					
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04					
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04					
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04					
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04					
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04					
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04					
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04					
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04					
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69					
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69					
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69					
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69					
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69					
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69					
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69					
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69					
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69					
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69					
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69					
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69					
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69					
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69					
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69					
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69					
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69					
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69					
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69					
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69					
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69					
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69					
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69					
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69					
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69					
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69					
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69					
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69					
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69					
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69					
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69					
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69					
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69					
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69					
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69					
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69					
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69					
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69					
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69					
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69					
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69					
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69					
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69					
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69					
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69					
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69					
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69					
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69					

HRP6.1-PR-SMM.2-100 YEAR.OUT									
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69		
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69		
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69		
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69		
Max.Eff.Inten.(mm/hr)= 63.59 25.28									
over (min) 6.00 18.00									
Storage Coeff. (min)= 4.77 (ii) 17.00 (ii)									
Unit Hyd. Tpeak (min)= 6.00 18.00									
Unit Hyd. peak (cms)= 0.21 0.07									
TOTALS									
PEAK FLOW (cms)= 0.98 0.29 1.184 (iii)									
TIME TO PEAK (hrs)= 12.00 12.15 12.00									
RUNOFF VOLUME (mm)= 56.10 20.32 36.06									
TOTAL RAINFALL (mm)= 57.60 57.60 57.60									
RUNOFF COEFFICIENT = 0.97 0.35 0.63									
(i) ON PROCEDURE SELECTED FOR PVIOUS LOSSES:									
CN* = 72.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0919)									
1 + 2 = 3									

ID1= 1 (0121):		AREA	QPEAK	TPEAK		R.V.			
		(ha)	(cms)	(hrs)		(mm)			
+ ID2= 2 (0122):	13.12	1.02	0.120	12.00	39.33	36.96			
=====									
ID = 3 (0919):	14.74	1.394	12.00	35.43					
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

ADD HYD (0920)									
1 + 2 = 3									

ID1= 1 (0919):		AREA	QPEAK	TPEAK		R.V.			
		(ha)	(cms)	(hrs)		(mm)			
+ ID2= 2 (0940):	91.18	0.184	0.765	13.07	26.64				
=====									
ID = 3 (0920):	105.92	1.763	12.00	27.86					
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

V	V	I	SSSSS	U	U	A	L		(v 6.1.2002)
V	V	I	SS	U	U	A	A	L	
V	V	I	SS	U	U	AAAAA	L		
V	V	I	SS	U	U	A	A	L	
VV	I	SSSSS	UUUUU	A	A	LLLLL			

0	0	0	TTTTT	TTTTT	H	H	Y	M	M
0	0	0	T	T	H	H	Y	Y	M
0	0	0							0

HRP6.1-PR-SWM_2-100 YEAR.OUT

O O T T H H Y M M O O
000 T T H H Y M M 000
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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voinput.dat
Output filename: C:\Users\AbirA\AppData\Local\CVica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ff6cd779-7f06-4b34-9238-c1b703b01564\scenar
Summary filename: C:\Users\AbirA\AppData\Local\CVica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ff6cd779-7f06-4b34-9238-c1b703b01564\scenar

DATE: 03/24/2023 TIME: 10:37:52

USER:

COMMENTS: _____

** SIMULATION : Run 02 **

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\aa5f3685-1a4d-466b-8f88-df0e08ee45b\fs8e60ca
Ptotal= 76.80 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.77	6.25	1.54	12.25	11.06	18.25	1.38	
0.50	0.77	6.50	1.54	12.50	11.06	18.50	1.38	
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38	
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38	
1.25	0.77	7.25	1.54	13.25	1.08	19.25	1.38	
1.50	0.77	7.50	1.54	13.50	1.08	19.50	1.38	
1.75	0.77	7.75	1.54	13.75	6.30	19.75	1.38	
2.00	1.38	8.00	1.54	14.00	6.30	20.00	1.38	
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92	
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92	
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92	
3.00	1.00	9.00	2.07	15.00	2.30	21.00	0.92	
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92	
3.50	1.00	9.50	2.46	15.50	2.30	21.50	0.92	
3.75	1.00	9.75	2.76	15.75	2.30	21.75	0.92	
4.00	1.00	10.00	2.76	16.00	2.30	22.00	0.92	
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92	
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92	
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92	
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92	
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92	
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92	
5.75	1.23	11.75	31.95	17.75	1.38	23.75	0.92	
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92	

CALIB
NASHYD (1030)
ID= 1 DT= 5.0 min
Area (ha)= 30.38 Curve Number (CN)= 77.0
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38	
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38	
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38	
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38	
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38	
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38	
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38	
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38	
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38	

0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 1.394 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 34.909
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.455

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0021)
IN= 2---> OUT= 1

Routing time step (min)= 4.00

----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning
0.00	101.00	0.0800
1.00	100.67	0.0800
2.00	100.33	0.0800 / 0.0350 Main Channel
3.00	100.00	0.0350 Main Channel
4.00	100.00	0.0350 Main Channel
5.00	100.33	0.0350 / 0.0800 Main Channel

HRP6.1-PR-SWM_2-100 YEAR.OUT

	6.00	100.67	0.0000		
	7.00	101.00	0.0000		
<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.145E+02	0.0	0.34	13.16
0.09	100.09	.327E+02	0.1	0.51	8.80
0.14	100.14	.545E+02	0.1	0.64	7.02
0.19	100.19	.800E+02	0.2	0.75	6.00
0.24	100.24	.109E+03	0.3	0.85	5.31
0.28	100.28	.142E+03	0.5	0.94	4.81
0.33	100.33	.178E+03	0.7	1.02	4.42
0.39	100.39	.226E+03	1.0	1.17	3.84
0.44	100.44	.279E+03	1.3	1.30	3.47
0.50	100.50	.336E+03	1.7	1.40	3.21
0.55	100.55	.399E+03	2.2	1.49	3.02
0.61	100.61	.466E+03	2.7	1.57	2.87
0.66	100.66	.539E+03	3.3	1.63	2.75
0.72	100.72	.616E+03	3.9	1.69	2.66
0.78	100.78	.699E+03	4.5	1.75	2.58
0.83	100.83	.786E+03	5.2	1.80	2.51
0.89	100.89	.879E+03	6.0	1.84	2.45
0.94	100.94	.977E+03	6.8	1.88	2.39
1.00	101.00	.108E+04	7.7	1.92	2.35

<---- hydrograph ---->						<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)	
INFLOW : ID= 2 (1030)	30.38	1.39	12.42	34.91	0.45	1.31	
OUTFLOW: ID= 1 (0021)	30.38	1.40	12.42	34.91	0.45	1.31	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92

HRP6.1-PR-SWM_2-100 YEAR.OUT

3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW (cms)= 0.562 (i)
 TIME TO PEAK (hrs)= 12.250
 RUNOFF VOLUME (mm)= 40.411
 TOTAL RAINFALL (mm)= 76.800
 RUNOFF COEFFICIENT = 0.526

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0021):	30.38	1.396	12.42	34.91
+ ID2= 2 (0230):	9.14	0.562	12.25	40.41
=====				
ID = 3 (0003):	39.52	1.929	12.42	36.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)				OVERFLOW IS OFF			
IN= 2----> OUT= 1							
DT= 5.0 min							
		OUTFLOW (cms)	STORAGE (ha.m.)			OUTFLOW (cms)	STORAGE (ha.m.)
		0.0000	0.0000			2.7760	0.2010
		1.0940	0.0700			3.2300	0.2400
		1.8140	0.1110			3.7590	0.2830
		2.2340	0.1460			0.0000	0.0000
						AREA (ha)	TPEAK (hrs)
						39.520	12.42
						39.520	1.806
						R.V. (mm)	
						36.18	
						36.18	

PEAK FLOW REDUCTION [Qout/Qin](%)= 93.64
 TIME SHIFT OF PEAK FLOW (min)= 10.00
 MAXIMUM STORAGE USED (ha.m.)= 0.1109

CALIB			
STANDHYD (0231)			
ID= 1 DT= 2.0 min			

		Area (ha)=	7.45
		Total Imp(%)=	24.00
		Dir. Conn.(%)=	24.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.79	5.66	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	1.10	
Length (m)=	222.86	40.00	
Mannings n =	0.013	0.250	

HRP6.1-PR-SWM_2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38
1.000	0.77	7.000	1.54	13.000	5.67	19.00	1.38
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38
1.500	0.77	7.500	1.54	13.500	1.09	19.50	1.38
1.533	0.77	7.533	1.54	13.533	6.38	19.53	1.38
1.567	0.77	7.567	1.54	13.567	6.38	19.57	1.38
1.600	0.77	7.600	1.54	13.600	6.38	19.60	1.38
1.633	0.77	7.633	1.54	13.633	6.38	19.63	1.38
1.667	0.77	7.667	1.54	13.667	6.38	19.67	1.38
1.700	0.77	7.700	1.54	13.700	6.38	19.70	1.38
1.733	0.77	7.733	1.54	13.733	6.38	19.73	1.38
1.767	1.08	7.767	1.54	13.767	6.38	19.77	1.38
1.800	1.38	7.800	1.54	13.800	6.38	19.80	1.38
1.833	1.38	7.833	1.54	13.833	6.38	19.83	1.38
1.867	1.38	7.867	1.54	13.867	6.38	19.87	1.38
1.900	1.38	7.900	1.54	13.900	6.38	19.90	1.38
1.933	1.38	7.933	1.54	13.933	6.38	19.93	1.38
1.967	1.38	7.967	1.54	13.967	6.38	19.97	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.033	1.08	8.033	2.07	14.033	2.38	20.03	0.92
2.067	1.08	8.067	2.07	14.067	2.38	20.07	0.92
2.100	1.08	8.100	2.07	14.100	2.38	20.10	0.92
2.133	1.08	8.133	2.07	14.133	2.38	20.13	0.92
2.167	1.08	8.167	2.07	14.167	2.38	20.17	0.92
2.200	1.08	8.200	2.07	14.200	2.38	20.20	0.92
2.233	1.08	8.233	2.07	14.233	2.38	20.23	0.92
2.267	1.08	8.267	2.07	14.267	2.38	20.27	0.92
2.300	1.08	8.300	2.07	14.300	2.38	20.30	0.92
2.333	1.08	8.333	2.07	14.333	2.38	20.33	0.92
2.367	1.08	8.367	2.07	14.367	2.38	20.37	0.92
2.400	1.08	8.400	2.07	14.400	2.38	20.40	0.92
2.433	1.08	8.433	2.07	14.433	2.38	20.43	0.92
2.467	1.08	8.467	2.07	14.467	2.38	20.47	0.92
2.500	1.08	8.500	2.07	14.500	2.38	20.50	0.92
2.533	1.08	8.533	2.07	14.533	2.38	20.53	0.92
2.567	1.08	8.567	2.07	14.567	2.38	20.57	0.92
2.600	1.08	8.600	2.07	14.600	2.38	20.60	0.92
2.633	1.08	8.633	2.07	14.633	2.38	20.63	0.92
2.667	1.08	8.667	2.07	14.667	2.38	20.67	0.92

HRP6.1-PR-SWM_2-100 YEAR.OUT							
2.700	1.08	8.700	2.07	14.700	2.38	20.70	0.92
2.733	1.08	8.733	2.07	14.733	2.38	20.73	0.92
2.767	1.08	8.767	2.07	14.767	2.38	20.77	0.92
2.800	1.08	8.800	2.07	14.800	2.38	20.80	0.92
2.833	1.08	8.833	2.07	14.833	2.38	20.83	0.92
2.867	1.08	8.867	2.07	14.867	2.38	20.87	0.92
2.900	1.08	8.900	2.07	14.900	2.38	20.90	0.92
2.933	1.08	8.933	2.07	14.933	2.38	20.93	0.92
2.967	1.08	8.967	2.07	14.967	2.38	20.97	0.92
3.000	1.08	9.000	2.07	15.000	2.38	21.00	0.92
3.033	1.08	9.033	2.46	15.033	2.38	21.03	0.92
3.067	1.08	9.067	2.46	15.067	2.38	21.07	0.92
3.100	1.08	9.100	2.46	15.100	2.38	21.10	0.92
3.133	1.08	9.133	2.46	15.133	2.38	21.13	0.92
3.167	1.08	9.167	2.46	15.167	2.38	21.17	0.92
3.200	1.08	9.200	2.46	15.200	2.38	21.20	0.92
3.233	1.08	9.233	2.46	15.233	2.38	21.23	0.92
3.267	1.08	9.267	2.46	15.267	2.38	21.27	0.92
3.300	1.08	9.300	2.46	15.300	2.38	21.30	0.92
3.333	1.08	9.333	2.46	15.333	2.38	21.33	0.92
3.367	1.08	9.367	2.46	15.367	2.38	21.37	0.92
3.400	1.08	9.400	2.46	15.400	2.38	21.40	0.92
3.433	1.08	9.433	2.46	15.433	2.38	21.43	0.92
3.467	1.08	9.467	2.46	15.467	2.38	21.47	0.92
3.500	1.08	9.500	2.46	15.500	2.38	21.50	0.92
3.533	1.08	9.533	2.76	15.533	2.38	21.53	0.92
3.567	1.08	9.567	2.76	15.567	2.38	21.57	0.92
3.600	1.08	9.600	2.76	15.600	2.38	21.60	0.92
3.633	1.08	9.633	2.76	15.633	2.38	21.63	0.92
3.667	1.08	9.667	2.76	15.667	2.38	21.67	0.92
3.700	1.08	9.700	2.76	15.700	2.38	21.70	0.92
3.733	1.08	9.733	2.76	15.733	2.38	21.73	0.92
3.767	1.08	9.767	2.76	15.767	2.38	21.77	0.92
3.800	1.08	9.800	2.76	15.800	2.38	21.80	0.92
3.833	1.08	9.833	2.76	15.833	2.38	21.83	0.92
3.867	1.08	9.867	2.76	15.867	2.38	21.87	0.92
3.900	1.08	9.900	2.76	15.900	2.38	21.90	0.92
3.933	1.08	9.933	2.76	15.933	2.38	21.93	0.92
3.967	1.08	9.967	2.76	15.967	2.38	21.97	0.92
4.000	1.08	10.000	2.77	16.000	2.38	22.00	0.92
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	

HRP6.1-PR-SWM_2-100 YEAR.OUT

5.600	1.23	[11.600	31.95	[17.600	1.38	[23.60	0.92
5.633	1.23	[11.633	31.95	[17.633	1.38	[23.63	0.92
5.667	1.23	[11.667	31.95	[17.667	1.38	[23.67	0.92
5.700	1.23	[11.700	31.95	[17.700	1.38	[23.70	0.92
5.733	1.23	[11.733	31.95	[17.733	1.38	[23.73	0.92
5.767	1.23	[11.767	58.44	[17.767	1.38	[23.77	0.92
5.800	1.23	[11.800	84.79	[17.800	1.38	[23.80	0.92
5.833	1.23	[11.833	84.79	[17.833	1.38	[23.83	0.92
5.867	1.23	[11.867	84.79	[17.867	1.38	[23.87	0.92
5.900	1.23	[11.900	84.79	[17.900	1.38	[23.90	0.92
5.933	1.23	[11.933	84.79	[17.933	1.38	[23.93	0.92
5.967	1.23	[11.967	84.79	[17.967	1.38	[23.97	0.92
6.000	1.23	[12.000	84.68	[18.000	1.38	[24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 56.37
over (min) 5.00 16.00
Storage Coeff. (min)= 3.59 (ii) 14.21 (ii)
Unit Hyd. Tpeak (min)= 4.00 16.00
Unit Hyd. peak (cms)= 0.30 0.08

TOTALS
0.835 (iii)
12.00
50.95
76.80
0.66

PEAK FLOW (cms)= 0.42 0.54
TIME TO PEAK (hrs)= 12.00 12.13
RUNOFF VOLUME (mm)= 75.30 43.26
TOTAL RAINFALL (mm)= 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.56

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CW= 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0211)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0231):	7.45	0.835	12.00	50.95
+ ID2= 2 (0030):	39.52	1.806	12.58	36.18
=====				
ID = 3 (0211):	46.97	2.087	12.58	38.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0005) |
| IN= 2--> OUT= 1 | Routing time step (min)!= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.485E+01	0.0	0.34	4.39
0.09	100.09	.109E+02	0.1	0.51	2.93
0.14	100.14	.182E+02	0.1	0.64	2.34
0.19	100.19	.267E+02	0.2	0.75	2.00
0.24	100.24	.364E+02	0.3	0.85	1.77
0.28	100.28	.473E+02	0.5	0.94	1.60
0.33	100.33	.594E+02	0.7	1.02	1.47
0.39	100.39	.753E+02	1.0	1.17	1.28
0.44	100.44	.928E+02	1.3	1.30	1.16
0.50	100.50	.112E+03	1.7	1.40	1.07
0.55	100.55	.133E+03	2.2	1.49	1.01
0.61	100.61	.155E+03	2.7	1.57	0.96
0.66	100.66	.180E+03	3.3	1.63	0.92
0.72	100.72	.205E+03	3.9	1.69	0.89
0.78	100.78	.233E+03	4.5	1.75	0.86
0.83	100.83	.262E+03	5.2	1.80	0.84
0.89	100.89	.293E+03	6.0	1.84	0.82
0.94	100.94	.326E+03	6.8	1.88	0.80
1.00	101.00	.360E+03	7.7	1.92	0.78

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)

HRP6.1-PR-SWM_2-100 YEAR.OUT

INFLOW : ID= 2 (0211) 46.97 2.09 12.50 38.52 0.54 1.47
OUTFLOW: ID= 1 (0005) 46.97 2.08 12.50 38.52 0.54 1.47

| CALIB |
| STANDHYD (0232) | Area (ha)= 8.25
| ID= 1 DT= 3.0 min | Total Imp(%)= 39.00 Dir. Conn.(%)= 39.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.22 5.03
Dep. Storage (mm)= 15.00 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 234.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38				
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38				
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38				
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38				
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38				
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38				
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38				
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38				
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38				
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38				
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38				
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38				
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38				
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38				
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38				
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38				
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38				
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38				
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38				
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38				
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38				
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38				
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38				
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38				
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38				
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38				
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38				
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38				
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38				
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38				
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38				
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38				
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38				
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38				
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38				
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38				
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38				
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38				
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38				
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38				
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92				
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92				
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92				
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92				
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92				
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92				
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92				
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92				
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92				
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92				
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92				
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92				
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92				
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92				
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92				
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92				
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92				
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92				
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92				
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92				
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92				
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92				
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92				

HRP6.1-PR-SWM_2-100 YEAR.OUT

HRP6.1-PR-SWM_2-100 YEAR.OUT

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0022)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0000
1.00 100.67 0.0000
2.00 100.33 0.0000 /0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 /0.0000 Main Channel
6.00 100.67 0.0000
7.00 101.00 0.0000

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .609E+01 0.0 0.34 5.51
0.09 100.09 .137E+02 0.1 0.51 3.68
0.14 100.14 .228E+02 0.1 0.64 2.94
0.19 100.19 .335E+02 0.2 0.75 2.51
0.24 100.24 .457E+02 0.3 0.85 2.22
0.28 100.28 .594E+02 0.5 0.94 2.01
0.33 100.33 .746E+02 0.7 1.02 1.85
0.39 100.39 .945E+02 1.0 1.17 1.61
0.44 100.44 .117E+03 1.3 1.30 1.45
0.50 100.50 .141E+03 1.7 1.40 1.34
0.55 100.55 .167E+03 2.2 1.49 1.26
0.61 100.61 .195E+03 2.7 1.57 1.20
0.66 100.66 .225E+03 3.3 1.63 1.15
0.72 100.72 .258E+03 3.9 1.69 1.11
0.78 100.78 .292E+03 4.5 1.75 1.08
0.83 100.83 .329E+03 5.2 1.80 1.05
0.89 100.89 .368E+03 6.0 1.84 1.02
0.94 100.94 .409E+03 6.8 1.88 1.00
1.00 101.00 .452E+03 7.7 1.92 0.98

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0007) 55.22 2.40 12.03 39.34 0.57 1.52
OUTFLOW: ID= 1 (0022) 55.22 2.38 12.03 39.34 0.57 1.52

| CALIB |
| STANDHYD (0133) | Area (ha)= 6.79
| ID= 1 DT= 3.0 min | Total Imp(%)= 47.00 Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.19 3.60
Dep. Storage (mm)= 15.00 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 212.76 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.050 0.77 | 6.050 1.54 | 12.050 11.06 | 18.05 1.38
0.100 0.77 | 6.100 1.54 | 12.100 11.06 | 18.10 1.38
0.150 0.77 | 6.150 1.54 | 12.150 11.06 | 18.15 1.38
0.200 0.77 | 6.200 1.54 | 12.200 11.06 | 18.20 1.38
0.250 0.77 | 6.250 1.54 | 12.250 11.06 | 18.25 1.38
0.300 0.77 | 6.300 1.54 | 12.300 11.06 | 18.30 1.38
0.350 0.77 | 6.350 1.54 | 12.350 11.06 | 18.35 1.38
0.400 0.77 | 6.400 1.54 | 12.400 11.06 | 18.40 1.38
0.450 0.77 | 6.450 1.54 | 12.450 11.06 | 18.45 1.38
0.500 0.77 | 6.500 1.54 | 12.500 11.06 | 18.50 1.38
0.550 0.77 | 6.550 1.54 | 12.550 5.68 | 18.55 1.38
0.600 0.77 | 6.600 1.54 | 12.600 5.68 | 18.60 1.38
0.650 0.77 | 6.650 1.54 | 12.650 5.68 | 18.65 1.38
0.700 0.77 | 6.700 1.54 | 12.700 5.68 | 18.70 1.38
0.750 0.77 | 6.750 1.54 | 12.750 5.68 | 18.75 1.38
0.800 0.77 | 6.800 1.54 | 12.800 5.68 | 18.80 1.38
0.850 0.77 | 6.850 1.54 | 12.850 5.68 | 18.85 1.38
0.900 0.77 | 6.900 1.54 | 12.900 5.68 | 18.90 1.38
0.950 0.77 | 6.950 1.54 | 12.950 5.68 | 18.95 1.38

3.200 1.00 | 9.200 2.46 | 15.200 2.30 | 21.20 0.92
3.250 1.00 | 9.250 2.46 | 15.250 2.30 | 21.25 0.92
3.300 1.00 | 9.300 2.46 | 15.300 2.30 | 21.30 0.92
3.350 1.00 | 9.350 2.46 | 15.350 2.30 | 21.35 0.92
3.400 1.00 | 9.400 2.46 | 15.400 2.30 | 21.40 0.92
3.450 1.00 | 9.450 2.46 | 15.450 2.30 | 21.45 0.92
3.500 1.00 | 9.500 2.46 | 15.500 2.30 | 21.50 0.92
3.550 1.00 | 9.550 2.76 | 15.550 2.30 | 21.55 0.92
3.600 1.00 | 9.600 2.76 | 15.600 2.30 | 21.60 0.92
3.650 1.00 | 9.650 2.76 | 15.650 2.30 | 21.65 0.92
3.700 1.00 | 9.700 2.76 | 15.700 2.30 | 21.70 0.92
3.750 1.00 | 9.750 2.76 | 15.750 2.30 | 21.75 0.92
3.800 1.00 | 9.800 2.76 | 15.800 2.30 | 21.80 0.92
3.850 1.00 | 9.850 2.76 | 15.850 2.30 | 21.85 0.92
3.900 1.00 | 9.900 2.76 | 15.900 2.30 | 21.90 0.92
3.950 1.00 | 9.950 2.76 | 15.950 2.30 | 21.95 0.92
4.000 1.00 | 10.000 2.77 | 16.000 2.30 | 22.00 0.92
4.050 1.23 | 10.050 3.53 | 16.050 1.38 | 22.05 0.92
4.100 1.23 | 10.100 3.53 | 16.100 1.38 | 22.10 0.92
4.150 1.23 | 10.150 3.53 | 16.150 1.38 | 22.15 0.92
4.200 1.23 | 10.200 3.53 | 16.200 1.38 | 22.20 0.92
4.250 1.23 | 10.250 3.53 | 16.250 1.38 | 22.25 0.92
4.300 1.23 | 10.300 3.53 | 16.300 1.38 | 22.30 0.92
4.350 1.23 | 10.350 3.53 | 16.350 1.38 | 22.35 0.92
4.400 1.23 | 10.400 3.53 | 16.400 1.38 | 22.40 0.92
4.450 1.23 | 10.450 3.53 | 16.450 1.38 | 22.45 0.92
4.500 1.23 | 10.500 3.53 | 16.500 1.38 | 22.50 0.92
4.550 1.23 | 10.550 4.76 | 16.550 1.38 | 22.55 0.92
4.600 1.23 | 10.600 4.76 | 16.600 1.38 | 22.60 0.92
4.650 1.23 | 10.650 4.76 | 16.650 1.38 | 22.65 0.92
4.700 1.23 | 10.700 4.76 | 16.700 1.38 | 22.70 0.92
4.750 1.23 | 10.750 4.76 | 16.750 1.38 | 22.75 0.92
4.800 1.23 | 10.800 4.76 | 16.800 1.38 | 22.80 0.92
4.850 1.23 | 10.850 4.76 | 16.850 1.38 | 22.85 0.92
4.900 1.23 | 10.900 4.76 | 16.900 1.38 | 22.90 0.92
4.950 1.23 | 10.950 4.76 | 16.950 1.38 | 22.95 0.92
5.000 1.23 | 11.000 4.76 | 17.000 1.38 | 23.00 0.92
5.050 1.23 | 11.050 7.37 | 17.050 1.38 | 23.05 0.92
5.100 1.23 | 11.100 7.37 | 17.100 1.38 | 23.10 0.92
5.150 1.23 | 11.150 7.37 | 17.150 1.38 | 23.15 0.92
5.200 1.23 | 11.200 7.37 | 17.200 1.38 | 23.20 0.92
5.250 1.23 | 11.250 7.37 | 17.250 1.38 | 23.25 0.92
5.300 1.23 | 11.300 7.37 | 17.300 1.38 | 23.30 0.92
5.350 1.23 | 11.350 7.37 | 17.350 1.38 | 23.35 0.92
5.400 1.23 | 11.400 7.37 | 17.400 1.38 | 23.40 0.92
5.450 1.23 | 11.450 7.37 | 17.450 1.38 | 23.45 0.92
5.500 1.23 | 11.500 7.39 | 17.500 1.38 | 23.50 0.92
5.550 1.23 | 11.550 31.95 | 17.550 1.38 | 23.55 0.92
5.600 1.23 | 11.600 31.95 | 17.600 1.38 | 23.60 0.92
5.650 1.23 | 11.650 31.95 | 17.650 1.38 | 23.65 0.92
5.700 1.23 | 11.700 31.95 | 17.700 1.38 | 23.70 0.92
5.750 1.23 | 11.750 31.98 | 17.750 1.38 | 23.75 0.92
5.800 1.23 | 11.800 84.79 | 17.800 1.38 | 23.80 0.92
5.850 1.23 | 11.850 84.79 | 17.850 1.38 | 23.85 0.92
5.900 1.23 | 11.900 84.79 | 17.900 1.38 | 23.90 0.92
5.950 1.23 | 11.950 84.79 | 17.950 1.38 | 23.95 0.92
6.000 1.23 | 12.000 84.75 | 18.000 1.38 | 24.00 0.92

Max.Eff.Inten.(mm/hr)= 84.79 42.25
over (min) 6.00 15.00
Storage Coeff. (min)= 3.70 (ii) 13.66 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08

TOTALS
PEAK FLOW (cms)= 0.74 0.36 1.042 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 61.80 32.57 43.97
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.80 0.42 0.57

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0007) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0232): 8.25 1.042 12.00 43.97
+ ID2= 2 (0005): 46.97 2.001 12.50 38.52
=====

ID = 3 (0007): 55.22 2.395 12.03 39.34

HRP6.1-PR-SWM_2-100 YEAR.OUT

HRP6.1-PR-SWM_2-100 YEAR.OUT

TOTALS
0.932 (iii)

CN* = 62.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
| ADD HYD ( 0091)|
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NASHYD (0222) | Area (ha)= 3.54 Curve Number (CN)= 75.0

---- TRANSFORMED HYETOGRAPH ----

HRP6.1-PR-SWM_2-100 YEAR.OUT

2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.336 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 32.758
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.427

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0221)	Area (ha)= 3.79
ID= 1 DT= 5.0 min	Total Imp(%)= 27.00 Dir. Conn.(%)= 27.00

Surface Area	(ha)=	IMPERVIOUS	PERVIOUS (i)
Dep. Storage	(mm)=	1.02	2.77
Average Slope	(%)=	1.50	5.00
Length	(m)=	2.00	2.00
Mannings n	=	158.95	40.00
		0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38

HRP6.1-PR-SWM_2-100 YEAR.OUT

1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 47.56
over (min) 5.00 15.00
Storage Coeff. (min)= 2.93 (ii) 12.43 (iii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.08

TOTALS
PEAK FLOW (cms)= 0.24 0.23 0.442 (iii)
TIME TO PEAK (hrs)= 12.00 12.08 12.00
RUNOFF VOLUME (mm)= 75.30 34.91 45.81
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.45 0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0000)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0221):	3.79	0.442	12.00	45.81

HRP6.1-PR-SWM_2-100 YEAR.OUT				
+ ID2= 2 (0222):	3.54	0.336	12.00	32.76
=====				
ID = 3 (0009):	7.33	0.778	12.00	39.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0009)				
3 + 2 = 1				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0009):	7.33	0.778	12.00	39.51
+ ID2= 2 (0091):	62.01	3.230	12.03	39.63
=====				
ID = 1 (0009):	69.34	3.978	12.00	39.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)				
IN= 2--> OUT= 1				
DT= 4.0 min				

OVERFLOW IS OFF				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	3.2510	1.2500
	0.6750	0.7720	3.7840	1.3920
	1.6680	1.0110	4.5560	1.5300
	2.4150	1.1310	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0009)	69.340	3.978	12.00	39.62
OUTFLOW: ID= 1 (0010)	69.340	1.663	13.07	39.62

PEAK FLOW REDUCTION [Qout/Qin](%)= 41.81
TIME SHIFT OF PEAK FLOW (min)= 64.00
MAXIMUM STORAGE USED (ha.m.)= 1.0100

CALIB		
STANDHYD (0234)		
ID= 1 DT= 3.0 min		

	Area	(ha)=	17.56
	Total Imp(%)=	28.00	Dir. Conn.(%)= 28.00

	IMPERVIOUS	PERVIOUS (I)	
Surface Area	(ha)=	4.92	12.64
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	342.15	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38		
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38		
1.550	0.77	7.550	1.54	13.550	6.38	19.55	1.38		

HRP6.1-PR-SWM_2-100 YEAR.OUT							
1.600	0.77	7.600	1.54	13.600	6.38	19.60	1.38
1.650	0.77	7.650	1.54	13.650	6.38	19.65	1.38
1.700	0.77	7.700	1.54	13.700	6.38	19.70	1.38
1.750	0.77	7.750	1.54	13.750	6.38	19.75	1.38
1.800	1.38	7.800	1.54	13.800	6.38	19.80	1.38
1.850	1.38	7.850	1.54	13.850	6.38	19.85	1.38
1.900	1.38	7.900	1.54	13.900	6.38	19.90	1.38
1.950	1.38	7.950	1.54	13.950	6.38	19.95	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92

HRP6.1-PR-SWM_2-100 YEAR.OUT

5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 42.25
over (min)= 6.00 15.00
Storage Coeff. (min)= 4.64 (ii) 14.60 (iii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

TOTALS
PEAK FLOW (cms)= 1.11 0.88 1.840 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 75.30 32.57 44.54
TOTAL RAINFALL (mm)= 76.00 76.00 76.00
RUNOFF COEFFICIENT = 0.98 0.42 0.58

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0010):	69.34	1.663	13.07	39.62
+ ID2= 2 (0234):	17.56	1.840	12.00	44.54
ID = 3 (0011):	86.90	2.218	12.00	40.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)	OVERFLOW IS OFF			
IN= 2--> OUT= 1				
DT= 3.0 min				
OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
0.0000	0.0000	3.4620	0.6060	
0.7430	0.2200	4.3720	0.6120	
1.6740	0.3940	5.3540	0.6210	
2.5260	0.4950	0.0000	0.0000	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
INFLOW : ID= 2 (0011)	86.900	2.218	12.00	40.61
OUTFLOW: ID= 1 (0015)	86.900	1.674	13.30	40.61
PEAK FLOW REDUCTION [Qout/Qin](%)= 75.46				
TIME SHIFT OF PEAK FLOW (min)= 78.00				
MAXIMUM STORAGE USED (ha.m.)= 0.3939				

CALIB	Area (ha)= 4.20
STANDHYD (0235)	Total Imp(%)= 30.00 Dir. Conn.(%)= 30.00
ID= 1 DT= 2.0 min	
IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)= 1.28	3.00
Dep. Storage (mm)= 1.50	1.50
Average Slope (%)= 2.00	2.00
Length (m)= 168.92	40.00
Mannings n = 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38

HRP6.1-PR-SWM_2-100 YEAR.OUT

0.500	0.77	6.500	1.54	12.500	11.05	18.50	1.38
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38
1.000	0.77	7.000	1.54	13.000	5.67	19.00	1.38
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38
1.500	0.77	7.500	1.54	13.500	1.09	19.50	1.38
1.533	0.77	7.533	1.54	13.533	6.30	19.53	1.38
1.567	0.77	7.567	1.54	13.567	6.30	19.57	1.38
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38
1.633	0.77	7.633	1.54	13.633	6.30	19.63	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38
1.767	1.08	7.767	1.54	13.767	6.30	19.77	1.38
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38
1.967	1.38	7.967	1.54	13.967	6.30	19.97	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.033	1.00	8.033	2.07	14.033	2.30	20.03	0.92
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.233	1.00	8.233	2.07	14.233	2.30	20.23	0.92
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.367	1.00	8.367	2.07	14.367	2.30	20.37	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.433	1.00	8.433	2.07	14.433	2.30	20.43	0.92
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92
2.567	1.00	8.567	2.07	14.567	2.30	20.57	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.633	1.00	8.633	2.07	14.633	2.30	20.63	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92
2.767	1.00	8.767	2.07	14.767	2.30	20.77	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.867	1.00	8.867	2.07	14.867	2.30	20.87	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92
2.967	1.00	8.967	2.07	14.967	2.30	20.97	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.033	1.00	9.033	2.46	15.033	2.30	21.03	0.92
3.067	1.00	9.067	2.46	15.067	2.30	21.07	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.133	1.00	9.133	2.46	15.133	2.30	21.13	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.233	1.00	9.233	2.46	15.233	2.30	21.23	0.92
3.267	1.00	9.267	2.46	15.267	2.30	21.27	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.367	1.00	9.367	2.46	15.367	2.30	21.37	0.92

HRP6.1-PR-SWM_2-100 YEAR.OUT

3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.433	1.00	9.433	2.46	15.433	2.30	21.43	0.92
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.533	1.00	9.533	2.76	15.533	2.30	21.53	0.92
3.567	1.00	9.567	2.76	15.567	2.30	21.57	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.633	1.00	9.633	2.76	15.633	2.30	21.63	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92
3.767	1.00	9.767	2.76	15.767	2.30	21.77	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92
3.967	1.00	9.967	2.76	15.967	2.30	21.97	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.500	1.23	11.500	7.40	17.500	1.38	23.50	0.92
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.767	1.23	11.767	58.44	17.767	1.38	23.77	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92
6.000	1.23	12.000	84.68	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 43.14
over (min) 5.00 14.00
Storage Coeff. (min)= 3.04 (ii) 12.92 (iii)
Unit Hyd. Tpeak (min)= 4.00 14.00
Unit Hyd. peak (cms)= 0.33 0.09

TOTALS
PEAK FLOW (cms)= 0.30 0.22 0.484 (iii)

HRP6.1-PR-SWM_2-100 YEAR.OUT

TIME TO PEAK (hrs)=	12.00	12.10	12.00
RUNOFF VOLUME (mm)=	75.30	32.57	45.39
TOTAL RAINFALL (mm)=	76.80	76.80	76.80
RUNOFF COEFFICIENT =	0.98	0.42	0.59

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0012)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0015):	86.90	1.674	13.30	40.61
+ ID2= 2 (0235):	4.28	0.484	12.00	45.39
ID = 3 (0012):	91.18	1.696	13.27	40.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)	Routing time step (min)'= 2.00
IN= 2--> OUT= 1	

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.590E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.136E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

<---- hydrograph ---->					<-pipe / channel->	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)	
INFLOW : ID= 2 (0012)	91.18	1.70	13.27	40.83	0.49	1.39
OUTFLOW: ID= 1 (0040)	91.18	1.67	13.43	40.83	0.49	1.38

CALIB	Area (ha)= 1.62
STANDHYD (0121)	Total Imp(%)= 28.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)= 28.00

Surface Area (ha)=	IMPERVIOUS 0.45	PERVIOUS (i) 1.17
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	183.92	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRP6.1-PR-SWM_2-100 YEAR.OUT

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	6.950	1.54	12.050	11.06	18.05	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38		
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38		
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38		
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38		
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38		
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38		
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38		
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38		
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38		
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38		
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92		
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92		
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92		
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92		
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92		
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92		
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92		
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92		
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92		
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92		
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92		
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92		
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92		
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92		
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92		
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92		
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92		
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92		
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92		
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92		
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92		
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92		
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92		
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92		
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92		
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92		
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92		
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92		
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92		
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92		
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92		
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92		
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92		
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92		
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92		
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92		
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92		
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92		

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4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Inten.(mm/hr)=	84.79	42.25
over (min)	6.00	15.00
Diff. (min)=	2.27 (ii)	12.23 (iii)
Tpeak (min)=	6.00	15.00
peak (cms)=	0.30	0.09

EAK (cms)=	0.11	0.09	*TOTALS*
EAK (hrs)=	12.00	12.10	0.180 (iii)
LUM (mm)=	75.30	32.57	44.53
INFALL (mm)=	76.80	76.80	76.80
EFFICIENT =	0.98	0.42	0.58

STORAGE COEFF. IS SMALLER THAN TIME STEP!

PROCEDURE SELECTED FOR PERVIOUS LOSSES:
* = 72.0 Ia = Dep. Storage (Above)
E STEP (DT) SHOULD BE SMALLER OR EQUAL
N THE STORAGE COEFFICIENT.
K FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

Area (ha)=	13.12		
Total Imp(%)=	44.00	Dir. Conn.(%)=	44.00

Area (ha)=	5.77	7.35
age (mm)=	1.50	1.50
lope (%)=	2.00	2.00
(m)=	295.75	40.00
n =	0.013	0.250

RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		

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0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.550	0.77	7.550	1.54	13.550	6.38	19.55	1.38
1.600	0.77	7.600	1.54	13.600	6.38	19.60	1.38
1.650	0.77	7.650	1.54	13.650	6.38	19.65	1.38
1.700	0.77	7.700	1.54	13.700	6.38	19.70	1.38
1.750	0.77	7.750	1.54	13.750	6.38	19.75	1.38
1.800	1.38	7.800	1.54	13.800	6.38	19.80	1.38
1.850	1.38	7.850	1.54	13.850	6.38	19.85	1.38
1.900	1.38	7.900	1.54	13.900	6.38	19.90	1.38
1.950	1.38	7.950	1.54	13.950	6.38	19.95	1.38
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92

HRP6.1-PR-SWM.2-100 YEAR.OUT

4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 42.25
over (min) 6.00 15.00
Storage Coeff. (min)= 4.25 (ii) 12.55 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

TOTALS
PEAK FLOW (cms)= 1.32 0.55 1.773 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 75.30 32.57 51.37
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.42 0.67

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN1 = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0121):	1.62	0.180	12.00	44.53
+ ID2= 2 (0122):	13.12	1.773	12.00	51.37
=====				
ID = 3 (0019):	14.74	1.953	12.00	50.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0019):	14.74	1.953	12.00	50.62
+ ID2= 2 (0040):	91.18	1.670	13.43	40.83
=====				
ID = 3 (0020):	105.92	2.622	12.00	42.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\861eee07-ea9c-49ed-9f61-8c9dadbb3f59\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\861eee07-ea9c-49ed-9f61-8c9dadbb3f59\scenar

DATE: 03/24/2023

TIME: 10:37:51

USER:

COMMENTS: _____

** SIMULATION : Run 03

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\
| | aa5f3685-1a4d-466b-8f88-d1f0e08ee45b\1913d010
| Ptotal= 88.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60	
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60	
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60	
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60	
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60	
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60	
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60	
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60	
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07	
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07	
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07	
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07	
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07	
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07	
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07	
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07	
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07	
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07	
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07	
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07	
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07	
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07	
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07	
6.00	1.42	12.00	98.84	18.00	1.60	24.00	1.07	

| CALIB |
| NASHYD (1030) | Area (ha)= 30.38 Curve Number (CN)= 77.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60	
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60	
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60	
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60	
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60	
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60	
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60	
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60	
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60	
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60	
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60	
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60	
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60	
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60	
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60	

1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60	
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60	
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60	
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60	
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60	
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60	
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60	
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60	
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60	
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07	
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07	
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07	
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07	
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07	
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07	
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07	
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07	
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07	
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07	
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07	
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07	
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07	
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07	
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07	
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07	
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07	
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07	
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07	
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07	
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07	
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07	
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07	
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07	
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07	
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07	
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07	
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07	
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07	
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07	
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07	
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07	
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07	
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07	
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07	
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07	
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07	
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07	
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07	
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07	
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07	
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07	
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07	
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07	
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07	
5.833	1.42	11.833	98.84	17.833	1.60	23.83	1.07	
5.917	1.42	11.917	98.84	17.917	1.60	23.92	1.07	
6.000	1.42	12.000	98.84	18.000	1.60	24.00	1.07	

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 1.766 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 43.979
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.495

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ROUTE CHN(0021) |
| IN= 2 ---> OUT= 1 | Routing time step (min)'= 4.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0000	
1.00	100.67	0.0000	
2.00	100.33	0.0000 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0000	Main Channel
6.00	100.67	0.0000	
7.00	101.00	0.0000	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)

HRP6.1-PR-SWM.2-100 YEAR.OUT									
0.05	100.05	.145E+02	0.0	0.34	13.16				
0.09	100.09	.327E+02	0.1	0.51	8.80				
0.14	100.14	.545E+02	0.1	0.64	7.02				
0.19	100.19	.806E+02	0.2	0.75	6.00				
0.24	100.24	.109E+03	0.3	0.85	5.31				
0.28	100.28	.142E+03	0.5	0.94	4.81				
0.33	100.33	.178E+03	0.7	1.02	4.42				
0.39	100.39	.226E+03	1.0	1.17	3.84				
0.44	100.44	.279E+03	1.3	1.30	3.47				
0.50	100.50	.336E+03	1.7	1.40	3.21				
0.55	100.55	.399E+03	2.2	1.49	3.02				
0.61	100.61	.466E+03	2.7	1.57	2.87				
0.66	100.66	.539E+03	3.3	1.63	2.75				
0.72	100.72	.616E+03	3.9	1.69	2.66				
0.78	100.78	.690E+03	4.5	1.75	2.58				
0.83	100.83	.780E+03	5.2	1.80	2.51				
0.89	100.89	.879E+03	6.0	1.84	2.45				
0.94	100.94	.977E+03	6.8	1.88	2.39				
1.00	101.00	.108E+04	7.7	1.92	2.35				

<---- hydrograph ----> <-pipe / channel->									
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL		
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)		
INFLOW : ID= 2 (	1030)	30.38	1.77	12.42	43.98	0.50	1.40		
OUTFLOW: ID= 1 (	0021)	30.38	1.77	12.42	43.98	0.50	1.41		

CALIB				
NASHYD (0230)	Area (ha)=	9.14	Curve Number (CN)=	82.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
-----	U.H. Tp(hrs)=	0.42		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60		
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60		
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60		
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60		
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60		
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.833	1.15	7.833	1.78	13.833	7.28	19.83	1.60		
1.917	1.15	7.917	1.78	13.917	7.28	19.92	1.60		
2.000	1.15	8.000	1.78	14.000	7.28	20.00	1.60		
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07		
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07		
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07		
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07		

HRP6.1-PR-SWM.2-100 YEAR.OUT									
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07		
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07		
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07		
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07		
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07		
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07		
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07		
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07		
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07		
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07		
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07		
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07		
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07		
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07		
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07		
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07		
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07		
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07		
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07		
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07		

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW	(cms)=	0.703 (i)
TIME TO PEAK	(hrs)=	12.250
RUNOFF VOLUME	(mm)=	50.315
TOTAL RAINFALL	(mm)=	88.800
RUNOFF COEFFICIENT	=	0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
-----	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0021):	30.38	1.771	12.42	43.98
+ ID2= 2 (0230):	9.14	0.703	12.25	50.31
=====				
ID = 3 (0003):	39.52	2.437	12.33	45.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
-----	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	2.7760	0.2010
	1.0940	0.0700	3.2380	0.2400
	1.8140	0.1110	3.7590	0.2830
	2.2340	0.1460	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0003)	39.520	2.437	12.33	45.44
OUTFLOW: ID= 1 (0030)	39.520	2.222	12.58	45.44
	PEAK FLOW	REDUCTION [Qout/Qin](%)=	91.20	
	TIME SHIFT OF PEAK FLOW	(min)=	15.00	
	MAXIMUM STORAGE USED	(ha.m.)=	0.1453	

CALIB				
STANDHYD (0231)	Area (ha)=	7.45		
ID= 1 DT= 2.0 min	Total Imp(%)=	24.00	Dir. Conn.(%)=	24.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.79	5.66
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	1.10
Length	(m)=	222.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

HRP6_1-PR-SWM_2-100 YEAR.OUT							
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60
1.000	0.89	7.000	1.78	13.000	6.56	19.00	1.60
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60
1.500	0.89	7.500	1.78	13.500	1.26	19.50	1.60
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60
1.767	1.24	7.767	1.78	13.767	7.28	19.77	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60
2.000	1.60	8.000	1.78	14.000	7.27	20.00	1.60
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07

HRP6_1-PR-SWM_2-100 YEAR.OUT							
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.367	1.42	11.367	8.52	17.367	1.60	23.37	1.07
5.400	1.42	11.400	8.51	17.400	1.60	23.40	1.07
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07
5.500	1.42	11.500	8.56	17.500	1.60	23.50	1.07
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07
5.767	1.42	11.767	67.57	17.767	1.60	23.77	1.07

HRP6.1-PR-SWM_2-100 YEAR.OUT

CALIB	Area (ha)=	8.25	
STANDHYD (0232)	Total Imp(%)=	39.00	Dir. Conn.(%)= 39.00
ID= 1 DT= 3.0 min			

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.22	5.03
Dep. Storage (mm)=	15.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	234.52	40.00
Mannings n =	0.013	0.250

---- TRANSFORMED HYETOGRAPH ----

CN* = 82.0 Ia = Dep. Storage (Above)

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

TIME	----- TRANSFORMED HETEROLOG -----				----- HETEROLOG -----			
	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60	
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60	
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60	
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60	
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60	
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60	
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60	
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60	
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60	
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60	
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60	
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60	
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60	
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60	
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60	
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60	
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60	
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60	
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60	
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60	
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60	
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60	
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60	
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60	
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60	
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60	
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60	
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60	
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60	
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60	
1.550	0.89	7.550	1.78	13.550	1.25	19.55	1.60	
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60	
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60	
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60	
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60	
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60	
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60	
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60	
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60	
2.000	1.15	8.000	2.40	14.000	7.28	20.00	1.60	
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.60	
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.60	
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.60	
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.60	
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.60	
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.60	
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.60	
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.60	
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.60	
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.60	
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.60	
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.60	
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.60	
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.60	
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.60	
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.60	
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.60	
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.60	
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.60	
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.60	
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.60	
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.60	
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.60	
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.60	
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.60	
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.60	
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.60	
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.60	
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.60	

NOTE: FEAR FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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<----- DATA FOR SECTION ( 1.1) ----->
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<----- TRAVEL TIME TABLE ----->

		<--- hydrograph <--->			<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0211)	46.97	2.52	12.50	47.98	0.59	1.54
OUTFLOW: ID= 1 (0005)	46.97	2.52	12.53	47.98	0.59	1.54

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<---- hydrograph ---->    <-pipe / channel->
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<-pipe / channel->
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INFLOW : ID= 2 (0211)	46.97	2.52	12.50	47.98	0.59	1.54
OUTFLOW: ID= 1 (0005)	46.97	2.52	12.53	47.98	0.59	1.54

HRP6.1-PR-SWM_2-100 YEAR.OUT

3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min) 6.00 12.00
Storage Coeff. (min)= 3.49 (ii) 12.00 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.09

TOTALS
PEAK FLOW (cms)= 0.86 0.50 1.316 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 73.80 40.96 53.76
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.83 0.46 0.61

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0232):	8.25	1.316	12.00	53.76
+ ID2= 2 (0005):	46.97	2.520	12.53	47.98
ID = 3 (0007):	55.22	3.066	12.03	48.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2---> OUT= 1 | Routing time step (min)'= 2.00

HRP6.1-PR-SWM_2-100 YEAR.OUT

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

<---- hydrograph ---->					<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0007)	55.22	3.07	12.03	48.84	0.65	1.61
OUTFLOW: ID= 1 (0022)	55.22	3.05	12.03	48.84	0.64	1.61

CALIB
STANDHYD (0133)
ID= 1 DT= 3.0 min | Area (ha)= 6.79
Total Imp(%)= 47.00 Dir. Conn.(%)= 47.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.19	3.60
Dep. Storage (mm)=	15.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	212.76	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60

HRP6.1-PR-SWM_2-100 YEAR.OUT											
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60				
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60				
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60				
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60				
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60				
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60				
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60				
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60				
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60				
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60				
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60				
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60				
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60				
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60				
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60				
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07				
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07				
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07				
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07				
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07				
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07				
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07				
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07				
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07				
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07				
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07				
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07				
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07				
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07				
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07				
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07				
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07				
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07				
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07				
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07				
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07				
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07				
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07				
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07				
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07				
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07				
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07				
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07				
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07				
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07				
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07				
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07				
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07				
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07				
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07				
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07				
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07				
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07				
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07				
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07				
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07				
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07				
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07				
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07				
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07				
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07				
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07				
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07				
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07				
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07				
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07				
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07				
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07				
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07				
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07				
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07				
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07				
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07				
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07				
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07				
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07				
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07				
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07				
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07				
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07				
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07				
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07				
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07				
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07				
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07				
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07				
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07				

HRP6.1-PR-SWM_2-100 YEAR.OUT									
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07		
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07		
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07		
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07		
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07		
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07		
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07		
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07		
Max.Eff.Inten.(mm/hr)=			98.04	40.38					
over (min)			6.00	12.00					
Storage Coeff. (min)=			3.29	(ii)	10.75	(iii)			
Unit Hyd. Tpeak (min)=			6.00						
Unit Hyd. peak (cms)=			0.26	0.10					
TOTALS									
PEAK FLOW (cms)=			0.86	0.28	1.112 (iii)				
TIME TO PEAK (hrs)=			12.00	12.10					
RUNOFF VOLUME (mm)=			73.80	31.37	51.31				
TOTAL RAINFALL (mm)=			88.80	88.80	88.80				
RUNOFF COEFFICIENT =			0.83	0.35	0.58				
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 62.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL									
THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0091)									
1 + 2 = 3									

ID1= 1 (0133):		AREA	QPEAK	TPEAK	R.V.				
		(ha)	(cms)	(hrs)	(mm)				
+ ID2= 2 (0022):		55.22	1.112	12.00	48.84				
=====									
ID = 3 (0091):		62.01	4.064	12.03	49.11				
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

CALIB (0222)									
WASHYD (0222)									
1 DT= 5.0 min									
Area		(ha)=	3.54	Curve Number	(CN)= 75.0				
Ia		(mm)=	5.00	# of Linear Res.	(N)= 3.00				
U.H. Tp(hrs)=		0.15							
NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.									

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs		
0.083	0.89	6.083	1.78	12.083	12.80	18.80	1.60		
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60		
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60		
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60		
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60		
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60		
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60		
2.000	1.60	8.000	1.78	14.000	2.66	20.00	1.60		
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07		

HRP6.1-PR-SWM.2-100 YEAR.OUT

HRP6.1-PR-SWM.2-100 YEAR.OUT

2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.427 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 41.444
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.467

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0221)	Area (ha)= 3.79		
ID= 1 DT= 5.0 min	Total Imp(%)= 27.00	Dir. Conn.(%)= 27.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.02	2.77	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	2.00	2.00	
Length (m)=	158.95	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60

1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 50.68
over (min) 5.00 15.00
Storage Coeff. (min)= 2.76 (ii) 11.44 (iii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.09

TOTALS
PEAK FLOW (cms)= 0.28 0.30 0.545 (iii)
TIME TO PEAK (hrs)= 12.00 12.08 12.00
RUNOFF VOLUME (mm)= 87.30 43.98 55.68
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.50 0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN TIME STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0000)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)		
ID1= 1 (0221):	3.79	0.545	12.00	55.68	
+ ID2= 2 (0222):	3.54	0.427	12.00	41.44	
ID = 3 (0009):	7.33	0.971	12.00	48.80	
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.					

HRP6.1-PR-SWM_2-100 YEAR.OUT

ADD HYD (0009)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(ha.m.)
ID1= 3 (0009):	7.33	0.971	12.00	48.80
+ ID2= 2 (0091):	62.01	4.064	12.03	49.11
=====				
ID = 1 (0009):	69.34	4.994	12.00	49.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)	OVERFLOW IS OFF			
IN= 2--> OUT= 1				
DT= 4.0 min				

	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	3.2510	1.2500
	0.6750	0.7720	3.7840	1.3920
	1.6680	1.0110	4.5560	1.5300
	2.4150	1.1310	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0009)	69.340	4.994	12.00	49.08
OUTFLOW: ID= 1 (0010)	69.340	2.408	12.93	49.08

PEAK FLOW REDUCTION [Qout/Qin](%)= 48.23
TIME SHIFT OF PEAK FLOW (min)= 56.00
MAXIMUM STORAGE USED (ha.m.)= 1.1301

CALIB				
STANDHYD (0234)	Area	(ha)=	17.56	
ID= 1 DT= 3.0 min	Total Imp(%)=	28.00	Dir. Conn.(%)=	28.00

	IMPERVIOUS		PERVIOUS (l)	
Surface Area	(ha)=	4.92	12.64	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	342.15	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		

HRP6_1-PR-SHM_2-100 YEAR_OUT							
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07
Max.Eff.Inten.(mm/hr)=			98.04	53.17			
over (min)			6.00	15.00			
Storage Coeff. (min)=			4.38 (ii)	13.46 (ii)			

HRP6.1-PR-SWM_2-100 YEAR.OUT				
Unit Hyd. Tpeak (min)=	6.00	15.00		
Unit Hyd. peak (cms)=	0.23	0.08		
			TOTALS	
PEAK FLOW (cms)=	1.30	1.15	2.256 (iii)	
TIME TO PEAK (hrs)=	12.00	12.10		
RUNOFF VOLUME (mm)=	87.30	40.96	53.93	
TOTAL RAINFALL (mm)=	88.80	88.80	88.80	
RUNOFF COEFFICIENT =	0.98	0.46	0.61	

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0010):	69.34	2.408	12.93	49.08
+ ID2= 2 (0234):	17.56	2.256	12.00	53.93
=====				
ID = 3 (0011):	86.90	2.741	12.00	50.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)				
OVERFLOW IS OFF				
IN= 2--> OUT= 1				
DT= 3.0 min				
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	3.4620	0.6060
	0.7430	0.2200	4.3720	0.6120
	1.6740	0.3940	5.3540	0.6210
	2.5260	0.4950	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0011)	86.900	2.741	12.00	50.06
OUTFLOW: ID= 1 (0015)	86.900	2.524	13.13	50.06

PEAK FLOW REDUCTION [Qout/Qin](%)= 92.07
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.4948

CALIB				
STANDHYD (0235)				
ID= 1 DT= 2.0 min				
	Area (ha)=	4.28		
	Total Imp(%)=	30.00	Dir. Conn.(%)=	30.00
	IMPERVIOUS			
Surface Area (ha)=	1.28	3.00		
Dep. Storage (mm)=	1.50	1.50		
Average Slope (%)=	2.00	2.00		
Length (m)=	168.92	40.00		
Mannings n =	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	0.09	6.033	1.78	12.033	12.79	18.03	1.60		
0.067	0.09	6.067	1.78	12.067	12.79	18.07	1.60		
0.100	0.09	6.100	1.78	12.100	12.79	18.10	1.60		
0.133	0.09	6.133	1.78	12.133	12.79	18.13	1.60		
0.167	0.09	6.167	1.78	12.167	12.79	18.17	1.60		
0.200	0.09	6.200	1.78	12.200	12.79	18.20	1.60		
0.233	0.09	6.233	1.78	12.233	12.79	18.23	1.60		
0.267	0.09	6.267	1.78	12.267	12.79	18.27	1.60		
0.300	0.09	6.300	1.78	12.300	12.79	18.30	1.60		
0.333	0.09	6.333	1.78	12.333	12.79	18.33	1.60		
0.367	0.09	6.367	1.78	12.367	12.79	18.37	1.60		
0.400	0.09	6.400	1.78	12.400	12.79	18.40	1.60		
0.433	0.09	6.433	1.78	12.433	12.79	18.43	1.60		
0.467	0.09	6.467	1.78	12.467	12.79	18.47	1.60		
0.500	0.09	6.500	1.78	12.500	12.78	18.50	1.60		
0.533	0.09	6.533	1.78	12.533	6.57	18.53	1.60		
0.567	0.09	6.567	1.78	12.567	6.57	18.57	1.60		
0.600	0.09	6.600	1.78	12.600	6.57	18.60	1.60		
0.633	0.09	6.633	1.78	12.633	6.57	18.63	1.60		
0.667	0.09	6.667	1.78	12.667	6.57	18.67	1.60		

0.700	0.09	6.700	1.78	12.700	6.57	18.70	1.60		
0.733	0.09	6.733	1.78	12.733	6.57	18.73	1.60		
0.767	0.09	6.767	1.78	12.767	6.57	18.77	1.60		
0.800	0.09	6.800	1.78	12.800	6.57	18.80	1.60		
0.833	0.09	6.833	1.78	12.833	6.57	18.83	1.60		
0.867	0.09	6.867	1.78	12.867	6.57	18.87	1.60		
0.900	0.09	6.900	1.78	12.900	6.57	18.90	1.60		
0.933	0.09	6.933	1.78	12.933	6.57	18.93	1.60		
0.967	0.09	6.967	1.78	12.967	6.57	18.97	1.60		
1.000	0.09	7.000	1.78	13.000	6.56	19.00	1.60		
1.033	0.09	7.033	1.78	13.033	1.24	19.03	1.60		
1.067	0.09	7.067	1.78	13.067	1.24	19.07	1.60		
1.100	0.09	7.100	1.78	13.100	1.24	19.10	1.60		
1.133	0.09	7.133	1.78	13.133	1.24	19.13	1.60		
1.167	0.09	7.167	1.78	13.167	1.24	19.17	1.60		
1.200	0.09	7.200	1.78	13.200	1.24	19.20	1.60		
1.233	0.09	7.233	1.78	13.233	1.24	19.23	1.60		
1.267	0.09	7.267	1.78	13.267	1.24	19.27	1.60		
1.300	0.09	7.300	1.78	13.300	1.24	19.30	1.60		
1.333	0.09	7.333	1.78	13.333	1.24	19.33	1.60		
1.367	0.09	7.367	1.78	13.367	1.24	19.37	1.60		
1.400	0.09	7.400	1.78	13.400	1.24	19.40	1.60		
1.433	0.09	7.433	1.78	13.433	1.24	19.43	1.60		
1.467	0.09	7.467	1.78	13.467	1.24	19.47	1.60		
1.500	0.09	7.500	1.78	13.500	1.26	19.50	1.60		
1.533	0.09	7.533	1.78	13.533	7.28	19.53	1.60		
1.567	0.09	7.567	1.78	13.567	7.28	19.57	1.60		
1.600	0.09	7.600	1.78	13.600	7.28	19.60	1.60		
1.633	0.09	7.633	1.78	13.633	7.28	19.63	1.60		
1.667	0.09	7.667	1.78	13.667	7.28	19.67	1.60		
1.700	0.09	7.700	1.78	13.700	7.28	19.70	1.60		
1.733	0.09	7.733	1.78	13.733	7.28	19.73	1.60		
1.767	1.24	7.767	1.78	13.767	7.28	19.77	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60		
2.000	1.60	8.000	1.78	14.000	7.27	20.00	1.60		
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07		
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07		
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07		

HRP6.1-PR-SWM_2-100 YEAR.OUT									
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.60		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.60		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.60		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.60		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.60		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.60		
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.60		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.60		
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.60		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.60		
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.60		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.60		
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.60		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.60		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.60		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.60		
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.60		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.60		
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.60		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.60		
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.60		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.60		
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.60		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.60		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.60		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.60		
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.60		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.60		
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.60		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.60		
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.60		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.60		
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.60		
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.60		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.60		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.60		
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.60		
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.60		
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.60		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.60		
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.60		
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.60		
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.60		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.60		
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.60		
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.60		
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.60		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.60		
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.60		
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.60		

HRP6.1-PR-SWM_2-100 YEAR.OUT									
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07		
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07		
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07		
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07		
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07		
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07		
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07		
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07		
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07		
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07		
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07		
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07		
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07		
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07		
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07		
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07		
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07		
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07		
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07		
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07		
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07		
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07		
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07		
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07		
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07		
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07		
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07		
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07		

Max.Eff.Inten.(mm/hr)=	98.04	53.17	
over (min)	6.00	12.00	
Storage Coeff. (min)=	2.14 (ii)	11.23 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.31	0.10	
PEAK FLOW (cms)=	0.12	0.12	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.05	0.232 (iii)
RUNOFF VOLUME (mm)=	87.30	40.96	53.93
TOTAL RAINFALL (mm)=	88.80	88.80	88.80
RUNOFF COEFFICIENT =	0.98	0.46	0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (0122)	Area (ha)=	13.12			
ID= 1 DT= 3.0 min	Total Imp(%)=	44.00	Dir. Conn.(%)=	44.00	
	IMPERVIOUS	PERVIOUS (i)			
Surface Area (ha)=	5.77	7.35			
Dep. Storage (mm)=	1.50	1.50			
Average Slope (%)=	2.00	2.00			
Length (m)=	295.75	40.00			
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.89	6.950	1.78	12.050	12.79	18.05	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.200	0.89	6.250	1.78	12.200	12.79	18.20	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		
0.550	0.89	6.550	1.78	12.550	12.57	18.55	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		

HRP6.1-PR-SWM_2-100 YEAR.OUT

0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07

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5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min) 6.00 12.00
Storage Coeff. (min)= 4.01 (ii) 11.84 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.24 0.09

PEAK FLOW (cms)= 1.53 0.73 2.199 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 87.30 40.96 61.35
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.69

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):	1.62	0.232	12.00	53.93
+ ID2= 2 (0122):	13.12	2.199	12.00	61.35
ID = 3 (0019):	14.74	2.431	12.00	60.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0019):	14.74	2.431	12.00	60.53
+ ID2= 2 (0040):	91.18	2.507	13.23	50.28
ID = 3 (0020):	105.92	3.305	12.00	51.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\vo1n.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\66476a47-f0be-4f04-b84f-b95d9ed706ff\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\66476a47-f0be-4f04-b84f-b95d9ed706ff\scenar

DATE: 03/24/2023

TIME: 10:37:50

HRP6.1-PR-SWM_2-100 YEAR.OUT

USER:

COMMENTS:

** SIMULATION : Run 04

MASS STORM
Filename: C:\Users\Abira\AppData\Local\Temp\aa5f3685-1a4d-466b-8f88-d1f0e08ee45b\cdfb3d47
Ptotal=103.20 mm
Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86
2.00	1.86	8.00	2.06	14.00	8.46	20.00	1.86
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24

CALIB
NASHYD (1030)
ID= 1 DT= 5.0 min
Area (ha)= 30.38
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.50
Curve Number (CN)= 77.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24

HRP6.1-PR-SWM_2-100 YEAR.OUT

2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 2.237 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 55.396
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.537

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0021)
IN= 2---> OUT= 1
Routing time step (min)'= 4.00

Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.145E+02	0.0	0.34	13.16
0.09	100.09	.327E+02	0.1	0.51	8.80
0.14	100.14	.545E+02	0.1	0.64	7.02
0.19	100.19	.800E+02	0.2	0.75	6.00
0.24	100.24	.109E+03	0.3	0.85	5.31
0.28	100.28	.142E+03	0.5	0.94	4.81
0.33	100.33	.178E+03	0.7	1.02	4.42
0.39	100.39	.226E+03	1.0	1.17	3.84
0.44	100.44	.279E+03	1.3	1.30	3.47
0.50	100.50	.336E+03	1.7	1.40	3.21

HRP6.1-PR-SWM.2-100 YEAR.OUT									
0.55	100.55	.399E+03	2.2	1.49	3.02				
0.61	100.61	.466E+03	2.7	1.57	2.87				
0.66	100.66	.539E+03	3.3	1.63	2.75				
0.72	100.72	.616E+03	3.9	1.69	2.66				
0.78	100.78	.699E+03	4.5	1.75	2.58				
0.83	100.83	.786E+03	5.2	1.80	2.51				
0.89	100.89	.879E+03	6.0	1.84	2.45				
0.94	100.94	.977E+03	6.8	1.88	2.39				
1.00	101.00	.108E+04	7.7	1.92	2.35				
<---- hydrograph ----> <-pipe / channel-->									
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL			
	(ha)	(cms)	(hrs)	(mm)	(ft)	(m/s)			
INFLOW : ID= 2 (1030)	30.38	2.24	12.33	55.40	0.56	1.50			
OUTFLOW: ID= 1 (0021)	30.38	2.24	12.42	55.40	0.56	1.50			

CALIB
NASHYD (0230) | Area (ha)= 9.14 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.42

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.083	1.03	6.083	2.06	12.083	14.87	18.08	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86		
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86		
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86		
1.917	1.06	7.917	2.06	13.917	8.46	19.92	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		

HRP6.1-PR-SWM.2-100 YEAR.OUT									
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24		
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24		
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24		
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24		

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW (cms)= 0.878 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 62.630
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.607

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0021):	30.38	2.242	12.42	55.40
+ ID2= 2 (0230):	9.14	0.878	12.25	62.63
=====				
ID = 3 (0003):	39.52	3.076	12.33	57.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)				
IN= 2----> OUT= 1				
DT= 5.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	2.7760	0.2010
	1.0940	0.0700	3.2380	0.2400
	1.8140	0.1110	3.7590	0.2830
	2.2340	0.1460	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0003)	39.520	3.076	12.33	57.07
OUTFLOW: ID= 1 (0030)	39.520	2.723	12.58	57.07

PEAK FLOW REDUCTION [Qout/Qin](%)= 88.52
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.1970

CALIB
STANDHYD (0231) | Area (ha)= 7.45
ID= 1 DT= 2.0 min | Total Imp(%)= 24.00 Dir. Conn.(%)= 24.00

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	1.79	5.66		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	1.10		
Length	(m)=	222.86	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86		
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		

HRP6_1-PR-SWM_2-100 YEAR.OUT												
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86					
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86					
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86					
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86					
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86					
0.500	1.03	6.500	2.06	12.500	14.85	18.50	1.86					
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86					
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86					
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86					
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86					
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86					
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86					
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86					
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86					
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86					
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86					
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86					
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86					
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86					
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86					
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86					
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86					
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86					
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86					
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86					
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86					
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86					
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86					
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86					
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86					
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86					
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86					
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86					
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86					
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86					
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86					
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86					
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86					
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86					
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86					
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86					
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86					
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86					
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86					
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86					
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86					
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86					
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86					
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86					
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86					
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86					
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24					
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24					
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24					
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24					
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24					
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24					
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24					
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24					
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24					
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24					
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24					
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24					
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24					
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24					
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24					
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24					
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24					
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24					
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24					
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24					
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24					
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24					
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24					
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24					
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24					
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24					
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24					
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24					
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24					
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24					
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24					
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24					
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24					
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24					
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24					
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24					

Max.Eff.Inten.(mm/hr)=
over (min)

113.93
5.00

86.07
14.00

HRP6_1-PR-SWM_2-100 YEAR.OUT												
3.10	21.23	1.24										
3.10	21.27	1.24										
3.10	21.30	1.24										
3.10	21.33	1.24										
3.10	21.37	1.24										
3.10	21.40	1.24										
3.10	21.43	1.24										
3.10	21.47	1.24										
3.10	21.50	1.24										
3.10	21.53	1.24										
3.10	21.57	1.24										
3.10	21.60	1.24										
3.10	21.63	1.24										
3.10	21.67	1.24										
3.10	21.70	1.24										
3.10	21.73	1.24										
3.10	21.77	1.24										
3.10	21.80	1.24										
3.10	21.83	1.24										
3.10	21.87	1.24										
3.10	21.90	1.24										
3.10	21.93	1.24										
3.10	21.97	1.24										
1.86	22.00	1.24										
1.86	22.03	1.24										
1.86	22.07	1.24										
1.86	22.10	1.24										
1.86	22.13	1.24										
1.86	22.17	1.24										
1.86	22.20	1.24										
1.86	22.23	1.24										
1.86	22.27	1.24										
1.86	22.30	1.24										
1.86	22.33	1.24										
1.86	22.37	1.24										
1.86	22.40	1.24										
1.86	22.43	1.24										
1.86	22.47	1.24										
1.86	22.50	1.24										
1.86	22.53	1.24										
1.86	22.57	1.24										
1.86	22.60	1.24										
1.86	22.63	1.24										
1.86	22.67	1.24										
1.86	22.70	1.24										
1.86	22.73	1.24										
1.86	22.77	1.24										
1.86	22.80	1.24										
1.86	22.83	1.24										
1.86	22.87	1.24										
1.86	22.90	1.24										
1.86	22.93	1.24										
1.86	22.97	1.24										
1.86	23.00	1.24										
1.86	23.03	1.24										
1.86	23.07	1.24										
1.86	23.10	1.24										
1.86	23.13	1.24										
1.86	23.17	1.24										
1.86	23.20	1.24										
1.86	23.23	1.24										
1.86	23.27	1.24										
1.86	23.30	1.24										
1.86	23.33	1.24										
1.86	23.37	1.24										
1.86	23.40	1.24										
1.86	23.43	1.24										
1.86	23.47	1.24										
1.86	23.50	1.24										
1.86	23.53	1.24										
1.86	23.57	1.24										
1.86	23.60	1.24										
1.86	23.63	1.24										
1.86	23.67	1.24										
1.86	23.70	1.24										
1.86	23.73	1.24										
1.86	23.77	1.24										
1.86	23.80	1.24										
1.86	23.83	1.24										
1.86	23.87	1.24										
1.86	23.90	1.24										
1.86	23.93	1.24										
1.86	23.97	1.24										
1.86	24.00	1.24										

HRP6.1-PR-SWM_2-100 YEAR.OUT

Storage Coeff. (min)= 3.19 (ii) 12.15 (ii)
Unit Hyd. Tpeak (min)= 4.00 14.00
Unit Hyd. peak (cms)= 0.32 0.09

PEAK FLOW (cms)= 0.56 0.09 1.321 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 101.70 65.68 74.33
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.64 0.72

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0211)
1 + 2 = 3
ID1= 1 (0231): 7.45 1.321 12.00 74.33
+ ID2= 2 (0030): 39.52 2.723 12.50 57.07
ID = 3 (0211): 46.97 3.059 12.50 59.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)
IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0000
1.00 100.67 0.0000
2.00 100.33 0.0000 / 0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 / 0.0000 Main Channel
6.00 100.67 0.0000
7.00 101.00 0.0000

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .485E+01 0.0 0.34 4.39
0.09 100.09 .109E+02 0.1 0.51 2.93
0.14 100.14 .182E+02 0.1 0.64 2.34
0.19 100.19 .267E+02 0.2 0.75 2.00
0.24 100.24 .364E+02 0.3 0.85 1.77
0.28 100.28 .473E+02 0.5 0.94 1.60
0.33 100.33 .594E+02 0.7 1.02 1.47
0.39 100.39 .753E+02 1.0 1.17 1.28
0.44 100.44 .928E+02 1.3 1.30 1.16
0.50 100.50 .112E+03 1.7 1.40 1.07
0.55 100.55 .133E+03 2.2 1.49 1.01
0.61 100.61 .155E+03 2.7 1.57 0.96
0.66 100.66 .180E+03 3.3 1.63 0.92
0.72 100.72 .205E+03 3.9 1.69 0.89
0.78 100.78 .233E+03 4.5 1.75 0.86
0.83 100.83 .262E+03 5.2 1.80 0.84
0.89 100.89 .293E+03 6.0 1.84 0.82
0.94 100.94 .326E+03 6.8 1.88 0.80
1.00 101.00 .360E+03 7.7 1.92 0.78

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0211) 46.97 3.06 12.50 59.81 0.64 1.61
OUTFLOW: ID= 1 (0005) 46.97 3.06 12.53 59.81 0.64 1.61

CALIB
STANDHYD (0232)
ID= 1 DT= 3.0 min | Total Imp(%)= 39.00 Dir. Conn.(%)= 39.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.22 5.03
Dep. Storage (mm)= 15.00 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 234.52 40.00

Mannings n = 0.013 0.250

HRP6.1-PR-SWM_2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.050 1.03 6.050 2.06 12.050 14.86 18.05 1.86
0.100 1.03 6.100 2.06 12.100 14.86 18.10 1.86
0.150 1.03 6.150 2.06 12.150 14.86 18.15 1.86
0.200 1.03 6.200 2.06 12.200 14.86 18.20 1.86
0.250 1.03 6.250 2.06 12.250 14.86 18.25 1.86
0.300 1.03 6.300 2.06 12.300 14.86 18.30 1.86
0.350 1.03 6.350 2.06 12.350 14.86 18.35 1.86
0.400 1.03 6.400 2.06 12.400 14.86 18.40 1.86
0.450 1.03 6.450 2.06 12.450 14.86 18.45 1.86
0.500 1.03 6.500 2.06 12.500 14.86 18.50 1.86
0.550 1.03 6.550 2.06 12.550 7.64 18.55 1.86
0.600 1.03 6.600 2.06 12.600 7.64 18.60 1.86
0.650 1.03 6.650 2.06 12.650 7.64 18.65 1.86
0.700 1.03 6.700 2.06 12.700 7.64 18.70 1.86
0.750 1.03 6.750 2.06 12.750 7.64 18.75 1.86
0.800 1.03 6.800 2.06 12.800 7.64 18.80 1.86
0.850 1.03 6.850 2.06 12.850 7.64 18.85 1.86
0.900 1.03 6.900 2.06 12.900 7.64 18.90 1.86
0.950 1.03 6.950 2.06 12.950 7.64 18.95 1.86
1.000 1.03 7.000 2.06 13.000 7.63 19.00 1.86
1.050 1.03 7.050 2.06 13.050 1.44 19.05 1.86
1.100 1.03 7.100 2.06 13.100 1.44 19.10 1.86
1.150 1.03 7.150 2.06 13.150 1.44 19.15 1.86
1.200 1.03 7.200 2.06 13.200 1.44 19.20 1.86
1.250 1.03 7.250 2.06 13.250 1.44 19.25 1.86
1.300 1.03 7.300 2.06 13.300 1.44 19.30 1.86
1.350 1.03 7.350 2.06 13.350 1.44 19.35 1.86
1.400 1.03 7.400 2.06 13.400 1.44 19.40 1.86
1.450 1.03 7.450 2.06 13.450 1.44 19.45 1.86
1.500 1.03 7.500 2.06 13.500 1.45 19.50 1.86
1.550 1.03 7.550 2.06 13.550 8.46 19.55 1.86
1.600 1.03 7.600 2.06 13.600 8.46 19.60 1.86
1.650 1.03 7.650 2.06 13.650 8.46 19.65 1.86
1.700 1.03 7.700 2.06 13.700 8.46 19.70 1.86
1.750 1.03 7.750 2.06 13.750 8.46 19.75 1.86
1.800 1.06 7.800 2.06 13.800 8.46 19.80 1.86
1.850 1.06 7.850 2.06 13.850 8.46 19.85 1.86
1.900 1.06 7.900 2.06 13.900 8.46 19.90 1.86
1.950 1.06 7.950 2.06 13.950 8.46 19.95 1.86
2.000 1.06 8.000 2.06 14.000 8.46 20.00 1.86
2.050 1.34 8.050 2.79 14.050 3.10 20.05 1.24
2.100 1.34 8.100 2.79 14.100 3.10 20.10 1.24
2.150 1.34 8.150 2.79 14.150 3.10 20.15 1.24
2.200 1.34 8.200 2.79 14.200 3.10 20.20 1.24
2.250 1.34 8.250 2.79 14.250 3.10 20.25 1.24
2.300 1.34 8.300 2.79 14.300 3.10 20.30 1.24
2.350 1.34 8.350 2.79 14.350 3.10 20.35 1.24
2.400 1.34 8.400 2.79 14.400 3.10 20.40 1.24
2.450 1.34 8.450 2.79 14.450 3.10 20.45 1.24
2.500 1.34 8.500 2.79 14.500 3.10 20.50 1.24
2.550 1.34 8.550 2.79 14.550 3.10 20.55 1.24
2.600 1.34 8.600 2.79 14.600 3.10 20.60 1.24
2.650 1.34 8.650 2.79 14.650 3.10 20.65 1.24
2.700 1.34 8.700 2.79 14.700 3.10 20.70 1.24
2.750 1.34 8.750 2.79 14.750 3.10 20.75 1.24
2.800 1.34 8.800 2.79 14.800 3.10 20.80 1.24
2.850 1.34 8.850 2.79 14.850 3.10 20.85 1.24
2.900 1.34 8.900 2.79 14.900 3.10 20.90 1.24
2.950 1.34 8.950 2.79 14.950 3.10 20.95 1.24
3.000 1.34 9.000 2.79 15.000 3.10 21.00 1.24
3.050 1.34 9.050 3.30 15.050 3.10 21.05 1.24
3.100 1.34 9.100 3.30 15.100 3.10 21.10 1.24
3.150 1.34 9.150 3.30 15.150 3.10 21.15 1.24
3.200 1.34 9.200 3.30 15.200 3.10 21.20 1.24
3.250 1.34 9.250 3.30 15.250 3.10 21.25 1.24
3.300 1.34 9.300 3.30 15.300 3.10 21.30 1.24
3.350 1.34 9.350 3.30 15.350 3.10 21.35 1.24
3.400 1.34 9.400 3.30 15.400 3.10 21.40 1.24
3.450 1.34 9.450 3.30 15.450 3.10 21.45 1.24
3.500 1.34 9.500 3.30 15.500 3.10 21.50 1.24
3.550 1.34 9.550 3.72 15.550 3.10 21.55 1.24
3.600 1.34 9.600 3.72 15.600 3.10 21.60 1.24
3.650 1.34 9.650 3.72 15.650 3.10 21.65 1.24
3.700 1.34 9.700 3.72 15.700 3.10 21.70 1.24
3.750 1.34 9.750 3.72 15.750 3.10 21.75 1.24
3.800 1.34 9.800 3.72 15.800 3.10 21.80 1.24
3.850 1.34 9.850 3.72 15.850 3.10 21.85 1.24
3.900 1.34 9.900 3.72 15.900 3.10 21.90 1.24
3.950 1.34 9.950 3.72 15.950 3.10 21.95 1.24

HRP6.1-PR-SWM_2-100 YEAR.OUT

HRP6.1-PR-SWM_2-100 YEAR.OUT

4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24

Max.Eff.Inten.(mm/hr)= 113.93 66.98
over (min) 6.00 12.00
Storage Coeff. (min)= 3.28 (ii) 11.30 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.26 0.10

TOTALS
PEAK FLOW (cms)= 1.01 0.64 1.597 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 88.20 51.59 65.87
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.85 0.50 0.64

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0232):	8.25	1.597	12.00	65.87
+ ID2= 2 (0005):	46.97	3.058	12.53	59.81
ID = 3 (0007):	55.22	3.817	12.03	60.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2--> OUT= 1 Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning	
0.00	101.00	0.0000	
1.00	100.67	0.0000	
2.00	100.33	0.0000 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0000	Main Channel
6.00	100.67	0.0000	

7.00 101.00 0.0000

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0007)	55.22	3.82	12.03	60.71	0.72	1.69
OUTFLOW: ID= 1 (0022)	55.22	3.79	12.03	60.71	0.71	1.69

CALIB	Area (ha)=	6.79
STANDHYD (0133)	Total Imp(%)=	47.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	47.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.19	3.60
Dep. Storage (mm)=	15.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	212.76	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86

1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.550	1.34	9.550	3.30	15.550	3.10	21.55	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.300	1.65	10.300	4.75				

Max.Eff.Inten. (mm/hr)= 113.93 51.85

	over (min)	6.00	12.00
Storage Coeff. (min)=	3.10 (ii)	10.13 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.27	0.10	
			TOTALS
PEAK FLOW (cms)=	1.00	0.37	1.337 (iii)
TIME TO PEAK (hrs)=	12.00	12.05	12.00
RUNOFF VOLUME (mm)=	88.20	40.18	62.75
TOTAL RAINFALL (mm)=	103.20	103.20	103.20
RUNOFF COEFFICIENT =	0.85	0.39	0.61

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0091)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0133):	6.79	1.337	12.00	62.75
+ ID2= 2 (0022):	55.22	3.791	12.03	60.71
ID = 3 (0091):	62.01	5.013	12.03	60.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (0222)	Area (ha)=	3.54	Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. To(hrs)=	0.15	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	--- TRANSFORMED HYETOGRAPH ---				---			
	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME
	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.083	1.93	6.083	2.06	12.083	14.87	18.08	1.86	
0.167	1.93	6.167	2.06	12.167	14.86	18.17	1.86	
0.250	1.93	6.250	2.06	12.250	14.86	18.25	1.86	
0.333	1.93	6.333	2.06	12.333	14.86	18.33	1.86	
0.417	1.93	6.417	2.06	12.417	14.86	18.41	1.86	
0.500	1.93	6.500	2.06	12.500	14.86	18.50	1.86	
0.583	1.93	6.583	2.06	12.583	7.64	18.58	1.86	
0.667	1.93	6.667	2.06	12.667	7.64	18.67	1.86	
0.750	1.93	6.750	2.06	12.750	7.64	18.75	1.86	
0.833	1.93	6.833	2.06	12.833	7.64	18.83	1.86	
0.917	1.93	6.917	2.06	12.917	7.64	18.92	1.86	
1.000	1.93	7.000	2.06	13.000	7.64	19.00	1.86	
1.083	1.93	7.083	2.06	13.083	1.45	19.08	1.86	
1.167	1.93	7.167	2.06	13.167	1.44	19.16	1.86	
1.250	1.93	7.250	2.06	13.250	1.44	19.25	1.86	
1.333	1.93	7.333	2.06	13.333	1.44	19.33	1.86	
1.417	1.93	7.417	2.06	13.417	1.44	19.42	1.86	
1.500	1.93	7.500	2.06	13.500	1.44	19.50	1.86	
1.583	1.93	7.583	2.06	13.583	8.46	19.58	1.86	
1.667	1.93	7.667	2.06	13.667	8.46	19.67	1.86	
1.750	1.93	7.750	2.06	13.750	8.46	19.75	1.86	
1.833	1.96	7.833	2.06	13.833	8.46	19.83	1.86	
1.917	1.96	7.917	2.06	13.917	8.46	19.91	1.86	
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86	
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24	
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24	
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24	
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24	
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24	
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24	
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24	
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24	
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24	
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24	
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24	
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24	
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24	
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24	
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24	
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24	
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24	
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24	
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24	
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24	

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3.750	1.34		9.750	3.72		15.750	3.10		21.75	1.24
3.833	1.34		9.833	3.72		15.833	3.10		21.83	1.24
3.917	1.34		9.917	3.72		15.917	3.10		21.92	1.24
4.000	1.34		10.000	3.72		16.000	3.10		22.00	1.24
4.083	1.65		10.083	4.75		16.083	1.86		22.08	1.24
4.167	1.65		10.167	4.75		16.167	1.86		22.17	1.24
4.250	1.65		10.250	4.75		16.250	1.86		22.25	1.24
4.333	1.65		10.333	4.75		16.333	1.86		22.33	1.24
4.417	1.65		10.417	4.75		16.417	1.86		22.42	1.24
4.500	1.65		10.500	4.75		16.500	1.86		22.50	1.24
4.583	1.65		10.583	6.40		16.583	1.86		22.58	1.24
4.667	1.65		10.667	6.40		16.667	1.86		22.67	1.24
4.750	1.65		10.750	6.40		16.750	1.86		22.75	1.24
4.833	1.65		10.833	6.40		16.833	1.86		22.83	1.24
4.917	1.65		10.917	6.40		16.917	1.86		22.92	1.24
5.000	1.65		11.000	6.40		17.000	1.86		23.00	1.24
5.083	1.65		11.083	9.91		17.083	1.86		23.08	1.24
5.167	1.65		11.167	9.91		17.167	1.86		23.17	1.24
5.250	1.65		11.250	9.91		17.250	1.86		23.25	1.24
5.333	1.65		11.333	9.91		17.333	1.86		23.33	1.24
5.417	1.65		11.417	9.91		17.417	1.86		23.42	1.24
5.500	1.65		11.500	9.91		17.500	1.86		23.50	1.24
5.583	1.65		11.583	42.93		17.583	1.86		23.58	1.24
5.667	1.65		11.667	42.93		17.667	1.86		23.67	1.24
5.750	1.65		11.750	42.93		17.750	1.86		23.75	1.24
5.833	1.65		11.833	113.93		17.833	1.86		23.83	1.24
5.917	1.65		11.917	113.93		17.917	1.86		23.92	1.24
6.000	1.65		12.000	113.93		18.000	1.86		24.00	1.24

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.542 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 52.430
TOTAL RAINFALL (mm)= 103.200
RUNOFF COEFFICIENT = 0.508

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0221)	Area (ha)= 3.79
ID= 1 DT= 5.0 min	Total Imp(%)= 27.00 Dir. Conn.(%)= 27.00

Surface Area	(ha)=	IMPERVIOUS	PERVIOUS (i)
Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	2.00	2.00
Length	(m)=	158.95	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.03		6.083	2.06		12.083	14.07
0.167	1.03		6.167	2.06		12.167	14.06
0.250	1.03		6.250	2.06		12.250	14.06
0.333	1.03		6.333	2.06		12.333	14.06
0.417	1.03		6.417	2.06		12.417	14.06
0.500	1.03		6.500	2.06		12.500	14.06
0.583	1.03		6.583	2.06		12.583	7.64
0.667	1.03		6.667	2.06		12.667	7.64
0.750	1.03		6.750	2.06		12.750	7.64
0.833	1.03		6.833	2.06		12.833	7.64
0.917	1.03		6.917	2.06		12.917	7.64
1.000	1.03		7.000	2.06		13.000	7.64
1.083	1.03		7.083	2.06		13.083	1.45
1.167	1.03		7.167	2.06		13.167	1.44
1.250	1.03		7.250	2.06		13.250	1.44
1.333	1.03		7.333	2.06		13.333	1.44
1.417	1.03		7.417	2.06		13.417	1.44
1.500	1.03		7.500	2.06		13.500	1.44
1.583	1.03		7.583	2.06		13.583	8.46
1.667	1.03		7.667	2.06		13.667	8.46
1.750	1.03		7.750	2.06		13.750	8.46
1.833	1.06		7.833	2.06		13.833	8.46
1.917	1.86		7.917	2.06		13.917	8.46
2.000	1.86		8.000	2.06		14.000	8.46
2.083	1.34		8.083	2.79		14.083	3.10
2.167	1.34		8.167	2.79		14.167	3.10
2.250	1.34		8.250	2.79		14.250	3.10
2.333	1.34		8.333	2.79		14.333	3.10
2.417	1.34		8.417	2.79		14.417	3.10

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2.500	1.34		8.500	2.79		14.500	3.10		20.50	1.24
2.583	1.34		8.583	2.79		14.583	3.10		20.58	1.24
2.667	1.34		8.667	2.79		14.667	3.10		20.67	1.24
2.750	1.34		8.750	2.79		14.750	3.10		20.75	1.24
2.833	1.34		8.833	2.79		14.833	3.10		20.83	1.24
2.917	1.34		8.917	2.79		14.917	3.10		20.92	1.24
3.000	1.34		9.000	2.79		15.000	3.10		21.00	1.24
3.083	1.34		9.083	3.30		15.083	3.10		21.08	1.24
3.167	1.34		9.167	3.30		15.167	3.10		21.17	1.24
3.250	1.34		9.250	3.30		15.250	3.10		21.25	1.24
3.333	1.34		9.333	3.30		15.333	3.10		21.33	1.24
3.417	1.34		9.417	3.30		15.417	3.10		21.42	1.24
3.500	1.34		9.500	3.30		15.500	3.10		21.50	1.24
3.583	1.34		9.583	3.72		15.583	3.10		21.58	1.24
3.667	1.34		9.667	3.72		15.667	3.10		21.67	1.24
3.750	1.34		9.750	3.72		15.750	3.10		21.75	1.24
3.833	1.34		9.833	3.72		15.833	3.10		21.83	1.24
3.917	1.34		9.917	3.72		15.917	3.10		21.92	1.24
4.000	1.34		10.000	3.72		16.000	3.10		22.00	1.24
4.083	1.65		10.083	4.75		16.083	1.86		22.08	1.24
4.167	1.65		10.167	4.75		16.167	1.86		22.17	1.24
4.250	1.65		10.250	4.75		16.250	1.86		22.25	1.24
4.333	1.65		10.333	4.75		16.333	1.86		22.33	1.24
4.417	1.65		10.417	4.75		16.417	1.86		22.42	1.24
4.500	1.65		10.500	4.75		16.500	1.86		22.50	1.24
4.583	1.65		10.583	6.40		16.583	1.86		22.58	1.24
4.667	1.65		10.667	6.40		16.667	1.86		22.67	1.24
4.750	1.65		10.750	6.40		16.750	1.86		22.75	1.24
4.833	1.65		10.833	6.40		16.833	1.86		22.83	1.24
4.917	1.65		10.917	6.40		16.917	1.86		22.92	1.24
5.000	1.65		11.000	6.40		17.000	1.86		23.00	1.24
5.083	1.65		11.083	9.91		17.083	1.86		23.08	1.24
5.167	1.65		11.167	9.91		17.167	1.86		23.17	1.24
5.250	1.65		11.250	9.91		17.250	1.86		23.25	1.24
5.333	1.65		11.333	9.91		17.333	1.86		23.33	1.24
5.417	1.65		11.417	9.91		17.417	1.86		23.42	1.24
5.500	1.65		11.500	9.91		17.500	1.86		23.50	1.24
5.583	1.65		11.583	42.93		17.583	1.86		23.58	1.24
5.667	1.65		11.667	42.93		17.667	1.86		23.67	1.24
5.750	1.65		11.750	42.93		17.750	1.86		23.75	1.24
5.833	1.65		11.833	113.93		17.833	1.86		23.83	1.24
5.917	1.65		11.917	113.93		17.917	1.86		23.92	1.24
6.000	1.65		12.000	113.93		18.000	1.86		24.00	1.24

Max.Eff.Inten.(mm/hr)= 113.93 74.80
over (min) 5.00 15.00
Storage Coeff. (min)= 2.60 (ii) 10.53 (iii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09

PEAK FLOW (cms)= 0.32 0.39 0.674 (iii)
TIME TO PEAK (hrs)= 12.00 12.00 12.00
RUNOFF VOLUME (mm)= 101.70 55.40 67.90
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.54 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0221):	3.79	0.674	12.00	67.90
+ ID2= 2 (0222):	3.54	0.542	12.00	52.43
ID = 3 (0009):	7.33	1.216	12.00	60.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0009)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0009):	7.33	1.216	12.00	60.43
+ ID2= 2 (0091):	62.01	5.013	12.03	60.93
ID = 1 (0009):	69.34	6.167	12.00	60.88

HRP6.1-PR-SWM_2-100 YEAR.OUT

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)				
DT= 4.0 min				
OVERFLOW IS OFF				
OUTFLOW	STORAGE	OUTFLOW	STORAGE	
(cms)	(ha.m.)	(cms)	(ha.m.)	
0.0000	0.0000	3.2510	1.2500	
0.6750	0.7720	3.7840	1.3920	
1.6680	1.0110	4.5560	1.5300	
2.4150	1.1310	0.0000	0.0000	
AREA	OPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
69.340	6.167	12.00	60.88	
69.340	3.246	12.83	60.88	
PEAK FLOW	REDUCTION	[Qout/Qin](%)= 52.63		
TIME SHIFT OF PEAK FLOW	USED	(min)= 50.00		
MAXIMUM STORAGE		(ha.m.)= 1.2493		

CALIB	Area	(ha)=	17.56	
STANDHYD (0234)	Total Imp(%)=	28.00	Dir. Conn.(%)=	28.00
ID= 1 DT= 3.0 min				
IMPERVIOUS	PERVIOUS (i)			
Surface Area (ha)=	4.92	12.64		
Dep. Storage (mm)=	1.50	1.50		
Average Slope (%)=	2.00	2.00		
Length (m)=	342.15	40.00		
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		

2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24
Max.Eff.Inten.(mm/hr)= 113.93 66.98							
over (min) 6.00 15.00							
Storage Coeff. (min)= 4.12 (ii) 12.40 (ii)							
Unit Hyd. Tpeak (min)= 6.00 15.00							
Unit Hyd. Tpeak (cms)= 0.23 0.09							
TOTALS							
PEAK FLOW (cms)=		1.51	1.51	2.784 (iii)			
TIME TO PEAK (hrs)=		12.00	12.10	12.00			
RUNOFF VOLUME (mm)=		181.70	51.59	65.62			
TOTAL RAINFALL (mm)=		183.20	183.20	183.20			
RUNOFF COEFFICIENT =		0.99	0.50	0.64			

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0010):	69.34	3.246	12.83	60.88
+ ID2= 2 (0234):	17.56	2.784	12.00	65.62
=====				
ID = 3 (0011):	86.90	3.705	12.63	61.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)				
IN= 2 ---> OUT= 1				
DT= 3.0 min				

OVERFLOW IS OFF				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	3.4620	0.6060
	0.7430	0.2200	4.3720	0.6120
	1.6740	0.3940	5.3540	0.6210
	2.5260	0.4950	0.0000	0.0000
=====				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0011)	86.900	3.705	12.63	61.83
OUTFLOW: ID= 1 (0015)	86.900	3.462	13.03	61.83
=====				
PEAK FLOW REDUCTION [Qout/Qin](%)= 93.44				
TIME SHIFT OF PEAK FLOW (min)= 24.00				
MAXIMUM STORAGE USED (ha.m.)= 0.6060				

CALIB				
STANDHYD (0235)				
ID= 1 DT= 2.0 min				

	Area	(ha)=	4.28	
	Total Imp(%)=	30.00	Dir. Conn.(%)=	30.00

	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	1.28	3.00	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	168.92	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86		
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86		
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		

					HRPc 1-PR-SW 2-100 Year OUT		
1.933	1.03	7.033	2.06	13.933	1.44	19.03	1.86
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24

HRP6.1-PR-SWM_2-100 YEAR.OUT

3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24
5.500	1.65	11.500	9.95	17.500	1.86	23.50	1.24
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24

Max.Eff.Inten.(mm/hr)= 113.93 68.19
over (min) 5.00 12.00
Storage Coeff. (min)= 2.70 (ii) 10.92 (iii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.35 0.10

TOTALS
PEAK FLOW (cms)= 0.40 0.39 0.752 (iii)
TIME TO PEAK (hrs)= 12.00 12.07
RUNOFF VOLUME (mm)= 101.70 51.59 86.62
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.50 0.65

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN= 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0012)|

1 + 2 = 3				HRP6.1-PR-SWM_2-100 YEAR.OUT			
		AREA	QPEAK	TPEAK	R.V.		
		(ha)	(cms)	(hrs)	(mm)		
ID1= 1 (0015):		86.90	3.462	13.03	61.83		
+ ID2= 2 (0235):		4.28	0.752	12.00	66.62		
ID = 3 (0012):		91.18	3.536	13.00	62.06		

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)		Routing time step (min)'= 2.00	
IN= 2---> OUT= 1			

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.590E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.136E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

	<---- hydrograph ---->				<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0012)	91.18	3.54	13.00	62.06	0.69	1.66
OUTFLOW: ID= 1 (0040)	91.18	3.47	13.13	62.06	0.68	1.65

CALIB		Area (ha)= 1.62	
STANDHYD (0121)		Total Imp(%)= 28.00	
ID= 1 DT= 3.0 min		Dir. Conn.(%)= 28.00	

Surface Area		(ha)=	IMPERVIOUS	PERVIOUS (i)
Dep. Storage		(mm)=	0.45	1.17
Average Slope		(%)=	1.50	1.50
Length		(m)=	2.00	2.00
Mannings n		=	103.92	40.00
			0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		

HRP6.1-PR-SWM_2-100 YEAR.OUT									
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		

HRP6.1-PR-SWM_2-100 YEAR.OUT									
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)=	113.93	66.98	
over (min)	6.00	12.00	
Storage Coeff. (min)=	2.02 (ii)	10.38 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.32	0.10	
TOTALS			
PEAK FLOW (cms)=	0.14	0.15	0.286 (iii)
TIME TO PEAK (hrs)=	12.00	12.05	12.00
RUNOFF VOLUME (mm)=	101.79	51.50	65.62
TOTAL RAINFALL (mm)=	103.20	103.20	103.20
RUNOFF COEFFICIENT =	0.99	0.50	0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN= 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0122)	Area (ha)= 13.12		
ID= 1 DT= 3.0 min	Total Imp(%)= 44.00	Dir. Conn.(%)= 44.00	

IMPERVIOUS PERVIOUS (i)			
Surface Area (ha)=	5.77	7.35	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	295.75	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs		RAIN
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		

HRP6.1-PR-SWM.2-100 YEAR.OUT									
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		

HRP6.1-PR-SWM.2-100 YEAR.OUT									
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		
Max.Eff.Inten.(mm/hr)=	113.93	66.98							
over (min)	6.00	12.00							
Storage Coeff. (min)=	3.78 (ii)	11.15 (ii)							
Unit Hyd. Tpeak (min)=	6.00	12.00							
Unit Hyd. peak (cms)=	0.24	0.10							
PEAK FLOW (cms)=	1.79	0.94							
TIME TO PEAK (hrs)=	12.00	12.05							
RUNOFF VOLUME (mm)=	101.70	51.59							
TOTAL RAINFALL (mm)=	103.20	103.20							
RUNOFF COEFFICIENT =	0.99	0.50							

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)									
1	2	3							
			AREA	QPEAK	TPEAK	R.V.			
			(ha)	(cms)	(hrs)	(mm)			
ID1= 1 (0121):			1.62	0.286	12.00	65.62			
+ ID2= 2 (0122):			13.12	2.658	12.00	73.64			
ID = 3 (0019):			14.74	2.944	12.00	72.76			

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)									
1	2	3							
			AREA	QPEAK	TPEAK	R.V.			
			(ha)	(cms)	(hrs)	(mm)			
ID1= 1 (0019):			14.74	2.944	12.00	72.76			
+ ID2= 2 (0040):			91.18	3.471	13.13	62.06			
ID = 3 (0020):			105.92	4.102	12.00	63.54			

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\38b5edc-7ddd-40c7-96e3-8a216945716c\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\38b5edc-7ddd-40c7-96e3-8a216945716c\scenar

DATE: 03/24/2023 TIME: 10:37:52

USER:

COMMENTS: _____

** SIMULATION : Run 05

HRP6.1-PR-SWM_2-100 YEAR.OUT

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\aa5f3685-1a4d-466b-8f88-d1f0e08ee45b\95accb52
| Ptotal=115.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07	
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07	
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07	
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07	
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07	
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07	
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07	
2.00	1.50	8.00	2.30	14.00	9.45	20.00	2.07	
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38	
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38	
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38	
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38	
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38	
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38	
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38	
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38	
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38	
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38	
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38	
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38	
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38	
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38	
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38	
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38	

| CALIB |
| NASHYD (1030) | Area (ha)= 30.38 Curve Number (CN)= 77.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' '	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07	
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07	
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07	
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07	
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07	
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07	
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07	
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07	
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07	
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07	
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07	
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07	
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07	
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07	
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07	
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07	
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07	
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07	
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07	
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07	
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07	
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07	
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07	
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07	
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38	
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38	
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38	
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38	
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38	
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38	
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38	
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38	
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38	
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38	
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38	

3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 2.645 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 65.263
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ROUTE CHN(0021) | Routing time step (min)'= 4.00
IN= 2---> OUT= 1
<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0000
1.00 100.67 0.0000
2.00 100.33 0.0000 / 0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 / 0.0000 Main Channel
6.00 100.67 0.0000
7.00 101.00 0.0000

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .145E+02 0.0 0.34 13.16
0.09 100.09 .327E+02 0.1 0.51 8.80
0.14 100.14 .545E+02 0.1 0.64 7.02
0.19 100.19 .800E+02 0.2 0.75 6.00
0.24 100.24 .100E+03 0.3 0.85 5.21
0.28 100.28 .142E+03 0.5 0.94 4.81
0.33 100.33 .178E+03 0.7 1.02 4.42
0.39 100.39 .226E+03 1.0 1.17 3.84
0.44 100.44 .279E+03 1.3 1.30 3.47
0.50 100.50 .336E+03 1.7 1.40 3.21
0.55 100.55 .399E+03 2.2 1.49 3.02
0.61 100.61 .466E+03 2.7 1.57 2.87
0.66 100.66 .530E+03 3.3 1.63 2.75
0.72 100.72 .616E+03 3.9 1.69 2.66
0.78 100.78 .690E+03 4.5 1.75 2.58
0.83 100.83 .786E+03 5.2 1.80 2.51
0.89 100.89 .879E+03 6.0 1.84 2.45
0.94 100.94 .977E+03 6.8 1.88 2.39
1.00 101.00 .108E+04 7.7 1.92 2.35

HRP6.1-PR-SWM.2-100 YEAR.OUT						
<---- hydrograph ---->				<-pipe / channel->		
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (1030)	30.38	2.65	12.33	65.26	0.60	1.56
OUTFLOW: ID= 1 (0021)	30.38	2.65	12.42	65.26	0.60	1.56

CALIB						
NASHYD (0230)	Area	(ha)=	9.14	Curve Number	(CN)=	82.0
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=		0.42			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	1.15	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38

HRP6.1-PR-SWM.2-100 YEAR.OUT						
5.583	1.84	11.583	47.92	17.583	2.07	23.58
5.667	1.84	11.667	47.92	17.667	2.07	23.67
5.750	1.84	11.750	47.92	17.750	2.07	23.75
5.833	1.84	11.833	127.17	17.833	2.07	23.83
5.917	1.84	11.917	127.18	17.917	2.07	23.92
6.000	1.84	12.000	127.18	18.000	2.07	24.00

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW	(cms)=	1.028 (1)
TIME TO PEAK	(hrs)=	12.250
RUNOFF VOLUME	(mm)=	73.169
TOTAL RAINFALL	(mm)=	115.200
RUNOFF COEFFICIENT	=	0.635

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0021):	30.38	2.649	12.42	65.26	
+ ID2= 2 (0230):	9.14	1.028	12.25	73.17	
ID = 3 (0003):	39.52	3.626	12.33	67.09	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	2.7760	0.2010
	1.0940	0.0700	3.2380	0.2400
	1.8140	0.1110	3.7590	0.2830
	2.2340	0.1460	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0003)	39.520	3.626	12.33	67.09
OUTFLOW: ID= 1 (0030)	39.520	3.220	12.58	67.09

PEAK FLOW REDUCTION [Qout/Qin](%)= 88.81
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.2398

CALIB					
STANDHYD (0231)	Area	(ha)=	7.45		
ID= 1 DT= 2.0 min	Total Imp(%)=	24.00	Dir. Conn.(%)=	24.00	
	IMPERVIOUS	PERVIOUS (i)			
Surface Area	(ha)=	1.79	5.66		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	1.10		
Length	(m)=	222.06	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07

HRP6_1-PR-SWM_2-100 YEAR.OUT									
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07		
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07		
1.000	1.15	7.000	2.30	13.000	8.51	19.00	2.07		
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07		
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07		
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07		
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07		
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.767	1.61	7.767	2.30	13.767	9.45	19.77	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38		

HRP6_1-PR-SWM_2-100 YEAR.OUT									
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38		
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38		
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38		
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38		
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38		
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38		
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38		
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38		
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38		
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38		
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38		
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38		
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		

HRP6.1-PR-SWM_2-100 YEAR.OUT

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 82.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 16 TIMES STORAGE COEFFICIENT
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0211)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0231):	7.45	1.692	12.00	85.27
+ ID2= 2 (0030):	39.52	3.220	12.58	67.09
ID = 3 (0211):	46.97	3.570	12.53	69.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)		Routing time step (min)'= 2.00	
IN= 2--> OUT= 1			
<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.465E+01	0.0	0.34	4.39
0.09	100.09	.109E+02	0.1	0.51	2.93
0.14	100.14	.182E+02	0.1	0.64	2.34
0.19	100.19	.267E+02	0.2	0.75	2.00
0.24	100.24	.364E+02	0.3	0.85	1.77
0.28	100.28	.473E+02	0.5	0.94	1.60
0.33	100.33	.594E+02	0.7	1.02	1.47
0.39	100.39	.753E+02	1.0	1.17	1.28
0.44	100.44	.920E+02	1.3	1.30	1.16
0.50	100.50	.112E+03	1.7	1.40	1.07
0.55	100.55	.133E+03	2.2	1.49	1.01
0.61	100.61	.155E+03	2.7	1.57	0.96
0.66	100.66	.180E+03	3.3	1.63	0.92
0.72	100.72	.205E+03	3.9	1.69	0.89
0.78	100.78	.233E+03	4.5	1.75	0.86
0.83	100.83	.262E+03	5.2	1.80	0.84
0.89	100.89	.293E+03	6.0	1.84	0.82
0.94	100.94	.326E+03	6.8	1.88	0.80
1.00	101.00	.360E+03	7.7	1.92	0.78

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0211)	46.97	3.57	12.53	69.97	0.69	1.66
OUTFLOW: ID= 1 (0005)	46.97	3.57	12.53	69.97	0.69	1.66

CALIB	Area (ha)=	8.25
STANDHYD (0232)	Total Imp(%)=	39.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	39.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.22	5.03
Dep. Storage (mm)=	15.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	234.52	40.00
Mannings n	=	0.013
		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07

HRP6.1-PR-SWM_2-100 YEAR.OUT

0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38

HRP6.1-PR-SWM_2-100 YEAR.OUT

4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 78.96
over (min) 6.00 12.00
Storage Coeff. (min)= 3.14 (ii) 10.81 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.10

PEAK FLOW (cms)= 1.12 0.77 *TOTALS* 1.840 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 100.20 60.84 76.19
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.87 0.53 0.66

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0232):	8.25	1.840	12.00	76.19
+ ID2= 2 (0005):	46.97	3.573	12.53	69.97
=====				
ID = 3 (0007):	55.22	4.533	12.03	70.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0022) |
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->				
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY
(m)	(m)	(cu.m.)	(cms)	(m/s)
0.05	100.05	.609E+01	0.0	0.34
0.09	100.09	.137E+02	0.1	0.51
0.14	100.14	.228E+02	0.1	0.64
0.19	100.19	.335E+02	0.2	0.75
0.24	100.24	.457E+02	0.3	0.85

TRAV.TIME

(min)

5.51

3.68

2.94

2.51

2.22

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0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11
0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0007)	55.22	4.53	12.03	70.90	0.78
OUTFLOW: ID= 1 (0022)	55.22	4.51	12.03	70.90	0.78

CALIB	Area (ha)=	6.79
STANDHYD (0133)	Total Imp(%)=	47.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	47.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	3.19	3.60	
Dep. Storage (mm)=	15.00	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	212.76	40.00	
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		

HRP6.1-PR-SWM_2-100 YEAR.OUT

2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 62.00
over (min) 6.00 12.00
Storage Coeff. (min)= 2.96 (ii) 9.69 (iii)
Unit Hyd. Tpk (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.11

TOTALS
PEAK FLOW (cms)= 1.12 0.45 1.530 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 100.20 47.99 72.53
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.87 0.42 0.63

HRP6.1-PR-SWM_2-100 YEAR.OUT

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0091)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0133):	6.79	1.530	12.00	72.53
+ ID2= 2 (0022):	55.22	4.505	12.03	70.90
=====				
ID = 3 (0091):	62.01	5.904	12.03	71.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	3.54	Curve Number (CN)=	75.0
NASHYD (0222)	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=		0.15		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---								
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07	
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07	
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07	
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07	
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07	
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07	
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07	
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07	
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07	
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07	
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07	
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07	
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07	
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07	
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07	
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07	
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07	
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07	
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07	
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07	
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07	
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07	
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07	
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07	
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38	
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38	
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38	
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38	
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38	
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38	
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38	
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38	
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38	
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38	
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38	
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38	
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38	
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38	
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38	
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38	
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38	
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38	
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38	
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38	
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38	
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38	
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38	
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38	
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38	
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38	
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38	
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38	
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38	

HRP6.1-PR-SWM_2-100 YEAR.OUT

HRP6.1-PR-SWM_2-100 YEAR.OUT

4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.641 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 61.960
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.538

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0221)	Area (ha)= 3.79
ID= 1 DT= 5.0 min	Total Imp(%)= 27.00 Dir. Conn.(%)= 27.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.02	2.77
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	150.95	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38

3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 87.74
over (min) 5.00 10.00
Storage Coeff. (min)= 2.49 (ii) 9.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.11

PEAK FLOW (cms)= 0.36 0.50 0.858 (iii)
TIME TO PEAK (hrs)= 12.00 12.00 12.00
RUNOFF VOLUME (mm)= 113.70 65.27 78.34
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.57 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0221):	3.79	0.858	12.00	78.34
+ ID2= 2 (0222):	3.54	0.641	12.00	61.96
ID = 3 (0009):	7.33	1.499	12.00	70.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0009)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0009):	7.33	1.499	12.00	70.43
+ ID2= 2 (0091):	62.01	5.904	12.03	71.07
ID = 1 (0009):	69.34	7.331	12.00	71.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min				

	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	3.2510	1.2500
	0.6750	0.7720	3.7840	1.3920

HRP6.1-PR-SWM_2-100 YEAR.OUT
1.6680 1.0110 | 4.5560 1.5300
2.4150 1.1310 | 0.0000 0.0000

AREA OPEAK TPEAK R.V.
(ha) (cms) (hrs)
INFLOW : ID= 2 (0009) 69.340 7.331 12.00 71.01
OUTFLOW: ID= 1 (0010) 69.340 3.721 12.83 71.01

PEAK FLOW REDUCTION [Qout/Qin](%)= 50.76
TIME SHIFT OF PEAK FLOW (min)= 50.00
MAXIMUM STORAGE USED (ha.m.)= 1.3755

CALIB
STANDHYD (0234)
ID= 1 DT= 3.0 min
Area (ha)= 17.56
Total Imp(%)= 28.00 Dir. Conn.(%)= 28.00

IMPERVIOUS PERVIOUS (l)
Surface Area (ha)= 4.92 12.64
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 342.15 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.050 1.15 | 6.050 2.30 | 12.050 16.59 | 18.05 2.07
0.100 1.15 | 6.100 2.30 | 12.100 16.59 | 18.10 2.07
0.150 1.15 | 6.150 2.30 | 12.150 16.59 | 18.15 2.07
0.200 1.15 | 6.200 2.30 | 12.200 16.59 | 18.20 2.07
0.250 1.15 | 6.250 2.30 | 12.250 16.59 | 18.25 2.07
0.300 1.15 | 6.300 2.30 | 12.300 16.59 | 18.30 2.07
0.350 1.15 | 6.350 2.30 | 12.350 16.59 | 18.35 2.07
0.400 1.15 | 6.400 2.30 | 12.400 16.59 | 18.40 2.07
0.450 1.15 | 6.450 2.30 | 12.450 16.59 | 18.45 2.07
0.500 1.15 | 6.500 2.30 | 12.500 16.58 | 18.50 2.07
0.550 1.15 | 6.550 2.30 | 12.550 8.52 | 18.55 2.07
0.600 1.15 | 6.600 2.30 | 12.600 8.52 | 18.60 2.07
0.650 1.15 | 6.650 2.30 | 12.650 8.52 | 18.65 2.07
0.700 1.15 | 6.700 2.30 | 12.700 8.52 | 18.70 2.07
0.750 1.15 | 6.750 2.30 | 12.750 8.52 | 18.75 2.07
0.800 1.15 | 6.800 2.30 | 12.800 8.52 | 18.80 2.07
0.850 1.15 | 6.850 2.30 | 12.850 8.52 | 18.85 2.07
0.900 1.15 | 6.900 2.30 | 12.900 8.52 | 18.90 2.07
0.950 1.15 | 6.950 2.30 | 12.950 8.52 | 18.95 2.07
1.000 1.15 | 7.000 2.30 | 13.000 8.52 | 19.00 2.07
1.050 1.15 | 7.050 2.30 | 13.050 1.61 | 19.05 2.07
1.100 1.15 | 7.100 2.30 | 13.100 1.61 | 19.10 2.07
1.150 1.15 | 7.150 2.30 | 13.150 1.61 | 19.15 2.07
1.200 1.15 | 7.200 2.30 | 13.200 1.61 | 19.20 2.07
1.250 1.15 | 7.250 2.30 | 13.250 1.61 | 19.25 2.07
1.300 1.15 | 7.300 2.30 | 13.300 1.61 | 19.30 2.07
1.350 1.15 | 7.350 2.30 | 13.350 1.61 | 19.35 2.07
1.400 1.15 | 7.400 2.30 | 13.400 1.61 | 19.40 2.07
1.450 1.15 | 7.450 2.30 | 13.450 1.61 | 19.45 2.07
1.500 1.15 | 7.500 2.30 | 13.500 1.62 | 19.50 2.07
1.550 1.15 | 7.550 2.30 | 13.550 9.45 | 19.55 2.07
1.600 1.15 | 7.600 2.30 | 13.600 9.45 | 19.60 2.07
1.650 1.15 | 7.650 2.30 | 13.650 9.45 | 19.65 2.07
1.700 1.15 | 7.700 2.30 | 13.700 9.45 | 19.70 2.07
1.750 1.15 | 7.750 2.30 | 13.750 9.45 | 19.75 2.07
1.800 2.07 | 7.800 2.30 | 13.800 9.45 | 19.80 2.07
1.850 2.07 | 7.850 2.30 | 13.850 9.45 | 19.85 2.07
1.900 2.07 | 7.900 2.30 | 13.900 9.45 | 19.90 2.07
1.950 2.07 | 7.950 2.30 | 13.950 9.45 | 19.95 2.07
2.000 2.07 | 8.000 2.30 | 14.000 9.44 | 20.00 2.07
2.050 1.50 | 8.050 3.11 | 14.050 3.46 | 20.05 1.38
2.100 1.50 | 8.100 3.11 | 14.100 3.46 | 20.10 1.38
2.150 1.50 | 8.150 3.11 | 14.150 3.46 | 20.15 1.38
2.200 1.50 | 8.200 3.11 | 14.200 3.46 | 20.20 1.38
2.250 1.50 | 8.250 3.11 | 14.250 3.46 | 20.25 1.38
2.300 1.50 | 8.300 3.11 | 14.300 3.46 | 20.30 1.38
2.350 1.50 | 8.350 3.11 | 14.350 3.46 | 20.35 1.38
2.400 1.50 | 8.400 3.11 | 14.400 3.46 | 20.40 1.38
2.450 1.50 | 8.450 3.11 | 14.450 3.46 | 20.45 1.38
2.500 1.50 | 8.500 3.11 | 14.500 3.46 | 20.50 1.38
2.550 1.50 | 8.550 3.11 | 14.550 3.46 | 20.55 1.38
2.600 1.50 | 8.600 3.11 | 14.600 3.46 | 20.60 1.38
2.650 1.50 | 8.650 3.11 | 14.650 3.46 | 20.65 1.38
2.700 1.50 | 8.700 3.11 | 14.700 3.46 | 20.70 1.38
2.750 1.50 | 8.750 3.11 | 14.750 3.46 | 20.75 1.38
2.800 1.50 | 8.800 3.11 | 14.800 3.46 | 20.80 1.38

HRP6.1-PR-SWM_2-100 YEAR.OUT
2.850 1.50 | 8.850 3.11 | 14.850 3.46 | 20.85 1.38
2.900 1.50 | 8.900 3.11 | 14.900 3.46 | 20.90 1.38
2.950 1.50 | 8.950 3.11 | 14.950 3.46 | 20.95 1.38
3.000 1.50 | 9.000 3.11 | 15.000 3.46 | 21.00 1.38
3.050 1.50 | 9.050 3.69 | 15.050 3.46 | 21.05 1.38
3.100 1.50 | 9.100 3.69 | 15.100 3.46 | 21.10 1.38
3.150 1.50 | 9.150 3.69 | 15.150 3.46 | 21.15 1.38
3.200 1.50 | 9.200 3.69 | 15.200 3.46 | 21.20 1.38
3.250 1.50 | 9.250 3.69 | 15.250 3.46 | 21.25 1.38
3.300 1.50 | 9.300 3.69 | 15.300 3.46 | 21.30 1.38
3.350 1.50 | 9.350 3.69 | 15.350 3.46 | 21.35 1.38
3.400 1.50 | 9.400 3.69 | 15.400 3.46 | 21.40 1.38
3.450 1.50 | 9.450 3.69 | 15.450 3.46 | 21.45 1.38
3.500 1.50 | 9.500 3.69 | 15.500 3.46 | 21.50 1.38
3.550 1.50 | 9.550 4.15 | 15.550 3.46 | 21.55 1.38
3.600 1.50 | 9.600 4.15 | 15.600 3.46 | 21.60 1.38
3.650 1.50 | 9.650 4.15 | 15.650 3.46 | 21.65 1.38
3.700 1.50 | 9.700 4.15 | 15.700 3.46 | 21.70 1.38
3.750 1.50 | 9.750 4.15 | 15.750 3.46 | 21.75 1.38
3.800 1.50 | 9.800 4.15 | 15.800 3.46 | 21.80 1.38
3.850 1.50 | 9.850 4.15 | 15.850 3.46 | 21.85 1.38
3.900 1.50 | 9.900 4.15 | 15.900 3.46 | 21.90 1.38
3.950 1.50 | 9.950 4.15 | 15.950 3.46 | 21.95 1.38
4.000 1.50 | 10.000 4.15 | 16.000 3.45 | 22.00 1.38
4.050 1.84 | 10.050 5.30 | 16.050 2.07 | 22.05 1.38
4.100 1.84 | 10.100 5.30 | 16.100 2.07 | 22.10 1.38
4.150 1.84 | 10.150 5.30 | 16.150 2.07 | 22.15 1.38
4.200 1.84 | 10.200 5.30 | 16.200 2.07 | 22.20 1.38
4.250 1.84 | 10.250 5.30 | 16.250 2.07 | 22.25 1.38
4.300 1.84 | 10.300 5.30 | 16.300 2.07 | 22.30 1.38
4.350 1.84 | 10.350 5.30 | 16.350 2.07 | 22.35 1.38
4.400 1.84 | 10.400 5.30 | 16.400 2.07 | 22.40 1.38
4.450 1.84 | 10.450 5.30 | 16.450 2.07 | 22.45 1.38
4.500 1.84 | 10.500 5.30 | 16.500 2.07 | 22.50 1.38
4.550 1.84 | 10.550 7.14 | 16.550 2.07 | 22.55 1.38
4.600 1.84 | 10.600 7.14 | 16.600 2.07 | 22.60 1.38
4.650 1.84 | 10.650 7.14 | 16.650 2.07 | 22.65 1.38
4.700 1.84 | 10.700 7.14 | 16.700 2.07 | 22.70 1.38
4.750 1.84 | 10.750 7.14 | 16.750 2.07 | 22.75 1.38
4.800 1.84 | 10.800 7.14 | 16.800 2.07 | 22.80 1.38
4.850 1.84 | 10.850 7.14 | 16.850 2.07 | 22.85 1.38
4.900 1.84 | 10.900 7.14 | 16.900 2.07 | 22.90 1.38
4.950 1.84 | 10.950 7.14 | 16.950 2.07 | 22.95 1.38
5.000 1.84 | 11.000 7.14 | 17.000 2.07 | 23.00 1.38
5.050 1.84 | 11.050 11.06 | 17.050 2.07 | 23.05 1.38
5.100 1.84 | 11.100 11.06 | 17.100 2.07 | 23.10 1.38
5.150 1.84 | 11.150 11.06 | 17.150 2.07 | 23.15 1.38
5.200 1.84 | 11.200 11.06 | 17.200 2.07 | 23.20 1.38
5.250 1.84 | 11.250 11.06 | 17.250 2.07 | 23.25 1.38
5.300 1.84 | 11.300 11.06 | 17.300 2.07 | 23.30 1.38
5.350 1.84 | 11.350 11.06 | 17.350 2.07 | 23.35 1.38
5.400 1.84 | 11.400 11.06 | 17.400 2.07 | 23.40 1.38
5.450 1.84 | 11.450 11.06 | 17.450 2.07 | 23.45 1.38
5.500 1.84 | 11.500 11.08 | 17.500 2.07 | 23.50 1.38
5.550 1.84 | 11.550 47.92 | 17.550 2.07 | 23.55 1.38
5.600 1.84 | 11.600 47.92 | 17.600 2.07 | 23.60 1.38
5.650 1.84 | 11.650 47.92 | 17.650 2.07 | 23.65 1.38
5.700 1.84 | 11.700 47.92 | 17.700 2.07 | 23.70 1.38
5.750 1.84 | 11.750 47.97 | 17.750 2.07 | 23.75 1.38
5.800 1.84 | 11.800 127.18 | 17.800 2.07 | 23.80 1.38
5.850 1.84 | 11.850 127.18 | 17.850 2.07 | 23.85 1.38
5.900 1.84 | 11.900 127.18 | 17.900 2.07 | 23.90 1.38
5.950 1.84 | 11.950 127.18 | 17.950 2.07 | 23.95 1.38
6.000 1.84 | 12.000 127.12 | 18.000 2.07 | 24.00 1.38

Max.Eff.Inten.(mm/hr)= 127.18 78.96
over (min) 6.00 12.00
Storage Coeff. (min)= 3.94 (ii) 11.70 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.24 0.10

TOTALS
PEAK FLOW (cms)= 1.70 1.88 3.43 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 113.70 60.84 75.64
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53 0.66

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-PR-SWM.2-100 YEAR.OUT

ADD HYD (0011)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0010):	69.34	3.721	12.83	71.01
+ ID2= 2 (0234):	17.56	3.431	12.00	75.64
=====				
ID = 3 (0011):	86.90	4.621	12.07	71.94
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

RESERVOIR(0015)				
IN= 2--> OUT= 1				
DT= 3.0 min				

OVERFLOW IS OFF				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	3.4620	0.6060
	0.7430	0.2200	4.3720	0.6120
	1.6740	0.3940	5.3540	0.6210
	2.5260	0.4950	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0011)	86.900	4.621	12.07	71.94
OUTFLOW: ID= 1 (0015)	86.900	4.344	12.50	71.94
PEAK FLOW REDUCTION [Qout/Qin](%)= 94.00				
TIME SHIFT OF PEAK FLOW (min)= 26.00				
MAXIMUM STORAGE USED (ha.m.)= 0.6118				

CALIB				
STANDHYD (0235)				
ID= 1 DT= 2.0 min				

IMPERVIOUS				
Area (ha)=	4.28			
Total Imp(%)=	30.00			
Dir. Conn.(%)= 30.00				

IMPERVIOUS				
PERVIOUS (i)				
Surface Area (ha)=	1.28			
Dep. Storage (mm)=	1.50			
Average Slope (%)=	2.00			
Length (m)=	168.92			
Mannings n =	0.013			

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

HRP6.1-PR-SWM.2-100 YEAR.OUT

1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07
1.767	1.61	7.767	2.30	13.767	9.45	19.77	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38

HRP6.1-PR-SWM_2-100 YEAR.OUT

HRP6.1-PR-SWM_2-100 YEAR.OUT

4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.500	1.84	11.500	11.10	17.500	2.07	23.50	1.38
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.767	1.84	11.767	87.66	17.767	2.07	23.77	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38
6.000	1.84	12.000	127.03	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 80.29
over (min) 5.00 12.00
Storage Coeff. (min)= 2.58 (ii) 10.29 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.36 0.10

TOTALS
PEAK FLOW (cms)= 0.45 0.47 0.874 (iii)
TIME TO PEAK (hrs)= 12.00 12.00
RUNOFF VOLUME (mm)= 113.70 60.84 76.70
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53 0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0012)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0015):	86.90	4.344	12.50	71.94
+ ID2= 2 (0235):	4.28	0.874	12.00	76.70
=====				
ID = 3 (0012):	91.18	4.550	12.47	72.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)		Routing time step (min)'= 2.00	
IN= 2--> OUT= 1			
<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0800	
1.00	100.67	0.0800	
2.00	100.33	0.0800 /0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 /0.0800	Main Channel
6.00	100.67	0.0800	
7.00	101.00	0.0800	

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.590E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.136E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0012)	91.18	4.55	12.47	72.16	0.78	1.75
OUTFLOW: ID= 1 (0040)	91.18	4.27	12.80	72.16	0.75	1.72

CALIB	Area (ha)= 1.62
STANDHYD (0121)	Total Imp(%)= 28.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)= 28.00

Surface Area	(ha)= 0.45	1.17
Dep. Storage	(mm)= 1.50	1.50
Average Slope	(%)= 2.00	2.00
Length	(m)= 183.92	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07

HRP6.1-PR-SWM_2-100 YEAR.OUT									
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38		

HRP6.1-PR-SWM_2-100 YEAR.OUT									
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38		
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38		
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38		

Max.Eff.Inten.(mm/hr)=	127.18	78.96		
over (min)	6.00	12.00		
Storage Coeff. (min)=	1.93 (ii)	9.69 (ii)		
Unit Hyd. Tpeak (min)=	6.00	12.00		
Unit Hyd. peak (cms)=	0.32	0.11		
TOTALS				
PEAK FLOW (cms)=	0.16	0.19	0.334 (iii)	
TIME TO PEAK (hrs)=	12.00	12.05	12.00	
RUNOFF VOLUME (mm)=	113.70	60.84	75.64	
TOTAL RAINFALL (mm)=	115.20	115.20	115.20	
RUNOFF COEFFICIENT =	0.99	0.53	0.66	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN TIME STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB									
STANDHYD (0122)	Area	(ha)=	13.12						
ID= 1 DT= 3.0 min	Total Imp(%)=	44.00	Dir. Conn.(%)=	44.00					

Surface Area	(ha)=	5.77	7.35						
Dep. Storage	(mm)=	1.50	1.50						
Average Slope	(%)=	2.00	2.00						
Length	(m)=	295.75	40.00						
Mannings n	=	0.013	0.250						
NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.									

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		</

HRP6.1-PR-SWM_2-100 YEAR.OUT									
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38		
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38		
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38		
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38		
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38		
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38		
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38		
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38		
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38		
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38		
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38		
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38		
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38		
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38		
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38		
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38		
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38		
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38		
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38		
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38		
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38		
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38		
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38		
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38		
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38		
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38		
Max.Eff.Inten.(mm/hr)= 127.18 78.96									
over (min) 6.00 12.00									

HRP6.1-PR-SWM_2-100 YEAR.OUT

Storage Coeff. (min)= 3.61 (ii) 10.67 (ii)
 Unit Hyd. Tpeak (min)= 6.00 12.00
 Unit Hyd. peak (cms)= 0.25 0.10

PEAK FLOW (cms)= 2.00 1.13
 TIME TO PEAK (hrs)= 12.00 12.05
 RUNOFF VOLUME (mm)= 113.70 84.10
 TOTAL RAINFALL (mm)= 115.20 115.20
 RUNOFF COEFFICIENT = 0.99 0.53 0.73

TOTALS
 3.053 (iii)

(i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
 CN = 72.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)
 1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0121):	1.62	0.334	12.00	75.64
+ ID2= 2 (0122):	13.12	3.053	12.00	84.10
=====				
ID = 3 (0019):	14.74	3.386	12.00	83.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)
 1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0019):	14.74	3.386	12.00	83.17
+ ID2= 2 (0040):	91.18	4.271	12.00	72.16
=====				
ID = 3 (0020):	105.92	4.837	12.00	73.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
 V V I SS U U A A L
 V V I SS U U A A A A L
 V V I SS U U A A L
 VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
 0 0 T T H H Y Y MM MM 0 0
 0 0 T T H H Y M M 0 0
 000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voind.dat
 Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\b1d49720-804c-4176-a900-1663f78d8d60\scenar
 Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\b1d49720-804c-4176-a900-1663f78d8d60\scenar

DATE: 03/24/2023 TIME: 10:37:51

USER:

COMMENTS:

 ** SIMULATION : Run 06

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\aa5f3685-1a4d-466b-8f88-d1f0e08ee45b\2985551a
 Ptotal=127.20 mm Comments: Mass 24-Hour SCS Type II Design Storm

HRP6.1-PR-SWM_2-100 YEAR.OUT

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53

CALIB
NASHYD (1030)
ID= 1 DT= 5.0 min

Area (ha)= 30.38
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.50

Curve Number (CN)= 77.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53

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3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 3.064 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 75.388
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.593

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0021)
IN= 2----> OUT= 1

Routing time step (min)'= 4.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning	
0.00	101.00	0.0000	
1.00	100.67	0.0000	
2.00	100.33	0.0000 / 0.0350	Main Channel
3.00	100.00	0.0350	Main Channel
4.00	100.00	0.0350	Main Channel
5.00	100.33	0.0350 / 0.0000	Main Channel
6.00	100.67	0.0000	
7.00	101.00	0.0000	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.145E+02	0.0	0.34	13.16
0.09	100.09	.327E+02	0.1	0.51	8.00
0.14	100.14	.545E+02	0.1	0.64	7.02
0.19	100.19	.800E+02	0.2	0.75	6.00
0.24	100.24	.109E+03	0.3	0.85	5.31
0.28	100.28	.142E+03	0.5	0.94	4.81
0.33	100.33	.178E+03	0.7	1.02	4.42
0.39	100.39	.226E+03	1.0	1.17	3.84
0.44	100.44	.279E+03	1.3	1.30	3.47
0.50	100.50	.336E+03	1.7	1.40	3.21
0.55	100.55	.399E+03	2.2	1.49	3.02
0.61	100.61	.466E+03	2.7	1.57	2.87
0.66	100.66	.539E+03	3.3	1.63	2.75
0.72	100.72	.616E+03	3.9	1.69	2.66
0.78	100.78	.690E+03	4.5	1.75	2.58
0.83	100.83	.786E+03	5.2	1.80	2.51
0.89	100.89	.879E+03	6.0	1.84	2.45
0.94	100.94	.977E+03	6.8	1.88	2.39
1.00	101.00	.108E+04	7.7	1.92	2.35

<---- hydrograph ----> <-pipe / channel->
AREA TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (1030) 30.38 3.06 12.33 75.39 0.65 1.61
OUTFLOW: ID= 1 (0021) 30.38 3.07 12.42 75.39 0.65 1.61

HRP6.1-PR-SWM_2-100 YEAR.OUT

 CALIB
 NASHYD (0230) | Area (ha)= 9.14 Curve Number (CN)= 82.0
 ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.42

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	1.27	6.003	2.54	12.003	18.33	18.00	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53		
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53		
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53		
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53		
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53		
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53		
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53		
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53		

Unit Hyd Qpeak (cms)= 0.827

HRP6.1-PR-SWM_2-100 YEAR.OUT

PEAK FLOW (cms)= 1.179 (i)
 TIME TO PEAK (hrs)= 12.250
 RUNOFF VOLUME (mm)= 83.905
 TOTAL RAINFALL (mm)= 127.200
 RUNOFF COEFFICIENT = 0.660

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ADD HYD (0003) |
1 + 2 = 3
 ID1= 1 (0021): 30.38 3.066 12.42 75.39
 + ID2= 2 (0230): 9.14 1.179 12.25 83.90

 ID = 3 (0003): 39.52 4.190 12.33 77.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 RESERVOIR(0030) | OVERFLOW IS OFF
 IN= 2----> OUT= 1 |
DT= 5.0 min

OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	2.7760	0.2010
1.0940	0.0700	3.2380	0.2400
1.8140	0.1110	3.7590	0.2830
2.2340	0.1460	0.0000	0.0000

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
39.520	4.190	12.33	77.36
39.520	3.727	12.58	77.36

PEAK FLOW	REDUCTION	[Qout/Qin](%)= 88.96
TIME SHIFT OF PEAK FLOW		(min)= 15.00
MAXIMUM STORAGE USED		(ha.m.)= 0.2816

 CALIB
 STANDHYD (0231) | Area (ha)= 7.45
 ID= 1 DT= 2.0 min | Total Imp(%)= 24.00 Dir. Conn.(%)= 24.00

Surface Area	(ha)=	IMPERVIOUS	PERVIOUS (i)
Dep. Storage	(mm)=	1.79	5.66
Average Slope	(%)=	1.50	1.50
Length	(m)=	2.00	1.10
Mannings n	=	222.86	40.00
		0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29		
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29		
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29		
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29		
0.500	1.27	6.500	2.54	12.500	18.30	18.50	2.29		
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29		
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29		
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29		

HRP6_1-PR-SWM_2-100 YEAR.OUT									
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29		
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29		
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29		
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29		
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29		
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29		
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29		
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29		
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29		
1.767	1.78	7.767	2.54	13.767	10.43	19.77	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29		
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29		
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29		
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53		
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53		
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53		
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53		
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53		
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53		
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53		
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53		
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53		
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53		
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53		
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		

HRP6_1-PR-SWM_2-100 YEAR.OUT							
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53
Max.Eff.Inten.(mm/hr)= over (min)			140.43	113.06			
Storage Coeff. (min)=			2.93 (ii)	10.07 (ii)			
Unit Hyd. Tpeak (min)=			4.00	12.90			
Unit Hyd. peak (cms)=			0.34	0.10			
PEAK FLOW (cms)=				0.69	1.24	*TOTALS=	
TIME TO PEAK (hrs)=				12.00	12.07	1.832 (iii)	
RUNOFF VOLUME (mm)=				125.78	87.07	96.34	
TOTAL RAINFALL (mm)=				127.20	127.20	127.20	
RUNOFF COEFFICIENT =				0.99	0.68	0.76	
(i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES: CN* = 82.0 Ia = Dep. Storage (Above)							
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.							
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

HRP6.1-PR-SWM_2-100 YEAR.OUT

ADD HYD (0211)				
1 + 2 = 3				

ID1= 1 (0231):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (0030):	7.45	1.832	12.00	96.34
	39.52	3.727	12.58	77.36
=====				
ID = 3 (0211):	46.97	4.113	12.53	80.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)		
IN= 2---> OUT= 1		
Routing time step (min) '= 2.00		

<----- DATA FOR SECTION (1.1) ----->		
Distance	Elevation	Manning
0.00	101.00	0.0000
1.00	100.67	0.0000
2.00	100.33	0.0000 / 0.0350 Main Channel
3.00	100.00	0.0350 Main Channel
4.00	100.00	0.0350 Main Channel
5.00	100.33	0.0350 / 0.0000 Main Channel
6.00	100.67	0.0000
7.00	101.00	0.0000

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.95	.405E+01	0.0	0.34	4.39
0.09	100.09	.109E+02	0.1	0.51	2.93
0.14	100.14	.182E+02	0.1	0.64	2.34
0.19	100.19	.267E+02	0.2	0.75	2.00
0.24	100.24	.364E+02	0.3	0.85	1.77
0.28	100.28	.473E+02	0.5	0.94	1.60
0.33	100.33	.594E+02	0.7	1.02	1.47
0.39	100.39	.753E+02	1.0	1.17	1.28
0.44	100.44	.923E+02	1.3	1.30	1.16
0.50	100.50	.112E+03	1.7	1.40	1.07
0.55	100.55	.133E+03	2.2	1.49	1.01
0.61	100.61	.155E+03	2.7	1.57	0.96
0.66	100.66	.180E+03	3.3	1.63	0.92
0.72	100.72	.205E+03	3.9	1.69	0.89
0.78	100.78	.233E+03	4.5	1.75	0.86
0.83	100.83	.262E+03	5.2	1.80	0.84
0.89	100.89	.293E+03	6.0	1.84	0.82
0.94	100.94	.326E+03	6.8	1.88	0.80
1.00	101.00	.360E+03	7.7	1.92	0.78

<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0211)	46.97	4.11	12.53	80.37	0.74	1.71
OUTFLOW: ID= 1 (0005)	46.97	4.12	12.53	80.37	0.74	1.71

CALIB			
STANDHYD (0232)			
ID= 1 DT= 3.0 min			

Area	(ha)=	8.25	
Total Imp(%)=	39.00		Dir. Conn.(%)= 39.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	3.22	5.03		
Dep. Storage	(mm)=	15.00	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	234.52	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		

0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53

HRP6.1-PR-SWM_2-100 YEAR.OUT

4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 91.28
over (min) 6.00 12.00
Storage Coeff. (min)= 3.02 (ii) 10.39 (ii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.27 0.10

TOTALS

PEAK FLOW (cms)= 1.24 0.91 2.988 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 112.20 70.39 86.69
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.88 0.55 0.68

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0007)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0232):	8.25	2.088	12.00	86.69
+ ID2= 2 (0005):	46.97	4.117	12.53	80.37
=====				
ID = 3 (0007):	55.22	5.226	12.03	81.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2--> OUT= 1 Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0800		
1.00	100.67	0.0800		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.609E+01	0.0	0.34	5.51
0.09	100.09	.137E+02	0.1	0.51	3.68
0.14	100.14	.228E+02	0.1	0.64	2.94
0.19	100.19	.335E+02	0.2	0.75	2.51
0.24	100.24	.457E+02	0.3	0.85	2.22
0.28	100.28	.594E+02	0.5	0.94	2.01
0.33	100.33	.746E+02	0.7	1.02	1.85
0.39	100.39	.945E+02	1.0	1.17	1.61
0.44	100.44	.117E+03	1.3	1.30	1.45
0.50	100.50	.141E+03	1.7	1.40	1.34
0.55	100.55	.167E+03	2.2	1.49	1.26
0.61	100.61	.195E+03	2.7	1.57	1.20
0.66	100.66	.225E+03	3.3	1.63	1.15
0.72	100.72	.258E+03	3.9	1.69	1.11

HRP6.1-PR-SWM_2-100 YEAR.OUT

0.78	100.78	.292E+03	4.5	1.75	1.08
0.83	100.83	.329E+03	5.2	1.80	1.05
0.89	100.89	.368E+03	6.0	1.84	1.02
0.94	100.94	.409E+03	6.8	1.88	1.00
1.00	101.00	.452E+03	7.7	1.92	0.98

<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m) (m/s)
INFLOW : ID= 2 (0007)	55.22	5.23	12.03	81.31	0.83 1.80
OUTFLOW: ID= 1 (0022)	55.22	5.20	12.03	81.31	0.83 1.79

CALIB	Area (ha)=	6.79
STANDHYD (0133)	Total Imp(%)=	47.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	47.00

Surface Area	(ha)=	IMPERVIOUS	PERVIOUS (l)
Dep. Storage	(mm)=	15.00	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	212.76	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		

HRP6.1-PR-SWM_2-100 YEAR.OUT									
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53		
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53		
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53		
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53		
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53		
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53		
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53		
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53		
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53		
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53		
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53		
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53		
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53		
Max.Eff.Inten.(mm/hr)=	140.43	72.61							
over (min)	6.00	12.00							
Storage Coeff. (min)=	2.85 (ii)	9.31 (ii)							
Unit Hyd. Tpeak (min)=	6.00	12.00							
Unit Hyd. peak (cms)=	0.28	0.11							
PEAK FLOW (cms)=	1.24	0.53							
TIME TO PEAK (hrs)=	12.00	12.05	12.00						
RUNOFF VOLUME (mm)=	112.20	56.15	82.49						
TOTAL RAINFALL (mm)=	127.20	127.20	127.20						
RUNOFF COEFFICIENT =	0.88	0.44	0.65						

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-PR-SWM_2-100 YEAR.OUT									

ADD HYD (0091)									
1 + 2 = 3									
		AREA	QPEAK	TPEAK	R.V.				
		(ha)	(cms)	(hrs)	(mm)				
ID1= 1 (0133):		6.79	1.729	12.00	82.49				
+ ID2= 2 (0022):		55.22	5.196	12.03	81.31				
=====									
ID = 3 (0091):		62.01	6.776	12.03	81.44				
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

CALIB									
NASHYD (0222)	Area	(ha)=	3.54	Curve Number (CN)=	75.0				
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00				

U.H. Tp(hrs)= 0.15									
NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.									

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		

HRP6.1-PR-SWM_2-100 YEAR.OUT

5.250	2.04	[11.250	12.21	[17.250	2.29	[23.25	1.53
5.333	2.04	[11.333	12.21	[17.333	2.29	[23.33	1.53
5.417	2.04	[11.417	12.21	[17.417	2.29	[23.42	1.53
5.500	2.04	[11.500	12.21	[17.500	2.29	[23.50	1.53
5.583	2.04	[11.583	52.91	[17.583	2.29	[23.58	1.53
5.667	2.04	[11.667	52.92	[17.667	2.29	[23.67	1.53
5.750	2.04	[11.750	52.92	[17.750	2.29	[23.75	1.53
5.833	2.04	[11.833	140.42	[17.833	2.29	[23.83	1.53
5.917	2.04	[11.917	140.43	[17.917	2.29	[23.92	1.53
6.000	2.04	[12.000	140.43	[18.000	2.29	[24.00	1.53

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.743 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 71.770
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.564

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0221)
ID= 1 DT= 5.0 min

Area (ha)= 3.79
Total Imp(%)= 27.00
Dir. Conn.(%)= 27.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.02 2.77
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.00 2.00
Length (m)= 158.95 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53

HRP6.1-PR-SWM_2-100 YEAR.OUT

4.000	1.65	[10.000	4.58	[16.000	3.82	[22.00	1.53
4.083	2.04	[10.083	5.85	[16.083	2.29	[22.08	1.53
4.167	2.04	[10.167	5.85	[16.167	2.29	[22.17	1.53
4.250	2.04	[10.250	5.85	[16.250	2.29	[22.25	1.53
4.333	2.04	[10.333	5.85	[16.333	2.29	[22.33	1.53
4.417	2.04	[10.417	5.85	[16.417	2.29	[22.42	1.53
4.500	2.04	[10.500	5.85	[16.500	2.29	[22.50	1.53
4.583	2.04	[10.583	7.89	[16.583	2.29	[22.58	1.53
4.667	2.04	[10.667	7.89	[16.667	2.29	[22.67	1.53
4.750	2.04	[10.750	7.89	[16.750	2.29	[22.75	1.53
4.833	2.04	[10.833	7.89	[16.833	2.29	[22.83	1.53
4.917	2.04	[10.917	7.89	[16.917	2.29	[22.92	1.53
5.000	2.04	[11.000	7.89	[17.000	2.29	[23.00	1.53
5.083	2.04	[11.083	12.21	[17.083	2.29	[23.08	1.53
5.167	2.04	[11.167	12.21	[17.167	2.29	[23.17	1.53
5.250	2.04	[11.250	12.21	[17.250	2.29	[23.25	1.53
5.333	2.04	[11.333	12.21	[17.333	2.29	[23.33	1.53
5.417	2.04	[11.417	12.21	[17.417	2.29	[23.42	1.53
5.500	2.04	[11.500	12.21	[17.500	2.29	[23.50	1.53
5.583	2.04	[11.583	52.91	[17.583	2.29	[23.58	1.53
5.667	2.04	[11.667	52.92	[17.667	2.29	[23.67	1.53
5.750	2.04	[11.750	52.92	[17.750	2.29	[23.75	1.53
5.833	2.04	[11.833	140.42	[17.833	2.29	[23.83	1.53
5.917	2.04	[11.917	140.43	[17.917	2.29	[23.92	1.53
6.000	2.04	[12.000	140.43	[18.000	2.29	[24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 100.91
over (min) 5.00 10.00
Storage Coeff. (min)= 2.39 (ii) 9.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.12

PEAK FLOW (cms)= 0.40 0.59 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.00 0.985 (iii)
RUNOFF VOLUME (mm)= 125.70 75.39 12.00
TOTAL RAINFALL (mm)= 127.20 127.20 88.97
RUNOFF COEFFICIENT = 0.99 0.59 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0221): 3.79 0.985 12.00 88.97
+ ID2= 2 (0222): 3.54 0.743 12.00 71.77
ID = 3 (0009): 7.33 1.728 12.00 80.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0009)
3 + 2 = 1
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 3 (0009): 7.33 1.728 12.00 80.66
+ ID2= 2 (0091): 62.01 6.776 12.03 81.44
ID = 1 (0009): 69.34 8.417 12.00 81.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)
IN= 2---> OUT= 1
DT= 4.0 min
OVERFLOW IS OFF
OUTFLOW (cms) STORAGE (ha.m.) OUTFLOW (cms) STORAGE (ha.m.)
0.0000 0.0000 3.2510 1.2500
0.6750 0.7720 3.7840 1.3920
1.6680 1.0110 4.5560 1.5300
2.4150 1.1310 0.0000 0.0000
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
INFLOW : ID= 2 (0009) 69.340 8.417 12.00 81.36
OUTFLOW: ID= 1 (0010) 69.340 4.414 12.00 81.35

PEAK FLOW REDUCTION [Qout/Qin](%)= 52.44

HRP6.1-PR-SWM_2-100 YEAR.OUT

TIME SHIFT OF PEAK FLOW (min)= 48.00
MAXIMUM STORAGE USED (ha.m.)= 1.5047

| CALIB |
| STANDHYD (0234) | Area (ha)= 17.56
| ID= 1 DT= 3.0 min | Total Imp(%)= 28.00 Dir. Conn.(%)= 28.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.92 12.64
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 342.15 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.27	6.950	2.54	12.050	18.32	18.05	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53

HRP6.1-PR-SWM_2-100 YEAR.OUT

3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 91.28
over (min) 6.00 15.00
Storage Coeff. (min)= 3.79 (ii) 12.78 (ii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

PEAK FLOW (cms)= 1.88 2.05
TIME TO PEAK (hrs)= 12.00 12.10
RUNOFF VOLUME (mm)= 125.70 70.39
TOTAL RAINFALL (mm)= 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.55

TOTALS
3.609 (iii)
12.00
85.87
127.20
0.68

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CIV 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0011) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0010): 69.34 4.414 12.00 81.35
+ ID2= 2 (0234): 17.56 3.609 12.00 85.87
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP6.1-PR-SWM.2-100 YEAR.OUT

RESERVOIR(0015)				
IN= 2--> OUT= 1				
DT= 3.0 min				
OVERFLOW IS OFF				
OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
0.0000	0.0000	3.4620	0.6060	
0.7430	0.2200	4.3720	0.6120	
1.6740	0.3940	5.3540	0.6210	
2.5260	0.4950	0.0000	0.0000	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
86.900	5.723	12.13	82.27	
OUTFLOW: ID= 1 (0015)	86.900	5.334	12.27	82.27
PEAK TIME SHIFT OF PEAK FLOW MAXIMUM	FLOW STORAGE	REDUCTION USED	[Qout/Qin](%)= 93.21 (min)= 8.00 (ha.m.)= 0.6210	

CALIB				
STANDHYD (0235)				
ID= 1 DT= 2.0 min				
Area	(ha)=	4.28		
Total Imp(%)=	30.00	Dir. Conn.(%)=	30.00	
IMPERVIOUS	PERVIOUS (1)			
Surface Area	(ha)=	1.28	3.00	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	168.92	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29		
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29		
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29		
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29		
0.500	1.27	6.500	2.54	12.500	18.30	18.50	2.29		
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29		
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29		
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29		
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29		
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29		
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29		
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29		
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29		
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29		
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29		
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29		
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		

1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.767	1.27	7.767	2.54	13.767	10.43	19.77	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53</

HRP6.1-PR-SWM.2-100 YEAR.OUT

HRP6.1-PR-SWM.2-100 YEAR.OUT

4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.767	2.04	11.767	95.79	17.767	2.29	23.77	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 92.72
over (min) 5.00 10.00
Storage Coeff. (min)= 2.48 (ii) 9.76 (iii)
Unit Hyd. Tpeak (min)= 4.00 10.00
Unit Hyd. peak (cms)= 0.37 0.11

TOTALS

PEAK FLOW (cms)= 0.50 0.56 1.034 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 125.70 70.38 86.98
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.55 0.68

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0012)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0015):	86.90	5.334	12.27	82.27
+ ID2= 2 (0235):	4.28	1.034	12.00	86.98
ID = 3 (0012):	91.18	5.679	12.27	82.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)
IN= 2--> OUT= 1 | Routing time step (min)= 2.00

Distance	Elevation	Manning
0.00	101.00	0.0000
1.00	100.67	0.0000
2.00	100.33	0.0000 / 0.0350 Main Channel

3.00	100.00	0.0350
4.00	100.00	0.0350
5.00	100.33	0.0350 / 0.0000
6.00	100.67	0.0000
7.00	101.00	0.0000

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.590E+02	0.0	0.34	53.36
0.09	100.09	.133E+03	0.1	0.51	35.70
0.14	100.14	.221E+03	0.1	0.64	28.48
0.19	100.19	.324E+03	0.2	0.75	24.33
0.24	100.24	.442E+03	0.3	0.85	21.55
0.28	100.28	.575E+03	0.5	0.94	19.51
0.33	100.33	.723E+03	0.7	1.02	17.94
0.39	100.39	.916E+03	1.0	1.17	15.58
0.44	100.44	.113E+04	1.3	1.30	14.08
0.50	100.50	.136E+04	1.7	1.40	13.03
0.55	100.55	.162E+04	2.2	1.49	12.25
0.61	100.61	.189E+04	2.7	1.57	11.65
0.66	100.66	.218E+04	3.3	1.63	11.17
0.72	100.72	.250E+04	3.9	1.69	10.77
0.78	100.78	.283E+04	4.5	1.75	10.45
0.83	100.83	.319E+04	5.2	1.80	10.17
0.89	100.89	.357E+04	6.0	1.84	9.92
0.94	100.94	.396E+04	6.8	1.88	9.71
1.00	101.00	.438E+04	7.7	1.92	9.52

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0012)	91.18	5.68	12.27	82.49	0.87
OUTFLOW: ID= 1 (0040)	91.18	5.22	12.67	82.48	0.83

CALIB	Area (ha)= 1.62
STANDHYD (0121)	Total Imp(%)= 28.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)= 28.00

Surface Area	(ha)=	IMPERVIOUS	PERVIOUS (i)
Dep. Storage	(mm)= 1.50	1.50	
Average Slope	(%)= 2.00	2.00	
Length	(m)= 103.92	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29

HRP6.1-PR-SWM_2-100 YEAR.OUT

HRP6.1-PR-SWM_2-100 YEAR.OUT

TOTALS

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.77	7.35
Storage	(mm)=	1.50	1.50
Storage Slope	(%)=	2.00	2.00
Length	(m)=	295.75	40.00
Runoffs n	=	0.013	0.250

TRANSFORMED HYDROGRAPH									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	1.27	6.100	2.54	12.050	18.32	18.10	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.79	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	1.83	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	18.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	18.43	19.65	2.29		
1.700	1.27	7.700	2.54	13.700	18.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	18.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	18.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	18.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	18.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	18.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	18.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.6								

HRP6.1-PR-SWM_2-100 YEAR.OUT

HRP6.1-PR-SWM_2-100 YEAR.OUT

2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 91.28
over (min) 6.00 12.00
Storage Coeff. (min)= 3.47 (ii) 10.26 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.10

TOTALS
PEAK FLOW (cms)= 2.22 1.33 3.457 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 125.70 70.39 94.72
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.55 0.74

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0019)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):	1.62	0.369	12.00	85.87
+ ID2= 2 (0122):	13.12	3.457	12.00	94.72
=====				
ID = 3 (0019):	14.74	3.826	12.00	93.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0020)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0019):	14.74	3.826	12.00	93.75
+ ID2= 2 (0040):	91.18	5.223	12.67	82.48
=====				
ID = 3 (0020):	105.92	5.855	12.53	84.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP7-PR-SWM_2-100 YEAR.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
V V I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\474f5dfb-2878-4118-954a-eaf9ffc25dd\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\474f5dfb-2878-4118-954a-eaf9ffc25dd\scenar

DATE: 03/24/2023 TIME: 10:51:14

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\2f7a6968-fd3c-4c50-b391-74185cad43f3\571fbdef
Ptotal= 57.60 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.58	6.083	1.15	12.083	8.30	18.08	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69	
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69	
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69	
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69	
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69	
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69	
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69	
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69	
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69	
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69	
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69	
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69	
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69	
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69	
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69	
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69	
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69	
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69	
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69	
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69	
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69	
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69	
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69	
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69	
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69	
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69	
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69	
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69	
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69	
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69	
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69	
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69	
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69	
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69	
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69	
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69	
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69	
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69	

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 0.346 (1)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 20.152
TOTAL RAINFALL (mm)= 57.600
RUNOFF COEFFICIENT = 0.350

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

HRP7-PR-SWM_2-100 YEAR.OUT

| STANDHYD (0240)| Area (ha)= 20.08
|ID= 1 DT= 3.0 min | Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

IMPERVIOUS PERVIOUS (I)
Surface Area (ha)= 11.65
Dep. Storage (mm)= 1.50
Average Slope (%)= 2.00
Length (m)= 365.88
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69		

HRP7-PR-SWM_2-100 YEAR.OUT

3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 21.95
over (min) 6.00 30.00
Storage Coeff. (min)= 5.42 (ii) 27.85 (iii)
Unit Hyd. Tpeak (min)= 6.00 30.00
Unit Hyd. peak (cms)= 0.20 0.64

TOTALS

PEAK FLOW (cms)= 1.40 0.40 1.600 (iii)
TIME TO PEAK (hrs)= 12.00 12.35 12.00
RUNOFF VOLUME (mm)= 56.10 23.85 37.39
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.41 0.65

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0038)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
----- (ha) (cms) (hrs) (mm)
ID1= 1 (1040): 10.35 0.346 12.25 20.15
+ ID2= 2 (0240): 20.08 1.600 12.00 37.39
=====

ID = 3 (0038): 30.43 1.841 12.00 31.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0029)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

HRP7-PR-SWM_2-100 YEAR.OUT

Distance	Elevation	Manning
0.00	101.00	0.0500
1.00	100.67	0.0500
2.00	100.33	0.0500 / 0.0300
3.00	100.00	0.0300
4.00	100.00	0.0300
5.00	100.33	0.0300 / 0.0500
6.00	100.67	0.0500
7.00	101.00	0.0500

Main Channel

Main Channel

Main Channel

----- TRAVEL TIME TABLE -----

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.321E+02	0.0	0.28	35.15
0.09	100.09	.721E+02	0.1	0.42	23.51
0.14	100.14	.120E+03	0.1	0.53	18.76
0.19	100.19	.176E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.490E+03	0.8	0.97	10.26
0.44	100.44	.614E+03	1.1	1.07	9.26
0.50	100.50	.741E+03	1.4	1.16	8.55
0.55	100.55	.879E+03	1.8	1.24	8.01
0.61	100.61	.103E+04	2.3	1.31	7.60
0.66	100.66	.119E+04	2.7	1.37	7.26
0.72	100.72	.136E+04	3.2	1.42	6.98
0.78	100.78	.154E+04	3.8	1.47	6.74
0.83	100.83	.173E+04	4.4	1.52	6.53
0.89	100.89	.194E+04	5.1	1.56	6.35
0.94	100.94	.215E+04	5.8	1.60	6.19
1.00	101.00	.238E+04	6.6	1.64	6.05

<--- hydrograph ---> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0038)	30.43	1.84	12.00	31.53	0.56	1.24
OUTFLOW: ID= 1 (0029)	30.43	1.54	12.07	31.52	0.51	1.18

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.003	0.58	6.083	1.15	12.083	8.30	18.08	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69

HRP7-PR-SWM_2-100 YEAR.OUT

2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.083	0.92	10.083	2.65	16.083	1.04	22.08	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW	(cms)=	0.497 (i)
TIME TO PEAK	(hrs)=	12.083
RUNOFF VOLUME	(mm)=	21.522
TOTAL RAINFALL	(mm)=	57.600
RUNOFF COEFFICIENT	=	0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

----- ADD HYD (0018) -----

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1041):	11.30	0.497	12.08	21.52
+ ID2= 2 (0029):	30.43	1.537	12.07	31.52
ID = 3 (0018):	41.73	2.026	12.07	28.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

----- CALIB -----

STANDHYD (0241)	Area	(ha)=	12.29
ID= 1 DT= 2.0 min	Total Imp(%)=	73.00	Dir. Conn.(%)= 73.00

----- IMPERVIOUS PERVIOUS (i) -----

Surface Area	(ha)=	8.97	3.32
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	286.24	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04

HRP7-PR-SWM_2-100 YEAR.OUT											
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04				
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04				
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04				
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04				
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04				
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04				
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04				
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04				
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04				
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04				
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04				
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04				
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04				
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04				
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04				
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04				
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04				
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04				
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04				
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04				
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04				
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04				
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04				
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04				
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04				
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04				
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04				
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04				
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04				
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04				
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04				
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04				
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04				
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04				
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04				
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04				
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04				
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04				
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04				
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04				
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04				
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04				
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04				
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04				
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04				
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04				
1.767	0.81	7.767	1.15	13.767	4.72	19.77	1.04				
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04				
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04				
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04				
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04				
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04				
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04				
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04				
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69				
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69				
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69				
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69				
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69				
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69				
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69				
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69				
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69				
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69				
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69				
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69				
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69				
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69				
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69				
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69				
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69				
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69				
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69				
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69				
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69				
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69				
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69				
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69				
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69				
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69				
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69				
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69				
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69				
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69				
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69				
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69				
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69				

HRP7-PR-SWM_2-100 YEAR.OUT							
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69

HRP7-PR-SWM_2-100 YEAR.OUT

Max.Eff.Inten.(mm/hr)=	63.59	33.86	
over (min)	5.00	12.00	
Storage Coeff. (min)=	4.67 (11)	10.36 (11)	
Unit Hyd. Tpeak (min)=	4.00	12.00	
Unit Hyd. peak (cms)=	0.25	0.10	
PEAK FLOW (cms)=	1.53	0.21	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.07	1.722 (111)
RUNOFF VOLUME (mm)=	56.10	25.46	12.00
TOTAL RAINFALL (mm)=	57.60	57.60	47.83
RUNOFF COEFFICIENT =	0.97	0.44	0.83

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0018):	41.73	2.026	12.07	28.81
+ ID2= 2 (0241):	12.29	1.722	12.00	47.83
=====				
ID = 3 (0021):	54.02	2.068	12.07	30.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0211)				
IN= 2----> OUT= 1				
DT= 3.0 min				
OVERFLOW IS OFF				
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	4.2170	0.5750
	0.8310	0.4090	5.0100	0.6210
	2.1110	0.5050	5.8210	0.6600
	3.3030	0.5320	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0021)	54.020	2.068	12.07	30.42
OUTFLOW: ID= 1 (0211)	54.020	0.830	12.75	30.42

PEAK FLOW REDUCTION [Qout/Qin](%)= 40.14
TIME SHIFT OF PEAK FLOW (min)= 40.50
MAXIMUM STORAGE USED (ha.m.)= 0.4086

CALIB			
STANDHYD (0142)			
ID= 1 DT= 3.0 min			
Area (ha)=	10.92		
Total Imp(%)=	53.00	Dir. Conn.(%)=	53.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.79	5.13
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	269.81	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	0.58	6.950	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04

HRP7-PR-SWM_2-100 YEAR.OUT							
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69

HRP7-PR-SWM_2-100 YEAR.OUT

5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 18.99
over (min) 6.00 15.00
Storage Coeff. (min)= 4.51 (ii) 12.57 (iii)
Unit Hyd. Tpeak (min)= 6.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

TOTALS

PEAK FLOW (cms)= 0.99 0.17 1.123 (iii)
TIME TO PEAK (hrs)= 12.00 12.10
RUNOFF VOLUME (mm)= 56.10 14.86 36.72
TOTAL RAINFALL (mm)= 57.60 57.60 57.60
RUNOFF COEFFICIENT = 0.97 0.26 0.64

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):	10.92	1.123	12.00	36.72
+ ID2= 2 (0211):	54.02	0.830	12.75	30.42
ID = 3 (0023):	64.94	1.542	12.00	31.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)		OVERFLOW IS OFF			
IN= 2---> OUT= 1					
DT= 3.0 min					
		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	0.0830	0.5800
		0.0370	0.1125	1.9000	0.7700
		0.0530	0.2275	6.4000	1.1000
		0.0650	0.3450	9.2000	1.2500
		0.0750	0.4630	0.0000	0.0000

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0023)	64.940	1.542	12.00
OUTFLOW: ID= 1 (0024)	64.940	0.908	13.00

PEAK FLOW REDUCTION [Qout/Qin](%)= 58.85
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.6662

CALIB	Area (ha)= 0.84
STANDHYD (0143)	Total Imp(%)= 55.00
ID= 1 DT= 1.0 min	Dir. Conn.(%)= 55.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.46 0.38
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 74.83 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

HRP7-PR-SWM_2-100 YEAR.OUT

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	0.58	6.017	1.15	12.017	8.33	18.02	1.04
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04
0.083	0.58	6.083	1.15	12.083	8.29	18.08	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.117	0.58	6.117	1.15	12.117	8.29	18.12	1.04
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.183	0.58	6.183	1.15	12.183	8.29	18.18	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.217	0.58	6.217	1.15	12.217	8.29	18.22	1.04
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04
0.283	0.58	6.283	1.15	12.283	8.29	18.28	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.317	0.58	6.317	1.15	12.317	8.29	18.32	1.04
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04
0.383	0.58	6.383	1.15	12.383	8.29	18.38	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04
0.483	0.58	6.483	1.15	12.483	8.29	18.48	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.517	0.58	6.517	1.15	12.517	4.27	18.52	1.04
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.617	0.58	6.617	1.15	12.617	4.26	18.62	1.04
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.683	0.58	6.683	1.15	12.683	4.26	18.68	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.717	0.58	6.717	1.15	12.717	4.26	18.72	1.04
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04
0.783	0.58	6.783	1.15	12.783	4.26	18.78	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.817	0.58	6.817	1.15	12.817	4.26	18.82	1.04
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04
0.883	0.58	6.883	1.15	12.883	4.26	18.88	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04
0.983	0.58	6.983	1.15	12.983	4.26	18.98	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.017	0.58	7.017	1.15	13.017	0.81	19.02	1.04
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.117	0.58	7.117	1.15	13.117	0.81	19.12	1.04
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.183	0.58	7.183	1.15	13.183	0.81	19.18	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.217	0.58	7.217	1.15	13.217	0.81	19.22	1.04
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04
1.283	0.58	7.283	1.15	13.283	0.81	19.28	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.317	0.58	7.317	1.15	13.317	0.81	19.32	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04
1.383	0.58	7.383	1.15	13.383	0.81	19.38	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04

HRP7-PR-SWM_2-100 YEAR.OUT									
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04		
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		
1.483	0.58	7.483	1.15	13.483	0.81	19.48	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.517	0.58	7.517	1.15	13.517	4.72	19.52	1.04		
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04		
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04		
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04		
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.617	0.58	7.617	1.15	13.617	4.72	19.62	1.04		
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04		
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04		
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04		
1.683	0.58	7.683	1.15	13.683	4.72	19.68	1.04		
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04		
1.717	0.58	7.717	1.15	13.717	4.72	19.72	1.04		
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04		
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04		
1.767	1.04	7.767	1.15	13.767	4.72	19.77	1.04		
1.783	1.04	7.783	1.15	13.783	4.72	19.78	1.04		
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04		
1.817	1.04	7.817	1.15	13.817	4.72	19.82	1.04		
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04		
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04		
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04		
1.883	1.04	7.883	1.15	13.883	4.72	19.88	1.04		
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04		
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04		
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04		
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04		
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04		
1.983	1.04	7.983	1.15	13.983	4.72	19.98	1.04		
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04		
2.017	0.75	8.017	1.56	14.017	1.74	20.02	0.69		
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69		
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69		
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69		
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69		
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69		
2.117	0.75	8.117	1.56	14.117	1.73	20.12	0.69		
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69		
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69		
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69		
2.183	0.75	8.183	1.56	14.183	1.73	20.18	0.69		
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69		
2.217	0.75	8.217	1.56	14.217	1.73	20.22	0.69		
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69		
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69		
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69		
2.283	0.75	8.283	1.56	14.283	1.73	20.28	0.69		
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69		
2.317	0.75	8.317	1.56	14.317	1.73	20.32	0.69		
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69		
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69		
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69		
2.383	0.75	8.383	1.56	14.383	1.73	20.38	0.69		
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69		
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69		
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69		
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69		
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69		
2.483	0.75	8.483	1.56	14.483	1.73	20.48	0.69		
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69		
2.517	0.75	8.517	1.56	14.517	1.73	20.52	0.69		
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69		
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69		
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69		
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69		
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69		
2.617	0.75	8.617	1.56	14.617	1.73	20.62	0.69		
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69		
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69		
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69		
2.683	0.75	8.683	1.56	14.683	1.73	20.68	0.69		
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69		
2.717	0.75	8.717	1.56	14.717	1.73	20.72	0.69		
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69		
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69		
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69		
2.783	0.75	8.783	1.56	14.783	1.73	20.78	0.69		
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69		
2.817	0.75	8.817	1.56	14.817	1.73	20.82	0.69		
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69		
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69		
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69		

HRP7-PR-SWM_2-100 YEAR.OUT								
2.883	0.75	8.883	1.56	14.883	1.73	20.88	0.69	
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69	
2.917	0.75	8.917	1.56	14.917	1.73	20.92	0.69	
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69	
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69	
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69	
2.983	0.75	8.983	1.56	14.983	1.73	20.98	0.69	
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69	
3.017	0.75	9.017	1.84	15.017	1.73	21.02	0.69	
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69	
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69	
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69	
3.083	0.75	9.083	1.84	15.083	1.73	21.08	0.69	
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69	
3.117	0.75	9.117	1.84	15.117	1.73	21.12	0.69	
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69	
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69	
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69	
3.183	0.75	9.183	1.84	15.183	1.73	21.18	0.69	
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69	
3.217	0.75	9.217	1.84	15.217	1.73	21.22	0.69	
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69	
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69	
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69	
3.283	0.75	9.283	1.84	15.283	1.73	21.28	0.69	
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69	
3.317	0.75	9.317	1.84	15.317	1.73	21.32	0.69	
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69	
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69	
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69	
3.383	0.75	9.383	1.84	15.383	1.73	21.38	0.69	
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69	
3.417	0.75	9.417	1.84	15.417	1.73	21.42	0.69	
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69	
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69	
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69	
3.483	0.75	9.483	1.84	15.483	1.73	21.48	0.69	
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69	
3.517	0.75	9.517	2.07	15.517	1.73	21.52	0.69	
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69	
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69	
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69	
3.583	0.75	9.583	2.07	15.583	1.73	21.58	0.69	
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69	
3.617	0.75	9.617	2.07	15.617	1.73	21.62	0.69	
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69	
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69	
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69	
3.683	0.75	9.683	2.07	15.683	1.73	21.68	0.69	
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69	
3.717	0.75	9.717	2.07	15.717	1.73	21.72	0.69	
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69	
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69	
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69	
3.783	0.75	9.783	2.07	15.783	1.73	21.78	0.69	
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69	
3.817	0.75	9.817	2.07	15.817	1.73	21.82	0.69	
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69	
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69	
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69	
3.883	0.75	9.883	2.07	15.883	1.73	21.88	0.69	
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69	
3.917	0.75	9.917	2.07	15.917	1.73	21.92	0.69	
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69	
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69	
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69	
3.983	0.75	9.983	2.07	15.983	1.73	21.98	0.69	
4.000	0.92	10.000	2.07	16.000	1.84	22.00	0.69	
4.017	0.92	10.017	2.65	16.017	1.84	22.02	0.69	
4.033	0.92	10.033	2.65	16.033	1.84	22.03	0.69	
4.050	0.92	10.050	2.65	16.050	1.84	22.05	0.69	
4.067	0.92	10.067	2.65	16.067	1.84	22.07	0.69	
4.083	0.92	10.083	2.65	16.083	1.84	22.08	0.69	
4.100	0.92	10.100	2.65	16.100	1.84	22.10	0.69	
4.117	0.92	10.117	2.65	16.117	1.84	22.12	0.69	
4.133	0.92	10.133	2.65	16.133	1.84	22.13	0.69	
4.150	0.92	10.150	2.65	16.150	1.84	22.15	0.69	
4.167	0.92	10.167	2.65	16.167	1.84	22.17	0.69	
4.183	0.92	10.183	2.65	16.183	1.84	22.18	0.69	
4.200	0.92	10.200	2.65	16.200	1.84	22.20	0.69	
4.217	0.92	10.217	2.65	16.217	1.84	22.22	0.69	
4.233	0.92	10.233	2.65	16.233	1.84	22.23	0.69	
4.250	0.92	10.250	2.65	16.250	1.84	22.25	0.69	
4.267	0.92	10.267	2.65	16.267	1.84	22.27	0.69	
4.283	0.92	10.283	2.65	16.283	1.84	22.28	0.69	
4.300	0.92	10.300	2.65	16.300	1.84	22.30	0.69	
4.317	0.92	10.317	2.65	16.317	1.84	22.32	0.69	

HRP7-PR-SWM_2-100 YEAR.OUT									
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.383	0.92	10.383	2.65	16.383	1.04	22.38	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.417	0.92	10.417	2.65	16.417	1.04	22.42	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.483	0.92	10.483	2.65	16.483	1.04	22.48	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.517	0.92	10.517	3.57	16.517	1.04	22.52	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.583	0.92	10.583	3.57	16.583	1.04	22.58	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.617	0.92	10.617	3.57	16.617	1.04	22.62	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.683	0.92	10.683	3.57	16.683	1.04	22.68	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.717	0.92	10.717	3.57	16.717	1.04	22.72	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		
4.783	0.92	10.783	3.57	16.783	1.04	22.78	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.817	0.92	10.817	3.57	16.817	1.04	22.82	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69		
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69		
4.883	0.92	10.883	3.57	16.883	1.04	22.88	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.917	0.92	10.917	3.57	16.917	1.04	22.92	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69		
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69		
4.983	0.92	10.983	3.57	16.983	1.04	22.98	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.017	0.92	11.017	5.53	17.017	1.04	23.02	0.69		
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69		
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69		
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69		
5.083	0.92	11.083	5.53	17.083	1.04	23.08	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.117	0.92	11.117	5.53	17.117	1.04	23.12	0.69		
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69		
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.183	0.92	11.183	5.53	17.183	1.04	23.18	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.217	0.92	11.217	5.53	17.217	1.04	23.22	0.69		
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69		
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69		
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69		
5.283	0.92	11.283	5.53	17.283	1.04	23.28	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.317	0.92	11.317	5.53	17.317	1.04	23.32	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69		
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69		
5.383	0.92	11.383	5.53	17.383	1.04	23.38	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.417	0.92	11.417	5.53	17.417	1.04	23.42	0.69		
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69		
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.483	0.92	11.483	5.53	17.483	1.04	23.48	0.69		
5.500	0.92	11.500	5.53	17.500	1.04	23.50	0.69		
5.517	0.92	11.517	23.96	17.517	1.04	23.52	0.69		
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.617	0.92	11.617	23.96	17.617	1.04	23.62	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.683	0.92	11.683	23.96	17.683	1.04	23.68	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.717	0.92	11.717	23.96	17.717	1.04	23.72	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69		
5.767	0.92	11.767	63.57	17.767	1.04	23.77	0.69		

HRP7-PR-SWM_2-100 YEAR.OUT									
5.783	0.92	11.783	63.59	17.783	1.04	23.78	0.69		
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.817	0.92	11.817	63.59	17.817	1.04	23.82	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.883	0.92	11.883	63.59	17.883	1.04	23.88	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		
5.983	0.92	11.983	63.59	17.983	1.04	23.98	0.69		
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69		

Max.Eff.Inten.(mm/hr)=	63.59	26.91		
over (min)	5.00	10.00		
Storage Coeff. (min)=	2.09 (ii)	9.90 (ii)		
Unit Hyd. Tpeak (min)=	5.00	10.00		
Unit Hyd. peak (cms)=	0.37	0.11		

PEAK FLOW (cms)=	0.08	0.02	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.07	0.100 (iii)
RUNOFF VOLUME (mm)=	56.10	20.32	
TOTAL RAINFALL (mm)=	57.60	57.60	
RUNOFF COEFFICIENT =	0.97	0.35	0.69

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0143):	0.84	0.100	12.00	39.99	
+ ID2= 2 (0024):	64.94	0.908	13.00	30.26	
=====					
ID = 3 (0026):	65.78	0.910	8.67	20.42	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (0244)					
ID= 1 DT= 4.0 min					
	Area	(ha)=	6.58		
	Total Imp(%)=	45.00	Dir. Conn.(%)=	45.00	

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	2.96	3.62	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	209.44	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
	mm/hr		mm/hr	'	hrs	mm/hr			
0.067	0.58	6.067	1.15	12.067	8.30	18.07	1.04		
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04		
0.533	0.58	6.533	1.15	12.533	6.28	18.53	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04		
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04		
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		

HRP7-PR-SWM_2-100 YEAR.OUT

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (002θ)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0244):	6.58	0.614	12.00	36.42
+ ID2= 2 (0026):	65.78	0.910	8.67	20.42
ID = 3 (002θ):	72.36	0.924	8.67	21.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
V  V  I  SSSS  U  U  A  L
V  V  I  SS    U  U  A A  L
V  V  I  SS    U  U  AAAAA L
V  V  I  SS    U  U  A  A  L
VV    I  SSSS  UUUU  A  A  LLLL
```

000	TTTT	TTTT	H	H	Y	Y	M	M	000	TM
0 0	T	T	H	H	Y Y		MM	MM	0 0	
0 0	T	T	H	H	Y		M	M	0 0	
000	T	T	H	H	Y		M	M	000	

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***** DETAILED OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\vo.in.dat
Output filename: C:\Users\Abir\AppData\Local\Civica\H5\10b4df95-7c1b-43ad-8aec-1bb48ca96caf\b41c31f8-f60a-4162-8581-f39ff464292b\scenar
Summary filename: C:\Users\Abir\AppData\Local\Civica\H5\10b4df95-7c1b-43ad-8aec-1bb48ca96caf\b41c31f8-f60a-4162-8581-f39ff464292b\scenar
```

DATE: 03/24/2023 TIME: 10:51:15

USER:

COMMENTS:

```
*****
** SIMULATION : Run 02                               **
*****
```

MASS STORM	Filename: C:\Users\AbirA\AppData Local\Temp\2f7a6968-fd3c-4c50-b391-74185cad43f3\fb8e60ca
Total= 76.80 mm	Comments: Mass 24-Hour SCS Type II Design Storm

```
Duration of storm      = 24.00 hrs
Mass curve time step = 15.00 min
```

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	0.77	6.25	1.54	12.25	11.06	18.25	1.38
0.50	0.77	6.50	1.54	12.50	11.06	18.50	1.38
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38
1.25	0.77	7.25	1.54	13.25	1.08	19.25	1.38
1.50	0.77	7.50	1.54	13.50	1.08	19.50	1.38
1.75	0.77	7.75	1.54	13.75	6.30	19.75	1.38
2.00	1.38	8.00	1.54	14.00	6.30	20.00	1.38
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92
3.00	1.00	9.00	2.07	15.00	2.30	21.00	0.92
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92
3.50	1.00	9.50	2.46	15.50	2.30	21.50	0.92
3.75	1.00	9.75	1.54	15.75	2.30	21.75	0.92
4.00	1.00	10.00	2.76	16.00	2.30	22.00	0.92
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92

Max. Eff. Inten. (mm/hr)=	63.59	24.18	
over (min)=	5.00	20.00	
Storage Coeff. (min)=	3.88 (ii)	16.33 (ii)	
Unit Hyd. Tpeak (min)=	4.00	20.00	
Unit Hyd. peak (cms)=	0.27	0.06	
			TOTALS
PEAK FLOW (cms)=	0.52	0.14	0.614 (iii)
TIME TO PEAK (hrs)=	12.08	12.20	12.08
RUNOFF VOLUME (mm)=	56.10	20.32	36.42
TOTAL RAINFALL (mm)=	57.60	57.60	57.60
RUNOFF COEFFICIENT =	0.97	0.35	0.63

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
```

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

HRP7-PR-SWM_2-100 YEAR.OUT								
5.75	1.23	11.75	31.95	17.75	1.38	23.75	0.92	
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92	

CALIB								
NASHYD (1040)		Area	(ha)=	10.35	Curve Number (CN)=	75.0		
ID= 1 DT= 5.0 min		Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00		

		U.H. Tp(hrs)=	0.35					

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38		
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38		
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38		
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38		
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38		
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38		
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38		
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38		
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38		
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38		
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38		
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38		
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38		
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38		
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38		
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38		
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92		
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92		
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92		
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92		
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92		
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92		
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92		
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92		
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92		
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92		
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92		
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92		
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92		
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92		
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92		
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92		
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92		
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92		
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92		
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92		
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92		
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92		
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92		
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92		
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92		
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92		
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92		
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92		
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92		
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92		
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92		
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92		
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92		
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92		
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92		
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92		
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92		
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92		
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92		
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92		
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92		
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92		
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92		
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92		
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92		

					HRP7-PR-SWM_2-100 YEAR.OUT		
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92
Unit Hyd Qpeak (cms)= 1.123							

PEAK FLOW	(cms)=	0.573 (1)					
TIME TO PEAK	(hrs)=	12.250					
RUNOFF VOLUME	(mm)=	32.941					
TOTAL RAINFALL	(mm)=	76.800					
RUNOFF COEFFICIENT	=	0.429					
(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							

CALIB					
STANDHYD (0240)	Area	(ha)=	20.00		
ID= 1 DT= 3.0 min	Total	Imp(%)=	42.00	Dir. Conn.(%)=	42.00
	IMPERVIOUS		PERVIOUS (i)		
Surface Area	(ha)=	8.43	11.65		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	365.88	100.00		
Mannings n	=	0.013	0.250		
 NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.					

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38		
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38		
1.550	0.77	7.550	1.54	13.550	6.39	19.55	1.38		
1.600	0.77	7.600	1.54	13.600	6.39	19.60	1.38		
1.650	0.77	7.650	1.54	13.650	6.39	19.65	1.38		
1.700	0.77	7.700	1.54	13.700	6.39	19.70	1.38		
1.750	0.77	7.750	1.54	13.750	6.39	19.75	1.38		
1.800	1.38	7.800	1.54	13.800	6.39	19.80	1.38		
1.850	1.38	7.850	1.54	13.850	6.39	19.85	1.38		
1.900	1.38	7.900	1.54	13.900	6.39	19.90	1.38		
1.950	1.38	7.950	1.54	13.950	6.39	19.95	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92		
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92		
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92		
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92		
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92		
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92		
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92		
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92		
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92		
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92		

HRP7-PR-SWM_2-100 YEAR.OUT

2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)=	84.79	41.92
over (min)	6.00	24.00
Storage Coeff. (min)=	4.83 (ii)	22.14 (ii)
Unit Hyd. Tpeak (min)=	6.00	24.00
Unit Hyd. peak (cms)=	0.21	0.05
PEAK FLOW (cms)=	1.90	0.73
TIME TO PEAK (hrs)=	12.00	12.00
RUNOFF VOLUME (mm)=	75.30	37.51
TOTAL RAINFALL (mm)=	76.80	76.80
RUNOFF COEFFICIENT =	0.98	0.49

TOTALS
2.342 (iii)
12.00
53.38
76.80
0.70

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP7-PR-SWM_2-100 YEAR.OUT

ADD HYD (0038)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1040):	10.35	0.573	12.25	32.94
+ ID2= 2 (0240):	20.08	2.342	12.00	53.38
ID = 3 (0038):	30.43	2.751	12.00	46.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0029)	Routing time step (min)'= 2.00
IN= 2---> OUT= 1	
<----- DATA FOR SECTION (1.1) ----->	
Distance	Elevation Manning
0.00	101.00 0.0500
1.00	100.67 0.0500
2.00	100.33 0.0500 /0.0300 Main Channel
3.00	100.00 0.0300 Main Channel
4.00	100.00 0.0300 Main Channel
5.00	100.33 0.0300 /0.0500 Main Channel
6.00	100.67 0.0500
7.00	101.00 0.0500

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.321E+02	0.0	0.28	35.15
0.09	100.09	.721E+02	0.1	0.42	23.51
0.14	100.14	.120E+03	0.1	0.53	18.76
0.19	100.19	.176E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.498E+03	0.8	0.97	10.26
0.44	100.44	.614E+03	1.1	1.07	9.26
0.50	100.50	.741E+03	1.4	1.16	8.55
0.55	100.55	.879E+03	1.8	1.24	8.01
0.61	100.61	.103E+04	2.3	1.31	7.60
0.66	100.66	.119E+04	2.7	1.37	7.26
0.72	100.72	.136E+04	3.2	1.42	6.98
0.78	100.78	.154E+04	3.8	1.47	6.74
0.83	100.83	.173E+04	4.4	1.52	6.53
0.89	100.89	.194E+04	5.1	1.56	6.35
0.94	100.94	.215E+04	5.8	1.60	6.19
1.00	101.00	.238E+04	6.6	1.64	6.05

<---- hydrograph ---->					<-pipe / channel-->	
AREA	QPEAK	TPEAK	R.V.		MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)		(m)	(m/s)
INFLOW : ID= 2 (0038)	30.43	2.75	12.00	46.43	0.67	1.37
OUTFLOW: ID= 1 (0029)	30.43	2.35	12.07	46.42	0.62	1.32

CALIB	Area	(ha)=	11.30	Curve Number	(CN)= 77.0
NASHYD (1041)	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=		0.26		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.083	0.77	6.083	1.54	12.083	11.07	18.08	1.38		
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38		
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38		
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38		
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38		
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38		
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38		
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38		
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38		
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38		

HRP7-PR-SWM_2-100 YEAR.OUT

1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 0.819 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 34.887
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.454

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):	11.30	0.819	12.08	34.89
+ ID2= 2 (0029):	30.43	2.348	12.07	46.42
=====				
ID = 3 (0018):	41.73	3.155	12.07	43.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0241)			
ID= 1 DT= 2.0 min	Area (ha)=	12.29	
	Total Imp(%)=	73.00	Dir. Conn.(%)= 73.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.97	3.32
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00

HRP7-PR-SWM_2-100 YEAR.OUT

Length (m)= 286.24
Mannings n = 0.013 40.00 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38		
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38		
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38		
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38		
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38		
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38		
0.500	0.77	6.500	1.54	12.500	11.05	18.50	1.38		
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38		
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38		
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38		
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38		
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38		
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38		
1.000	0.77	7.000	1.54	13.000	5.67	19.00	1.38		
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38		
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38		
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38		
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38		
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38		
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38		
1.500	0.77	7.500	1.54	13.500	1.09	19.50	1.38		
1.533	0.77	7.533	1.54	13.533	6.30	19.53	1.38		
1.567	0.77	7.567	1.54	13.567	6.30	19.57	1.38		
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38		
1.633	0.77	7.633	1.54	13.633	6.30	19.63	1.38		
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38		
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38		
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38		
1.767	1.08	7.767	1.54	13.767	6.30	19.77	1.38		
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38		
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38		
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38		
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38		
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38		
1.967	1.38	7.967	1.54	13.967	6.30	19.97	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.033	1.00	8.033	2.07	14.033	2.30	20.03	0.92		
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92		
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92		
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92		
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.233	1.00	8.233	2.07	14.233	2.30	20.23	0.92		
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92		
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92		
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92		
2.367	1.00	8.367	2.07	14.367	2.30	20.37	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.433	1.00	8.433	2.07	14.433	2.30	20.43	0.92		
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92		
2.567	1.00	8.567	2.07	14.567	2.30	20.57	0.92		
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92		

HRP7-PR-SNM-2-100 YEAR. OUT									
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92		
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92		
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92		
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92		
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92		
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92		
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92		
5.767	1.23	11.767	58.44	17.767	1.38	23.77	0.92		
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92		
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92		
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92		
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92		
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92		
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92		
6.000	1.23	12.000	84.68	18.000	1.38	24.00	0.92		
Max.Eff.Inten.(mm/hr)= 84.79 52.62									
over (min) 5.00 10.00									
Storage Coeff. (min)= 4.17 (ii) 9.23 (ii)									
Unit Hyd. Tpeak (min)= 4.00 10.00									
Unit Hyd. peak (cms)= 0.27 0.12									
TOTALS									
PEAK FLOW (cms)= 2.06 0.36 2.402 (iii)									
TIME TO PEAK (hrs)= 12.00 12.07 12.00									
RUNOFF VOLUME (mm)= 75.30 39.70 65.69									
TOTAL RAINFALL (mm)= 76.80 76.80 76.80									
RUNOFF COEFFICIENT = 0.98 0.52 0.86									
(i) CN PROCEDURE SELECTED FOR PREVIOUS LOSSES:									
CN* = 79.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0021)									
1 + 2 = 3									
ID= 1 (0018): 41.73 0.155 12.07 43.30									
+ ID= 2 (0241): 12.29 2.402 12.00 65.69									
=====									
ID = 3 (0021): 54.02 3.211 12.07 44.66									
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

RESERVOIR(0211)									
CN= 2----> OUT= 1									
DT= 3.0 min									
OVERFLOW IS OFF									
OUTFLOW STORAGE OUTFLOW STORAGE									
(cms) (ha.m.) (cms) (ha.m.)									
0.0000 0.0000 4.2170 0.5750									
0.8310 0.4090 5.0100 0.6210									
2.1110 0.5050 5.8210 0.6600									
3.3030 0.5320 0.0000 0.0000									
AREA PPEAK TPEAK R.V.									
(ha) (cms) (hrs) (mm)									
INFLOW : ID= 2 (0021) 54.020 3.211 12.07 44.66									
OUTFLOW: ID= 1 (0211) 54.020 2.110 12.43 44.65									
PEAK FLOW REDUCTION [Qout/Qin](%)= 65.72									
TIME SHIFT OF PEAK FLOW (min)= 21.00									
MAXIMUM STORAGE USED (ha.m.)= 0.5050									

STANDHYD (0142)									
1 DT= 3.0 min									
Area (ha)= 10.92									
Total Imp(%)= 53.00 Dir. Conn.(%)= 53.00									
IMPERVIOUS PERVIOUS (i)									
Surface Area (ha)= 5.79 5.13									
Dep. Storage (mm)= 1.50 1.50									
Average Slope (%)= 2.00 2.00									
Length (m)= 269.81 40.00									
Mannings n = 0.013 0.250									
NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.									

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.050	0.77	6.050	1.54	12.050	11.96	18.05	1.38		

HRP7-PR-SWM_2-100 YEAR.OUT									
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38		
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38		
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38		
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38		
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38		
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38		
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38		
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38		
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38		
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38		
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92		
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92		
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92		
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92		
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92		
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92		
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92		
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92		
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92		
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92		
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92		
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92		
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92		
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92		
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92		
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92		
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92		
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92		
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92		
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92		
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92		
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92		
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92		
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92		
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92		
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92		
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92		
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92		
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92		
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92		
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92		
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92		
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92		
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92		
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92		
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92		
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92		
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92		
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92		
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92		
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92		
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92		

HRP7-PR-SWM_2-100 YEAR.OUT									
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92		
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92		
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92		
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92		
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92		
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92		
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92		
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92		
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92		
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92		
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92		
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92		
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92		
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92		
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92		
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92		
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92		
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92		
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92		
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92		
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92		
5.500	1.23	11.500	7.39	17.500	1.38	23.50	0.92		
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92		
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92		
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92		
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92		
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92		
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92		
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92		
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92		
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92		
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92		

Max.Eff.Inten.(mm/hr)=	84.79	31.53		
over (min)	6.00	12.00		
Storage Coeff. (min)=	4.02 (ii)	11.21 (ii)		
Unit Hyd. Tpeak (min)=	6.00	12.00		
Unit Hyd. peak (cms)=	0.24	0.10		
PEAK FLOW (cms)=	1.33	0.30	*TOTALS*	1.605 (iii)
TIME TO PEAK (hrs)=	12.00	12.10		12.00
RUNOFF VOLUME (mm)=	75.30	24.55		51.45
TOTAL RAINFALL (mm)=	76.80	76.80		76.80
RUNOFF COEFFICIENT =	0.98	0.32		0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):	10.92	1.605	12.00	51.45
+ ID2= 2 (0211):	54.02	2.110	12.43	44.65
=====				
ID = 3 (0023):	64.94	2.415	12.40	45.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)	OVERFLOW IS OFF			
IN= 2--> OUT= 1				
DT= 3.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
-----	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0030	0.5000
	0.0370	0.1125	1.9000	0.7700
	0.0530	0.2275	6.4000	1.1800
	0.0650	0.3450	9.2000	1.2500
	0.0750	0.4630	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0023)	64.940	2.415	12.40	45.00
OUTFLOW: ID= 1 (0024)	64.940	2.182	12.57	44.48
	PEAK FLOW REDUCTION	[Qout/Qin](%)= 90.36		
	TIME SHIFT OF PEAK FLOW	(min)= 10.50		
	MAXIMUM STORAGE USED	(ha.m.)= 0.7908		

HRP7-PR-SWM_2-100 YEAR.OUT

CALIB	
STANDHYD (0143)	Area (ha)= 0.84
ID= 1 DT= 1.0 min	Total Imp(%)= 55.00 Dir. Conn.(%)= 55.00

Surface Area	(ha)=	0.46	PERVIOUS (i)	0.38
Dep. Storage	(mm)=	1.50		1.50
Average Slope	(%)=	2.00		2.00
Length	(m)=	74.83		40.00
Mannings n	=	0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.017	0.77	6.017	1.54	12.017	11.11	18.02	1.38		
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38		
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38		
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38		
0.083	0.77	6.083	1.54	12.083	11.06	18.08	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.117	0.77	6.117	1.54	12.117	11.06	18.12	1.38		
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38		
0.183	0.77	6.183	1.54	12.183	11.06	18.18	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.217	0.77	6.217	1.54	12.217	11.06	18.22	1.38		
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38		
0.283	0.77	6.283	1.54	12.283	11.06	18.28	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		
0.317	0.77	6.317	1.54	12.317	11.06	18.32	1.38		
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38		
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38		
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38		
0.383	0.77	6.383	1.54	12.383	11.06	18.38	1.38		
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38		
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38		
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38		
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38		
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38		
0.483	0.77	6.483	1.54	12.483	11.06	18.48	1.38		
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38		
0.517	0.77	6.517	1.54	12.517	5.69	18.52	1.38		
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38		
0.550	0.77	6.550	1.54	12.550	5.68	18.55	1.38		
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38		
0.583	0.77	6.583	1.54	12.583	5.68	18.58	1.38		
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38		
0.617	0.77	6.617	1.54	12.617	5.68	18.62	1.38		
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38		
0.650	0.77	6.650	1.54	12.650	5.68	18.65	1.38		
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38		
0.683	0.77	6.683	1.54	12.683	5.68	18.68	1.38		
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38		
0.717	0.77	6.717	1.54	12.717	5.68	18.72	1.38		
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38		
0.750	0.77	6.750	1.54	12.750	5.68	18.75	1.38		
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38		
0.783	0.77	6.783	1.54	12.783	5.68	18.78	1.38		
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38		
0.817	0.77	6.817	1.54	12.817	5.68	18.82	1.38		
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38		
0.850	0.77	6.850	1.54	12.850	5.68	18.85	1.38		
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38		
0.883	0.77	6.883	1.54	12.883	5.68	18.88	1.38		
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38		
0.917	0.77	6.917	1.54	12.917	5.68	18.92	1.38		
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38		
0.950	0.77	6.950	1.54	12.950	5.68	18.95	1.38		
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38		
0.983	0.77	6.983	1.54	12.983	5.68	18.98	1.38		
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38		
1.017	0.77	7.017	1.54	13.017	1.08	19.02	1.38		
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38		
1.050	0.77	7.050	1.54	13.050	1.08	19.05	1.38		
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38		
1.083	0.77	7.083	1.54	13.083	1.08	19.08	1.38		
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38		
1.117	0.77	7.117	1.54	13.117	1.08	19.12	1.38		
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38		
1.150	0.77	7.150	1.54	13.150	1.08	19.15	1.38		
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38		

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1.183	0.77	7.183	1.54	13.183	1.08	19.18	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.217	0.77	7.217	1.54	13.217	1.08	19.22	1.38
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38
1.250	0.77	7.250	1.54	13.250	1.08	19.25	1.38
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38
1.283	0.77	7.283	1.54	13.283	1.08	19.28	1.38
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38
1.317	0.77	7.317	1.54	13.317	1.08	19.32	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.350	0.77	7.350	1.54	13.350	1.08	19.35	1.38
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38
1.383	0.77	7.383	1.54	13.383	1.08	19.38	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.417	0.77	7.417	1.54	13.417	1.08	19.42	1.38
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38
1.450	0.77	7.450	1.54	13.450	1.08	19.45	1.38
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38
1.483	0.77	7.483	1.54	13.483	1.08	19.48	1.38
1.500	0.77	7.500	1.54	13.500	1.08	19.50	1.38
1.517	0.77	7.517	1.54	13.517	6.30	19.52	1.38
1.533	0.77	7.533	1.54	13.533	6.30	19.53	1.38
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38
1.567	0.77	7.567	1.54	13.567	6.30	19.57	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38
1.617	0.77	7.617	1.54	13.617	6.30	19.62	1.38
1.633	0.77	7.633	1.54	13.633	6.30	19.63	1.38
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.683	0.77	7.683	1.54	13.683	6.30	19.68	1.38
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38
1.717	0.77	7.717	1.54	13.717	6.30	19.72	1.38
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38
1.767	1.38	7.767	1.54	13.767	6.30	19.77	1.38
1.783	1.38	7.783	1.54	13.783	6.30	19.78	1.38
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38
1.817	1.38	7.817	1.54	13.817	6.30	19.82	1.38
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38
1.883	1.38	7.883	1.54	13.883	6.30	19.88	1.38
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38
1.967	1.38	7.967	1.54	13.967	6.30	19.97	1.38
1.983	1.38	7.983	1.54	13.983	6.30	19.98	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.017	1.00	8.017	2.07	14.017	2.31	20.02	0.92
2.033	1.00	8.033	2.07	14.033	2.30	20.03	0.92
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92
2.117	1.00	8.117	2.07	14.117	2.30	20.12	0.92
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.183	1.00	8.183	2.07	14.183	2.30	20.18	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.217	1.00	8.217	2.07	14.217	2.30	20.22	0.92
2.233	1.00	8.233	2.07	14.233	2.30	20.23	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92
2.283	1.00	8.283	2.07	14.283	2.30	20.28	0.92
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92
2.317	1.00	8.317	2.07	14.317	2.30	20.32	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92
2.367	1.00	8.367	2.07	14.367	2.30	20.37	0.92
2.383	1.00	8.383	2.07	14.383	2.30	20.38	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.433	1.00	8.433	2.07	14.433	2.30	20.43	0.92
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92
2.483	1.00	8.483	2.07	14.483	2.30	20.48	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.517	1.00	8.517	2.07	14.517	2.30	20.52	0.92
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92
2.567	1.00	8.567	2.07	14.567	2.30	20.57	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.617	1.00	8.617	2.07	14.617	2.30	20.62	0.92

HRP7-PR-SWM_2-100 YEAR.OUT									
2.633	1.00	8.633	2.07	14.633	2.30	20.63	0.92		
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92		
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92		
2.683	1.00	8.683	2.07	14.683	2.30	20.68	0.92		
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92		
2.717	1.00	8.717	2.07	14.717	2.30	20.72	0.92		
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92		
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92		
2.767	1.00	8.767	2.07	14.767	2.30	20.77	0.92		
2.783	1.00	8.783	2.07	14.783	2.30	20.78	0.92		
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92		
2.817	1.00	8.817	2.07	14.817	2.30	20.82	0.92		
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92		
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92		
2.867	1.00	8.867	2.07	14.867	2.30	20.87	0.92		
2.883	1.00	8.883	2.07	14.883	2.30	20.88	0.92		
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92		
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92		
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92		
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92		
2.967	1.00	8.967	2.07	14.967	2.30	20.97	0.92		
2.983	1.00	8.983	2.07	14.983	2.30	20.98	0.92		
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92		
3.017	1.00	9.017	2.46	15.017	2.30	21.02	0.92		
3.033	1.00	9.033	2.46	15.033	2.30	21.03	0.92		
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92		
3.067	1.00	9.067	2.46	15.067	2.30	21.07	0.92		
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92		
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92		
3.117	1.00	9.117	2.46	15.117	2.30	21.12	0.92		
3.133	1.00	9.133	2.46	15.133	2.30	21.13	0.92		
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92		
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92		
3.183	1.00	9.183	2.46	15.183	2.30	21.18	0.92		
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92		
3.217	1.00	9.217	2.46	15.217	2.30	21.22	0.92		
3.233	1.00	9.233	2.46	15.233	2.30	21.23	0.92		
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92		
3.267	1.00	9.267	2.46	15.267	2.30	21.27	0.92		
3.283	1.00	9.283	2.46	15.283	2.30	21.28	0.92		
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92		
3.317	1.00	9.317	2.46	15.317	2.30	21.32	0.92		
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92		
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92		
3.367	1.00	9.367	2.46	15.367	2.30	21.37	0.92		
3.383	1.00	9.383	2.46	15.383	2.30	21.38	0.92		
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92		
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92		
3.433	1.00	9.433	2.46	15.433	2.30	21.43	0.92		
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92		
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92		
3.483	1.00	9.483	2.46	15.483	2.30	21.48	0.92		
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92		
3.517	1.00	9.517	2.76	15.517	2.30	21.52	0.92		
3.533	1.00	9.533	2.76	15.533	2.30	21.53	0.92		
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92		
3.567	1.00	9.567	2.76	15.567	2.30	21.57	0.92		
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92		
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92		
3.617	1.00	9.617	2.76	15.617	2.30	21.62	0.92		
3.633	1.00	9.633	2.76	15.633	2.30	21.63	0.92		
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92		
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92		
3.683	1.00	9.683	2.76	15.683	2.30	21.68	0.92		
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92		
3.717	1.00	9.717	2.76	15.717	2.30	21.72	0.92		
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92		
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92		
3.767	1.00	9.767	2.76	15.767	2.30	21.77	0.92		
3.783	1.00	9.783	2.76	15.783	2.30	21.78	0.92		
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92		
3.817	1.00	9.817	2.76	15.817	2.30	21.82	0.92		
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92		
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92		
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92		
3.883	1.00	9.883	2.76	15.883	2.30	21.88	0.92		
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92		
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92		
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92		
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92		
3.967	1.00	9.967	2.76	15.967	2.30	21.97	0.92		
3.983	1.00	9.983	2.76	15.983	2.30	21.98	0.92		
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92		
4.017	1.23	10.017	3.53	16.017	1.30	22.02	0.92		
4.033	1.23	10.033	3.53	16.033	1.30	22.03	0.92		
4.050	1.23	10.050	3.53	16.050	1.30	22.05	0.92		
4.067	1.23	10.067	3.53	16.067	1.30	22.07	0.92		

HRP7-PR-SWM_2-100 YEAR.OUT									
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92		
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92		
4.117	1.23	10.117	3.53	16.117	1.38	22.12	0.92		
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92		
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92		
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92		
4.183	1.23	10.183	3.53	16.183	1.38	22.18	0.92		
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92		
4.217	1.23	10.217	3.53	16.217	1.38	22.22	0.92		
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92		
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92		
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92		
4.283	1.23	10.283	3.53	16.283	1.38	22.28	0.92		
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92		
4.317	1.23	10.317	3.53	16.317	1.38	22.32	0.92		
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92		
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92		
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92		
4.383	1.23	10.383	3.53	16.383	1.38	22.38	0.92		
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92		
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92		
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92		
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92		
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92		
4.483	1.23	10.483	3.53	16.483	1.38	22.48	0.92		
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92		
4.517	1.23	10.517	4.76	16.517	1.38	22.52	0.92		
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92		
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92		
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92		
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92		
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92		
4.617	1.23	10.617	4.76	16.617	1.38	22.62	0.92		
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92		
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92		
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92		
4.683	1.23	10.683	4.76	16.683	1.38	22.68	0.92		
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92		
4.717	1.23	10.717	4.76	16.717	1.38	22.72	0.92		
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92		
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92		
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92		
4.783	1.23	10.783	4.76	16.783	1.38	22.78	0.92		
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92		
4.817	1.23	10.817	4.76	16.817	1.38	22.82	0.92		
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92		
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92		
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92		
4.883	1.23	10.883	4.76	16.883	1.38	22.88	0.92		
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92		
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92		
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92		
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92		
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92		
4.983	1.23	10.983	4.76	16.983	1.38	22.98	0.92		
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92		
5.017	1.23	11.017	7.37	17.017	1.38	23.02	0.92		
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92		
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92		
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92		
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92		
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92		
5.117	1.23	11.117	7.37	17.117	1.38	23.12	0.92		
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92		
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92		
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92		
5.183	1.23	11.183	7.37	17.183	1.38	23.18	0.92		
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92		
5.217	1.23	11.217	7.37	17.217	1.38	23.22	0.92		
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92		
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92		
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92		
5.283	1.23	11.283	7.37	17.283	1.38	23.28	0.92		
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92		
5.317	1.23	11.317	7.37	17.317	1.38	23.32	0.92		
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92		
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92		
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92		
5.383	1.23	11.383	7.37	17.383	1.38	23.38	0.92		
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92		
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92		
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92		
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92		
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92		
5.483	1.23	11.483	7.37	17.483	1.38	23.48	0.92		
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92		
5.517	1.23	11.517	31.94	17.517	1.38	23.52	0.92		

HRP7-PR-SWM_2-100 YEAR.OUT

5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92
5.550	1.23	11.550	31.95	17.550	1.38	23.55	0.92
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.617	1.23	11.617	31.95	17.617	1.38	23.62	0.92
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.683	1.23	11.683	31.95	17.683	1.38	23.68	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.717	1.23	11.717	31.95	17.717	1.38	23.72	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.767	1.23	11.767	84.76	17.767	1.38	23.77	0.92
5.783	1.23	11.783	84.79	17.783	1.38	23.78	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.817	1.23	11.817	84.79	17.817	1.38	23.82	0.92
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92
5.883	1.23	11.883	84.79	17.883	1.38	23.88	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92
5.983	1.23	11.983	84.79	17.983	1.38	23.98	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 43.15
over (min) 5.00 9.00
Storage Coeff. (min)= 1.86 (ii) 8.82 (ii)
Unit Hyd. Tpeak (min)= 5.00 9.00
Unit Hyd. peak (cms)= 0.39 0.13

PEAK FLOW (cms)= 0.11 0.03 0.141 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 75.30 32.57 56.07
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.42 0.73

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0143):	0.84	0.141	12.00	56.07	
+ ID2= 2 (0024):	64.94	2.182	12.57	44.48	
=====					
ID = 3 (0026):	65.78	2.185	8.38	29.99	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (0244)					
ID= 1 DT= 4.0 min					

	Area	(ha)=	6.58		
	Total Imp(%)=	45.00	Dir. Conn.(%)=	45.00	

	IMPERVIOUS	PERVIOUS (i)			
Surface Area	(ha)=	2.96	3.62		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	200.44	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	0.77	6.067	1.54	12.067	11.07	18.07	1.38
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38

HRP7-PR-SWM_2-100 YEAR.OUT

0.533	0.77	6.533	1.54	12.533	8.37	18.53	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38
1.000	0.77	7.000	1.54	13.000	5.68	19.00	1.38
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38
1.533	0.77	7.533	1.54	13.533	3.69	19.53	1.38
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38
1.800	1.23	7.800	1.54	13.800	6.30	19.80	1.38
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.867	1.00	8.867	2.07	14.867	2.30	20.87	0.92
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.067	1.00	9.067	2.46	15.067	2.30	21.07	0.92
3.133	1.00	9.133	2.46	15.133	2.30	21.13	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.267	1.00	9.267	2.46	15.267	2.30	21.27	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92
3.533	1.00	9.533	2.61	15.533	2.30	21.53	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92
4.533	1.23	10.533	4.15	16.533	1.38	22.53	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.533	1.23	11.533	19.66	17.533	1.38	23.53	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.800	1.23	11.800	71.57	17.800	1.38	23.80	0.92
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 42.25
over (min) 5.00 16.00
Storage Coeff. (min)= 3.45 (ii) 13.42 (ii)

Unit Hyd. Tpeak (min)= 4.00 16.00
Unit Hyd. peak (cms)= 0.29 0.08
PEAK FLOW (cms)= 0.69 0.26 0.905 (iii)
TIME TO PEAK (hrs)= 12.00 12.13 12.00
RUNOFF VOLUME (mm)= 75.30 32.57 51.80
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.42 0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)
1 * 2 = 3
ID1= 1 (0244): 6.58 0.905 12.00 51.80
+ ID2= 2 (0026): 65.78 2.185 8.38 29.99
ID = 3 (0028): 72.36 2.205 8.38 31.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voindat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb48ca06caf\44fe50db-ca7e-4681-bdcc-a773b21bc5b7\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb48ca06caf\44fe50db-ca7e-4681-bdcc-a773b21bc5b7\scenar

DATE: 03/24/2023 TIME: 10:51:15

USER:

COMMENTS:

** SIMULATION : Run 03 **

MASS STORM Filename: C:\Users\AbirA\AppData\Local\Temp\2f7a6968-fd3c-4c50-b391-74185cad43f3\1913d0e0
Ptotal= 88.80 mm Comments: Mass 24-Hour SCS Type II Design Storm
Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07

CALIB
NASHYD (1040)
ID= 1 DT= 5.0 min
Area (ha)= 10.35
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.35
Curve Number (CN)= 75.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07

HRP7-PR-SWM_2-100 YEAR.OUT

4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	5.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	5.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	5.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	5.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	5.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	5.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 0.730 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 41.676
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.469

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	20.08
STANDHYD (0240)	Total Imp(%)=	42.00 Dir. Conn.(%)= 42.00
ID= 1 DT= 3.0 min		

Surface Area (ha)=	IMPERVIOUS	PERVIOUS (i)
Dep. Storage (mm)=	8.43	11.65
Average Slope (%)=	1.50	1.50
Length (m)=	2.00	2.00
Mannings n	365.88	100.00
	=	0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07

HRP7-PR-SWM_2-100 YEAR.OUT

2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.500	1.42	11.500	8.54	17.500	1.60	23.50	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.750	1.42	11.750	36.97	17.750	1.60	23.75	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
6.000	1.42	12.000	97.99	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 52.34
over (min) 6.00 21.00
Storage Coeff. (min)= 4.55 (ii) 20.40 (ii)
Unit Hyd. Tpeak (min)= 6.00 21.00
Unit Hyd. peak (cms)= 0.22 0.05

PEAK FLOW (cms)= 2.21 0.97
TOTALS 2.858 (iii)

HRP7-PR-SWM_2-100 YEAR.OUT
TIME TO PEAK (hrs)= 12.00 12.20 12.00
RUNOFF VOLUME (mm)= 87.30 46.71 63.76
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.53 0.72

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0038)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (1040): 10.35 0.730 12.17 41.68
+ ID2= 2 (0240): 20.08 2.858 12.00 63.76
ID = 3 (0038): 30.43 3.385 12.00 56.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0029)
IN= 2----> OUT= 1
Routing time step (min)'= 2.00

DATA FOR SECTION (1.1) -----
Distance Elevation Manning
0.00 101.00 0.0500
1.00 100.67 0.0500
2.00 100.33 0.0500 / 0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel
5.00 100.33 0.0300 / 0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .321E+02 0.0 0.28 35.15
0.09 100.09 .721E+02 0.1 0.42 23.51
0.14 100.14 .120E+03 0.1 0.53 18.76
0.19 100.19 .170E+03 0.2 0.62 16.03
0.24 100.24 .240E+03 0.3 0.70 14.19
0.28 100.28 .313E+03 0.4 0.77 12.85
0.33 100.33 .393E+03 0.6 0.84 11.81
0.39 100.39 .498E+03 0.8 0.97 10.26
0.44 100.44 .614E+03 1.1 1.07 9.26
0.50 100.50 .741E+03 1.4 1.16 8.55
0.55 100.55 .879E+03 1.8 1.24 8.01
0.61 100.61 .103E+04 2.3 1.31 7.60
0.66 100.66 .119E+04 2.7 1.37 7.26
0.72 100.72 .136E+04 3.2 1.42 6.98
0.78 100.78 .154E+04 3.8 1.47 6.74
0.83 100.83 .173E+04 4.4 1.52 6.53
0.89 100.89 .194E+04 5.1 1.56 6.35
0.94 100.94 .215E+04 5.8 1.60 6.19
1.00 101.00 .238E+04 6.6 1.64 6.05

hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0038) 30.43 3.39 12.00 56.25 0.73 1.43
OUTFLOW: ID= 1 (0029) 30.43 2.92 12.07 56.24 0.68 1.39

CALIB
NASHYD (1041) Area (ha)= 11.30 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.26

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.083 0.09 | 6.083 1.78 | 12.083 12.00 | 18.08 1.60
0.167 0.09 | 6.167 1.78 | 12.167 12.79 | 18.17 1.60
0.250 0.09 | 6.250 1.78 | 12.250 12.79 | 18.25 1.60

HRP7-PR-SWM_2-100 YEAR.OUT
0.333 0.89 | 6.333 1.78 | 12.333 12.79 | 18.33 1.60
0.417 0.89 | 6.417 1.78 | 12.417 12.79 | 18.42 1.60
0.500 0.89 | 6.500 1.78 | 12.500 12.79 | 18.50 1.60
0.583 0.89 | 6.583 1.78 | 12.583 6.57 | 18.58 1.60
0.667 0.89 | 6.667 1.78 | 12.667 6.57 | 18.67 1.60
0.750 0.89 | 6.750 1.78 | 12.750 6.57 | 18.75 1.60
0.833 0.89 | 6.833 1.78 | 12.833 6.57 | 18.83 1.60
0.917 0.89 | 6.917 1.78 | 12.917 6.57 | 18.92 1.60
1.000 0.89 | 7.000 1.78 | 13.000 6.57 | 19.00 1.60
1.083 0.89 | 7.083 1.78 | 13.083 1.24 | 19.08 1.60
1.167 0.89 | 7.167 1.78 | 13.167 1.24 | 19.17 1.60
1.250 0.89 | 7.250 1.78 | 13.250 1.24 | 19.25 1.60
1.333 0.89 | 7.333 1.78 | 13.333 1.24 | 19.33 1.60
1.417 0.89 | 7.417 1.78 | 13.417 1.24 | 19.42 1.60
1.500 0.89 | 7.500 1.78 | 13.500 1.24 | 19.50 1.60
1.583 0.89 | 7.583 1.78 | 13.583 7.28 | 19.58 1.60
1.667 0.89 | 7.667 1.78 | 13.667 7.28 | 19.67 1.60
1.750 0.89 | 7.750 1.78 | 13.750 7.28 | 19.75 1.60
1.833 1.60 | 7.833 1.78 | 13.833 7.28 | 19.83 1.60
1.917 1.60 | 7.917 1.78 | 13.917 7.28 | 19.92 1.60
2.000 1.60 | 8.000 1.78 | 14.000 7.28 | 20.00 1.60
2.083 1.15 | 8.083 2.40 | 14.083 2.66 | 20.08 1.07
2.167 1.15 | 8.167 2.40 | 14.167 2.66 | 20.17 1.07
2.250 1.15 | 8.250 2.40 | 14.250 2.66 | 20.25 1.07
2.333 1.15 | 8.333 2.40 | 14.333 2.66 | 20.33 1.07
2.417 1.15 | 8.417 2.40 | 14.417 2.66 | 20.42 1.07
2.500 1.15 | 8.500 2.40 | 14.500 2.66 | 20.50 1.07
2.583 1.15 | 8.583 2.40 | 14.583 2.66 | 20.58 1.07
2.667 1.15 | 8.667 2.40 | 14.667 2.66 | 20.67 1.07
2.750 1.15 | 8.750 2.40 | 14.750 2.66 | 20.75 1.07
2.833 1.15 | 8.833 2.40 | 14.833 2.66 | 20.83 1.07
2.917 1.15 | 8.917 2.40 | 14.917 2.66 | 20.92 1.07
3.000 1.15 | 9.000 2.40 | 15.000 2.66 | 21.00 1.07
3.083 1.15 | 9.083 2.84 | 15.083 2.66 | 21.08 1.07
3.167 1.15 | 9.167 2.84 | 15.167 2.66 | 21.17 1.07
3.250 1.15 | 9.250 2.84 | 15.250 2.66 | 21.25 1.07
3.333 1.15 | 9.333 2.84 | 15.333 2.66 | 21.33 1.07
3.417 1.15 | 9.417 2.84 | 15.417 2.66 | 21.42 1.07
3.500 1.15 | 9.500 2.84 | 15.500 2.66 | 21.50 1.07
3.583 1.15 | 9.583 3.20 | 15.583 2.66 | 21.58 1.07
3.667 1.15 | 9.667 3.20 | 15.667 2.66 | 21.67 1.07
3.750 1.15 | 9.750 3.20 | 15.750 2.66 | 21.75 1.07
3.833 1.15 | 9.833 3.20 | 15.833 2.66 | 21.83 1.07
3.917 1.15 | 9.917 3.20 | 15.917 2.66 | 21.92 1.07
4.000 1.15 | 10.000 3.20 | 16.000 2.66 | 22.00 1.07
4.083 1.42 | 10.083 4.08 | 16.083 1.60 | 22.08 1.07
4.167 1.42 | 10.167 4.08 | 16.167 1.60 | 22.17 1.07
4.250 1.42 | 10.250 4.08 | 16.250 1.60 | 22.25 1.07
4.333 1.42 | 10.333 4.08 | 16.333 1.60 | 22.33 1.07
4.417 1.42 | 10.417 4.08 | 16.417 1.60 | 22.42 1.07
4.500 1.42 | 10.500 4.08 | 16.500 1.60 | 22.50 1.07
4.583 1.42 | 10.583 5.51 | 16.583 1.60 | 22.58 1.07
4.667 1.42 | 10.667 5.51 | 16.667 1.60 | 22.67 1.07
4.750 1.42 | 10.750 5.51 | 16.750 1.60 | 22.75 1.07
4.833 1.42 | 10.833 5.51 | 16.833 1.60 | 22.83 1.07
4.917 1.42 | 10.917 5.51 | 16.917 1.60 | 22.92 1.07
5.000 1.42 | 11.000 5.51 | 17.000 1.60 | 23.00 1.07
5.083 1.42 | 11.083 8.52 | 17.083 1.60 | 23.08 1.07
5.167 1.42 | 11.167 8.52 | 17.167 1.60 | 23.17 1.07
5.250 1.42 | 11.250 8.52 | 17.250 1.60 | 23.25 1.07
5.333 1.42 | 11.333 8.52 | 17.333 1.60 | 23.33 1.07
5.417 1.42 | 11.417 8.52 | 17.417 1.60 | 23.42 1.07
5.500 1.42 | 11.500 8.52 | 17.500 1.60 | 23.50 1.07
5.583 1.42 | 11.583 36.94 | 17.583 1.60 | 23.58 1.07
5.667 1.42 | 11.667 36.94 | 17.667 1.60 | 23.67 1.07
5.750 1.42 | 11.750 36.94 | 17.750 1.60 | 23.75 1.07
5.833 1.42 | 11.833 98.03 | 17.833 1.60 | 23.83 1.07
5.917 1.42 | 11.917 98.04 | 17.917 1.60 | 23.92 1.07
6.000 1.42 | 12.000 98.04 | 18.000 1.60 | 24.00 1.07

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.039 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 43.951
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.495

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (1041): 11.30 1.039 12.08 43.95

HRP7-PR-SWM_2-100 YEAR.OUT

+ ID2= 2 (0029): 30.43 2.918 12.07 56.24
=====

ID = 3 (0018): 41.73 3.942 12.07 52.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0241)
ID= 1 DT= 2.0 min

Area (ha)= 12.29
Total Imp(%)= 73.00 Dir. Conn.(%)= 73.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.32
Dep. Storage (mm)= 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 286.24 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60
1.000	0.89	7.000	1.78	13.000	6.56	19.00	1.60
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60
1.500	0.89	7.500	1.78	13.500	1.26	19.50	1.60
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60
1.767	1.24	7.767	1.78	13.767	7.28	19.77	1.60
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60
2.000	1.60	8.000	1.78	14.000	7.27	20.00	1.60
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07

2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07
4.500	1.42	10.500	5.51	16.500	1.60	22.50	1.07
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07
4.800							

HRP7-PR-SWM_2-100 YEAR.OUT

5.033	1.42	[11.033	8.52	[17.033	1.60	[23.03	1.07
5.067	1.42	[11.067	8.52	[17.067	1.60	[23.07	1.07
5.100	1.42	[11.100	8.52	[17.100	1.60	[23.10	1.07
5.133	1.42	[11.133	8.52	[17.133	1.60	[23.13	1.07
5.167	1.42	[11.167	8.52	[17.167	1.60	[23.17	1.07
5.200	1.42	[11.200	8.52	[17.200	1.60	[23.20	1.07
5.233	1.42	[11.233	8.52	[17.233	1.60	[23.23	1.07
5.267	1.42	[11.267	8.52	[17.267	1.60	[23.27	1.07
5.300	1.42	[11.300	8.52	[17.300	1.60	[23.30	1.07
5.333	1.42	[11.333	8.52	[17.333	1.60	[23.33	1.07
5.367	1.42	[11.367	8.52	[17.367	1.60	[23.37	1.07
5.400	1.42	[11.400	8.52	[17.400	1.60	[23.40	1.07
5.433	1.42	[11.433	8.52	[17.433	1.60	[23.43	1.07
5.467	1.42	[11.467	8.52	[17.467	1.60	[23.47	1.07
5.500	1.42	[11.500	8.56	[17.500	1.60	[23.50	1.07
5.533	1.42	[11.533	36.94	[17.533	1.60	[23.53	1.07
5.567	1.42	[11.567	36.94	[17.567	1.60	[23.57	1.07
5.600	1.42	[11.600	36.94	[17.600	1.60	[23.60	1.07
5.633	1.42	[11.633	36.94	[17.633	1.60	[23.63	1.07
5.667	1.42	[11.667	36.94	[17.667	1.60	[23.67	1.07
5.700	1.42	[11.700	36.94	[17.700	1.60	[23.70	1.07
5.733	1.42	[11.733	36.94	[17.733	1.60	[23.73	1.07
5.767	1.42	[11.767	67.57	[17.767	1.60	[23.77	1.07
5.800	1.42	[11.800	98.04	[17.800	1.60	[23.80	1.07
5.833	1.42	[11.833	98.04	[17.833	1.60	[23.83	1.07
5.867	1.42	[11.867	98.04	[17.867	1.60	[23.87	1.07
5.900	1.42	[11.900	98.04	[17.900	1.60	[23.90	1.07
5.933	1.42	[11.933	98.04	[17.933	1.60	[23.93	1.07
5.967	1.42	[11.967	98.04	[17.967	1.60	[23.97	1.07
6.000	1.42	[12.000	97.92	[18.000	1.60	[24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 65.06
over (min) 5.00 10.00
Storage Coeff. (min)= 3.93 (ii) 8.71 (ii)
Unit Hyd. Tpeak (min)= 4.00 10.00
Unit Hyd. peak (cms)= 0.28 0.12

PEAK FLOW (cms)= 2.39 0.45 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.03 2.828 (iii)
RUNOFF VOLUME (mm)= 87.30 49.22 77.02
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.55 0.87

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CWF = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0018):	41.73	3.942	12.07	52.91
+ ID2= 2 (0241):	12.29	2.828	12.00	77.02
=====				
ID = 3 (0021):	54.02	4.008	12.07	54.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0211)				
IN= 2--> OUT= 1				
DT= 3.0 min				

	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	4.2170	0.5750
	0.8310	0.4090	5.0100	0.6210
	2.1110	0.5050	5.8210	0.6600
	3.3830	0.5320	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0021)	54.020	4.008	12.07	54.02
OUTFLOW: ID= 1 (0211)	54.020	3.206	12.25	54.01

PEAK FLOW REDUCTION [Qout/Qin](%)= 82.25
TIME SHIFT OF PEAK FLOW (min)= 10.50
MAXIMUM STORAGE USED (ha.m.)= 0.5320

CALIB				
STANDHYD (0142)				
ID= 1 DT= 3.0 min				

	Area	(ha)=	10.92	
	Total Imp(%)=	53.00	Dir. Conn.(%)=	53.00

HRP7-PR-SWM_2-100 YEAR.OUT

Surface Area	(ha)=	IMPERVIOUS	PERVIOUS (1)	
Dep. Storage	(mm)=	5.79	5.13	
Average Slope	(%)=	1.50	1.50	
Length	(m)=	2.00	2.00	
Mannings n	=	269.81	40.00	
		0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.500	0.89	6.500	1.78	12.500	12.78	18.50	1.60		
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.500	0.89	7.500	1.78	13.500	1.25	19.50	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07		

HRP7-PR-SWM_2-100 YEAR.OUT

HRP7-PR-SWM_2-100 YEAR.OUT

3.700	1.15		9.700	3.20		15.700	2.66		21.70	1.07
3.750	1.15		9.750	3.20		15.750	2.66		21.75	1.07
3.800	1.15		9.800	3.20		15.800	2.66		21.80	1.07
3.850	1.15		9.850	3.20		15.850	2.66		21.85	1.07
3.900	1.15		9.900	3.20		15.900	2.66		21.90	1.07
3.950	1.15		9.950	3.20		15.950	2.66		21.95	1.07
4.000	1.15		10.000	3.20		16.000	2.66		22.00	1.07
4.050	1.42		10.050	4.08		16.050	1.60		22.05	1.07
4.100	1.42		10.100	4.08		16.100	1.60		22.10	1.07
4.150	1.42		10.150	4.08		16.150	1.60		22.15	1.07
4.200	1.42		10.200	4.08		16.200	1.60		22.20	1.07
4.250	1.42		10.250	4.08		16.250	1.60		22.25	1.07
4.300	1.42		10.300	4.08		16.300	1.60		22.30	1.07
4.350	1.42		10.350	4.08		16.350	1.60		22.35	1.07
4.400	1.42		10.400	4.08		16.400	1.60		22.40	1.07
4.450	1.42		10.450	4.08		16.450	1.60		22.45	1.07
4.500	1.42		10.500	4.09		16.500	1.60		22.50	1.07
4.550	1.42		10.550	5.51		16.550	1.60		22.55	1.07
4.600	1.42		10.600	5.51		16.600	1.60		22.60	1.07
4.650	1.42		10.650	5.51		16.650	1.60		22.65	1.07
4.700	1.42		10.700	5.51		16.700	1.60		22.70	1.07
4.750	1.42		10.750	5.51		16.750	1.60		22.75	1.07
4.800	1.42		10.800	5.51		16.800	1.60		22.80	1.07
4.850	1.42		10.850	5.51		16.850	1.60		22.85	1.07
4.900	1.42		10.900	5.51		16.900	1.60		22.90	1.07
4.950	1.42		10.950	5.51		16.950	1.60		22.95	1.07
5.000	1.42		11.000	5.51		17.000	1.60		23.00	1.07
5.050	1.42		11.050	8.52		17.050	1.60		23.05	1.07
5.100	1.42		11.100	8.52		17.100	1.60		23.10	1.07
5.150	1.42		11.150	8.52		17.150	1.60		23.15	1.07
5.200	1.42		11.200	8.52		17.200	1.60		23.20	1.07
5.250	1.42		11.250	8.52		17.250	1.60		23.25	1.07
5.300	1.42		11.300	8.52		17.300	1.60		23.30	1.07
5.350	1.42		11.350	8.52		17.350	1.60		23.35	1.07
5.400	1.42		11.400	8.52		17.400	1.60		23.40	1.07
5.450	1.42		11.450	8.52		17.450	1.60		23.45	1.07
5.500	1.42		11.500	8.54		17.500	1.60		23.50	1.07
5.550	1.42		11.550	36.94		17.550	1.60		23.55	1.07
5.600	1.42		11.600	36.94		17.600	1.60		23.60	1.07
5.650	1.42		11.650	36.94		17.650	1.60		23.65	1.07
5.700	1.42		11.700	36.94		17.700	1.60		23.70	1.07
5.750	1.42		11.750	36.97		17.750	1.60		23.75	1.07
5.800	1.42		11.800	98.04		17.800	1.60		23.80	1.07
5.850	1.42		11.850	98.04		17.850	1.60		23.85	1.07
5.900	1.42		11.900	98.04		17.900	1.60		23.90	1.07
5.950	1.42		11.950	98.04		17.950	1.60		23.95	1.07
6.000	1.42		12.000	97.99		18.000	1.60		24.00	1.07
TOTALS										
PEAK FLOW	(cms)=	1.54	0.40	1.908	(iii)					
TIME TO PEAK	(hrs)=	12.00	12.05	12.00						
RUNOFF VOLUME	(mm)=	87.30	31.37	61.01						
TOTAL RAINFALL	(mm)=	88.80	88.80	88.80						
RUNOFF COEFFICIENT	=	0.98	0.35	0.69						

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):	10.92	1.908	12.00	61.01
+ ID2= 2 (0211):	54.02	3.296	12.25	54.01
=====				
ID = 3 (0023):	64.94	3.803	12.23	55.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 3.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0030	0.5800
	0.0370	0.1125	1.9000	0.7700

	0.0530	0.2275	6.4000	1.1000
	0.0650	0.3450	9.2000	1.2500
	0.0750	0.4630	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0023)	64.940	3.803	12.23	55.19
OUTFLOW: ID= 1 (0024)	64.940	3.177	12.43	53.83
	PEAK FLOW	REDUCTION	[Qout/ Qin](%)= 83.52	
	TIME SHIFT OF PEAK FLOW		(min)= 12.00	
	MAXIMUM STORAGE USED		(ha.m.)= 0.8636	

CALIB	Area	(ha)=	0.84
STANDHYD (0143)	Total Imp(%)=	55.00	Dir. Conn.(%)= 55.00
ID= 1 DT= 1.0 min			

	IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.46
Dep. Storage	(mm)=	1.50
Average Slope	(%)=	2.00
Length	(m)=	74.83
Mannings n	=	0.013
		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.017	0.89	6.017	1.78	12.017	12.85	18.02	1.60		
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60		
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60		
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60		
0.083	0.89	6.083	1.78	12.083	12.79	18.08	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.117	0.89	6.117	1.78	12.117	12.79	18.12	1.60		
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60		
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60		
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60		
0.183	0.89	6.183	1.78	12.183	12.79	18.18	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.217	0.89	6.217	1.78	12.217	12.79	18.22	1.60		
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60		
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60		
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60		
0.283	0.89	6.283	1.78	12.283	12.79	18.28	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.317	0.89	6.317	1.78	12.317	12.79	18.32	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60		
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60		
0.383	0.89	6.383	1.78	12.383	12.79	18.38	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60		
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60		
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60		
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60		
0.483	0.89	6.483	1.78	12.483	12.79	18.48	1.60		
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60		
0.517	0.89	6.517	1.78	12.517	6.50	18.52	1.60		
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60		
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60		
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60		
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.617	0.89	6.617	1.78	12.617	6.57	18.62	1.60		
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60		
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.683	0.89	6.683	1.78	12.683	6.57	18.68	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.717	0.89	6.717	1.78	12.717	6.57	18.72	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60		
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60		
0.783	0.89	6.783	1.78	12.783	6.57	18.78	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.817	0.89	6.817	1.78	12.817	6.57	18.82	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.883	0.89	6.883	1.78	12.883	6.57	18.88	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60		

HRP7-PR-SWM_2-100 YEAR.OUT									
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60		
0.983	0.89	6.983	1.78	12.983	6.57	18.98	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.017	0.89	7.017	1.78	13.017	1.25	19.02	1.60		
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.117	0.89	7.117	1.78	13.117	1.24	19.12	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.183	0.89	7.183	1.78	13.183	1.24	19.18	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.217	0.89	7.217	1.78	13.217	1.24	19.22	1.60		
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.283	0.89	7.283	1.78	13.283	1.24	19.28	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.317	0.89	7.317	1.78	13.317	1.24	19.32	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60		
1.383	0.89	7.383	1.78	13.383	1.24	19.38	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60		
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.483	0.89	7.483	1.78	13.483	1.24	19.48	1.60		
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60		
1.517	0.89	7.517	1.78	13.517	7.27	19.52	1.60		
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60		
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.617	0.89	7.617	1.78	13.617	7.28	19.62	1.60		
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.683	0.89	7.683	1.78	13.683	7.28	19.68	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.717	0.89	7.717	1.78	13.717	7.28	19.72	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.767	1.60	7.767	1.78	13.767	7.28	19.77	1.60		
1.783	1.60	7.783	1.78	13.783	7.28	19.78	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.817	1.60	7.817	1.78	13.817	7.28	19.82	1.60		
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.883	1.60	7.883	1.78	13.883	7.28	19.88	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60		
1.983	1.60	7.983	1.78	13.983	7.28	19.98	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.017	1.15	8.017	2.40	14.017	2.66	20.02	1.07		
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.117	1.15	8.117	2.40	14.117	2.66	20.12	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.183	1.15	8.183	2.40	14.183	2.66	20.18	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.217	1.15	8.217	2.40	14.217	2.66	20.22	1.07		
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07		
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.283	1.15	8.283	2.40	14.283	2.66	20.28	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.317	1.15	8.317	2.40	14.317	2.66	20.32	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07		
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07		

HRP7-PR-SWM_2-100 YEAR.OUT									
2.383	1.15	8.383	2.40	14.383	2.66	20.38	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07		
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07		
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.483	1.15	8.483	2.40	14.483	2.66	20.48	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.517	1.15	8.517	2.40	14.517	2.66	20.52	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07		
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07		
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.617	1.15	8.617	2.40	14.617	2.66	20.62	1.07		
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07		
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.683	1.15	8.683	2.40	14.683	2.66	20.68	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.717	1.15	8.717	2.40	14.717	2.66	20.72	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07		
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07		
2.783	1.15	8.783	2.40	14.783	2.66	20.78	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.817	1.15	8.817	2.40	14.817	2.66	20.82	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07		
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.883	1.15	8.883	2.40	14.883	2.66	20.88	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07		
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07		
2.983	1.15	8.983	2.40	14.983	2.66	20.98	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.017	1.15	9.017	2.84	15.017	2.66	21.02	1.07		
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07		
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.117	1.15	9.117	2.84	15.117	2.66	21.12	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07		
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07		
3.183	1.15	9.183	2.84	15.183	2.66	21.18	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.217	1.15	9.217	2.84	15.217	2.66	21.22	1.07		
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07		
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.283	1.15	9.283	2.84	15.283	2.66	21.28	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.317	1.15	9.317	2.84	15.317	2.66	21.32	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07		
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07		
3.383	1.15	9.383	2.84	15.383	2.66	21.38	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07		
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07		
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07		
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07		
3.483	1.15	9.483	2.84	15.483	2.66	21.48	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.517	1.15	9.517	3.20	15.517	2.66	21.52	1.07		
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07		
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07		
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07		
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.617	1.15	9.617	3.20	15.617	2.66	21.62	1.07		
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07		
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.683	1.15	9.683	3.20	15.683	2.66	21.68	1.07		
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07		
3.717	1.15	9.717	3.20	15.717	2.66	21.72	1.07		
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07		
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07		
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07		
3.783	1.15	9.783	3.20	15.783	2.66	21.78	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.817	1.15	9.817	3.20	15.817	2.66	21.82	1.07		

HRP7-PR-SWM_2-100 YEAR.OUT									
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07		
3.850	1.15	9.850	3.20	15.850	2.66	21.85	1.07		
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07		
3.883	1.15	9.883	3.20	15.883	2.66	21.88	1.07		
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07		
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07		
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07		
3.950	1.15	9.950	3.20	15.950	2.66	21.95	1.07		
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07		
3.983	1.15	9.983	3.20	15.983	2.66	21.98	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.017	1.42	10.017	4.08	16.017	1.60	22.02	1.07		
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07		
4.050	1.42	10.050	4.08	16.050	1.60	22.05	1.07		
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07		
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07		
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07		
4.117	1.42	10.117	4.08	16.117	1.60	22.12	1.07		
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07		
4.150	1.42	10.150	4.08	16.150	1.60	22.15	1.07		
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07		
4.183	1.42	10.183	4.08	16.183	1.60	22.18	1.07		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07		
4.217	1.42	10.217	4.08	16.217	1.60	22.22	1.07		
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07		
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07		
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07		
4.283	1.42	10.283	4.08	16.283	1.60	22.28	1.07		
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07		
4.317	1.42	10.317	4.08	16.317	1.60	22.32	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.350	1.42	10.350	4.08	16.350	1.60	22.35	1.07		
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07		
4.383	1.42	10.383	4.08	16.383	1.60	22.38	1.07		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07		
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07		
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07		
4.450	1.42	10.450	4.08	16.450	1.60	22.45	1.07		
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07		
4.483	1.42	10.483	4.08	16.483	1.60	22.48	1.07		
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07		
4.517	1.42	10.517	5.51	16.517	1.60	22.52	1.07		
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07		
4.550	1.42	10.550	5.51	16.550	1.60	22.55	1.07		
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07		
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07		
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07		
4.617	1.42	10.617	5.51	16.617	1.60	22.62	1.07		
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07		
4.650	1.42	10.650	5.51	16.650	1.60	22.65	1.07		
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07		
4.683	1.42	10.683	5.51	16.683	1.60	22.68	1.07		
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07		
4.717	1.42	10.717	5.51	16.717	1.60	22.72	1.07		
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07		
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07		
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07		
4.783	1.42	10.783	5.51	16.783	1.60	22.78	1.07		
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07		
4.817	1.42	10.817	5.51	16.817	1.60	22.82	1.07		
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07		
4.850	1.42	10.850	5.51	16.850	1.60	22.85	1.07		
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07		
4.883	1.42	10.883	5.51	16.883	1.60	22.88	1.07		
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07		
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07		
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07		
4.950	1.42	10.950	5.51	16.950	1.60	22.95	1.07		
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07		
4.983	1.42	10.983	5.51	16.983	1.60	22.98	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.017	1.42	11.017	8.52	17.017	1.60	23.02	1.07		
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07		
5.050	1.42	11.050	8.52	17.050	1.60	23.05	1.07		
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07		
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07		
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07		
5.117	1.42	11.117	8.52	17.117	1.60	23.12	1.07		
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07		
5.150	1.42	11.150	8.52	17.150	1.60	23.15	1.07		
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07		
5.183	1.42	11.183	8.52	17.183	1.60	23.18	1.07		
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07		
5.217	1.42	11.217	8.52	17.217	1.60	23.22	1.07		
5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07		
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07		
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07		

HRP7-PR-SWM_2-100_YEAR.OUT							
5.283	1.42	11.283	8.52	17.283	1.60	23.28	1.07
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07
5.317	1.42	11.317	8.52	17.317	1.60	23.32	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.350	1.42	11.350	8.52	17.350	1.60	23.35	1.07
5.367	1.42	11.367	8.52	17.367	1.60	23.37	1.07
5.383	1.42	11.383	8.52	17.383	1.60	23.38	1.07
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07
5.450	1.42	11.450	8.52	17.450	1.60	23.45	1.07
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07
5.483	1.42	11.483	8.52	17.483	1.60	23.48	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.517	1.42	11.517	36.93	17.517	1.60	23.52	1.07
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07
5.550	1.42	11.550	36.94	17.550	1.60	23.55	1.07
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07
5.617	1.42	11.617	36.94	17.617	1.60	23.62	1.07
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07
5.650	1.42	11.650	36.94	17.650	1.60	23.65	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.683	1.42	11.683	36.94	17.683	1.60	23.68	1.07
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07
5.717	1.42	11.717	36.94	17.717	1.60	23.72	1.07
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.767	1.42	11.767	98.04	17.767	1.60	23.77	1.07
5.783	1.42	11.783	98.04	17.783	1.60	23.78	1.07
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07
5.817	1.42	11.817	98.04	17.817	1.60	23.82	1.07
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07
5.850	1.42	11.850	98.04	17.850	1.60	23.85	1.07
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07
5.883	1.42	11.883	98.04	17.883	1.60	23.88	1.07
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07
5.950	1.42	11.950	98.04	17.950	1.60	23.95	1.07
5.967	1.42	11.967	98.04	17.967	1.60	23.97	1.07
5.983	1.42	11.983	98.04	17.983	1.60	23.98	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Mannings n = 0.013 0.250 HRP7-PR-SWM_2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

```

    ---- TRANSFORMED HYETOGRAPH ----
    TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
    hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.067 0.89 | 6.067 1.78 | 12.067 12.80 | 18.07 1.60
0.133 0.89 | 6.133 1.78 | 12.133 12.79 | 18.13 1.60
0.200 0.89 | 6.200 1.78 | 12.200 12.79 | 18.20 1.60
0.267 0.89 | 6.267 1.78 | 12.267 12.79 | 18.27 1.60
0.333 0.89 | 6.333 1.78 | 12.333 12.79 | 18.33 1.60
0.400 0.89 | 6.400 1.78 | 12.400 12.79 | 18.40 1.60
0.467 0.89 | 6.467 1.78 | 12.467 12.79 | 18.47 1.60
0.533 0.89 | 6.533 1.78 | 12.533 9.68 | 18.53 1.60
0.600 0.89 | 6.600 1.78 | 12.600 6.57 | 18.60 1.60
0.667 0.89 | 6.667 1.78 | 12.667 6.57 | 18.67 1.60
0.733 0.89 | 6.733 1.78 | 12.733 6.57 | 18.73 1.60
0.800 0.89 | 6.800 1.78 | 12.800 6.57 | 18.80 1.60
0.867 0.89 | 6.867 1.78 | 12.867 6.57 | 18.87 1.60
0.933 0.89 | 6.933 1.78 | 12.933 6.57 | 18.93 1.60
1.000 0.89 | 7.000 1.78 | 13.000 6.57 | 19.00 1.60
1.067 0.89 | 7.067 1.78 | 13.067 1.24 | 19.07 1.60
1.133 0.89 | 7.133 1.78 | 13.133 1.24 | 19.13 1.60
1.200 0.89 | 7.200 1.78 | 13.200 1.24 | 19.20 1.60
1.267 0.89 | 7.267 1.78 | 13.267 1.24 | 19.27 1.60
1.333 0.89 | 7.333 1.78 | 13.333 1.24 | 19.33 1.60
1.400 0.89 | 7.400 1.78 | 13.400 1.24 | 19.40 1.60
1.467 0.89 | 7.467 1.78 | 13.467 1.24 | 19.47 1.60
1.533 0.89 | 7.533 1.78 | 13.533 4.26 | 19.53 1.60
1.600 0.89 | 7.600 1.78 | 13.600 7.28 | 19.60 1.60
1.667 0.89 | 7.667 1.78 | 13.667 7.28 | 19.67 1.60
1.733 0.89 | 7.733 1.78 | 13.733 7.28 | 19.73 1.60
1.800 1.42 | 7.800 1.78 | 13.800 7.28 | 19.80 1.60
1.867 1.60 | 7.867 1.78 | 13.867 7.28 | 19.87 1.60
1.933 1.60 | 7.933 1.78 | 13.933 7.28 | 19.93 1.60
2.000 1.60 | 8.000 1.78 | 14.000 7.28 | 20.00 1.60
2.067 1.15 | 8.067 2.40 | 14.067 2.66 | 20.07 1.07
2.133 1.15 | 8.133 2.40 | 14.133 2.66 | 20.13 1.07
2.200 1.15 | 8.200 2.40 | 14.200 2.66 | 20.20 1.07
2.267 1.15 | 8.267 2.40 | 14.267 2.66 | 20.27 1.07
2.333 1.15 | 8.333 2.40 | 14.333 2.66 | 20.33 1.07
2.400 1.15 | 8.400 2.40 | 14.400 2.66 | 20.40 1.07
2.467 1.15 | 8.467 2.40 | 14.467 2.66 | 20.47 1.07
2.533 1.15 | 8.533 2.40 | 14.533 2.66 | 20.53 1.07
2.600 1.15 | 8.600 2.40 | 14.600 2.66 | 20.60 1.07
2.667 1.15 | 8.667 2.40 | 14.667 2.66 | 20.67 1.07
2.733 1.15 | 8.733 2.40 | 14.733 2.66 | 20.73 1.07
2.800 1.15 | 8.800 2.40 | 14.800 2.66 | 20.80 1.07
2.867 1.15 | 8.867 2.40 | 14.867 2.66 | 20.87 1.07
2.933 1.15 | 8.933 2.40 | 14.933 2.66 | 20.93 1.07
3.000 1.15 | 9.000 2.40 | 15.000 2.66 | 21.00 1.07
3.067 1.15 | 9.067 2.84 | 15.067 2.66 | 21.07 1.07
3.133 1.15 | 9.133 2.84 | 15.133 2.66 | 21.13 1.07
3.200 1.15 | 9.200 2.84 | 15.200 2.66 | 21.20 1.07
3.267 1.15 | 9.267 2.84 | 15.267 2.66 | 21.27 1.07
3.333 1.15 | 9.333 2.84 | 15.333 2.66 | 21.33 1.07
3.400 1.15 | 9.400 2.84 | 15.400 2.66 | 21.40 1.07
3.467 1.15 | 9.467 2.84 | 15.467 2.66 | 21.47 1.07
3.533 1.15 | 9.533 3.02 | 15.533 2.66 | 21.53 1.07
3.600 1.15 | 9.600 3.20 | 15.600 2.66 | 21.60 1.07
3.667 1.15 | 9.667 3.20 | 15.667 2.66 | 21.67 1.07
3.733 1.15 | 9.733 3.20 | 15.733 2.66 | 21.73 1.07
3.800 1.15 | 9.800 3.20 | 15.800 2.66 | 21.80 1.07
3.867 1.15 | 9.867 3.20 | 15.867 2.66 | 21.87 1.07
3.933 1.15 | 9.933 3.20 | 15.933 2.66 | 21.93 1.07
4.000 1.15 | 10.000 3.20 | 16.000 2.66 | 22.00 1.07
4.067 1.42 | 10.067 4.08 | 16.067 1.60 | 22.07 1.07
4.133 1.42 | 10.133 4.08 | 16.133 1.60 | 22.13 1.07
4.200 1.42 | 10.200 4.08 | 16.200 1.60 | 22.20 1.07
4.267 1.42 | 10.267 4.08 | 16.267 1.60 | 22.27 1.07
4.333 1.42 | 10.333 4.08 | 16.333 1.60 | 22.33 1.07
4.400 1.42 | 10.400 4.08 | 16.400 1.60 | 22.40 1.07
4.467 1.42 | 10.467 4.08 | 16.467 1.60 | 22.47 1.07
4.533 1.42 | 10.533 4.80 | 16.533 1.60 | 22.53 1.07
4.600 1.42 | 10.600 5.51 | 16.600 1.60 | 22.60 1.07
4.667 1.42 | 10.667 5.51 | 16.667 1.60 | 22.67 1.07
4.733 1.42 | 10.733 5.51 | 16.733 1.60 | 22.73 1.07
4.800 1.42 | 10.800 5.51 | 16.800 1.60 | 22.80 1.07
4.867 1.42 | 10.867 5.51 | 16.867 1.60 | 22.87 1.07
4.933 1.42 | 10.933 5.51 | 16.933 1.60 | 22.93 1.07
5.000 1.42 | 11.000 5.51 | 17.000 1.60 | 23.00 1.07
5.067 1.42 | 11.067 8.52 | 17.067 1.60 | 23.07 1.07
5.133 1.42 | 11.133 8.52 | 17.133 1.60 | 23.13 1.07
5.200 1.42 | 11.200 8.52 | 17.200 1.60 | 23.20 1.07
5.267 1.42 | 11.267 8.52 | 17.267 1.60 | 23.27 1.07

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HRP7-PR-SWM_2-100 YEAR.OUT
5.333 1.42 | 11.333 8.52 | 17.333 1.60 | 23.33 1.07
5.400 1.42 | 11.400 8.52 | 17.400 1.60 | 23.40 1.07
5.467 1.42 | 11.467 8.52 | 17.467 1.60 | 23.47 1.07
5.533 1.42 | 11.533 22.73 | 17.533 1.60 | 23.53 1.07
5.600 1.42 | 11.600 36.94 | 17.600 1.60 | 23.60 1.07
5.667 1.42 | 11.667 36.94 | 17.667 1.60 | 23.67 1.07
5.733 1.42 | 11.733 36.94 | 17.733 1.60 | 23.73 1.07
5.800 1.42 | 11.800 82.75 | 17.800 1.60 | 23.80 1.07
5.867 1.42 | 11.867 98.04 | 17.867 1.60 | 23.87 1.07
5.933 1.42 | 11.933 98.04 | 17.933 1.60 | 23.93 1.07
6.000 1.42 | 12.000 98.04 | 18.000 1.60 | 24.00 1.06

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Max.Eff.Inten.(mm/hr)= 98.04 53.17
over (min) 5.00 12.00
Storage Coeff. (min)= 3.26 (ii) 10.97 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.30 0.10

*TOTALS*
PEAK FLOW (cms)= 0.80 0.37 1.148 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 87.30 40.96 61.81
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.70

```

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

```

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
    CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
    THAN TIME STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```

```

-----
| ADD HYD ( 0020) |
| 1 + 2 = 3 |
-----
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 ( 0244): 6.58 1.148 12.00 61.81
+ ID2= 2 ( 0026): 65.78 3.180 8.28 36.28
=====
ID = 3 ( 0028): 72.36 3.203 8.28 38.60

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

=====
V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL
000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y M M 0 0
0 0 T T H H Y Y M M 0 0
000 T T H H Y Y M M 000

```

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***** D E T A I L E D O U T P U T *****

```

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\23865276-e9fc-4351-ae89-e070d9167b05\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\23865276-e9fc-4351-ae89-e070d9167b05\scenar

```

DATE: 03/24/2023 TIME: 10:51:15

USER:

COMMENTS: _____

```

*****
** SIMULATION : Run 04 **
*****

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| MASS STORM | Filename: C:\Users\AbirA\AppData
| | ata\Local\Temp\

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HRP7-PR-SWM_2-100 YEAR.OUT

2f7a6968-fd3c-4c50-b391-74185cad43f3\cobjf3d47

Ptotal=103.20 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86
2.00	1.86	8.00	2.06	14.00	8.46	20.00	1.86
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24

CALIB			
NASHYD (1040)	Area (ha)=	10.35	Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.35	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.003	1.03	6.003	2.06	12.003	14.87	18.00	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24

HRP7-PR-SWM_2-100 YEAR.OUT

3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)=	0.930 (i)
TIME TO PEAK (hrs)=	12.167
RUNOFF VOLUME (mm)=	52.723
TOTAL RAINFALL (mm)=	103.200
RUNOFF COEFFICIENT	= 0.511

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0240)	Area (ha)=	20.88	
ID= 1 DT= 3.0 min	Total Imp(%)=	42.00	Dir. Conn.(%)= 42.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.43	11.65
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	365.88	100.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86

HRP7-PR-SWM_2-100 YEAR.OUT									
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		

HRP7-PR-SWM_2-100 YEAR.OUT									
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		
Max.Eff.Inten.(mm/hr)=	113.93	73.75							
over (min)	6.00	21.00							
Storage Coeff. (min)=	4.29 (ii)	18.10 (ii)							
Unit Hyd. Tpeak (min)=	6.00	21.00							
Unit Hyd. peak (cms)=	0.23	0.06							
PEAK FLOW (cms)=	2.59	1.28							
TIME TO PEAK (hrs)=	12.00	12.20							
RUNOFF VOLUME (mm)=	101.70	58.24							
TOTAL RAINFALL (mm)=	103.20	103.20							
RUNOFF COEFFICIENT =	0.99	0.56							
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 77.0									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL									
THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

ADD HYD (0038)									
1 + 2 = 3									

	AREA	QPEAK	TPEAK	R.V.					
	(ha)	(cms)	(hrs)	(mm)					
ID1= 1 (1040):	10.35	0.930	12.17	52.72					
+ ID2= 2 (0240):	20.08	3.454	12.00	76.50					
=====									
ID = 3 (0038):	30.43	4.131	12.00	68.41					
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.									

ROUTE CHN(0029)									
IN= 2----> OUT= 1									
Routing time step (min)'= 2.00									
<----- DATA FOR SECTION (1.1) ----->									
Distance	Elevation	Manning							
0.00	101.00	0.0500							
1.00	100.67	0.0500							
2.00	100.33	0.0500 / 0.0300							Main Channel
3.00	100.00	0.0300							Main Channel
4.00	100.00	0.0300							Main Channel
5.00	100.33	0.0300 / 0.0500							Main Channel
6.00	100.67	0.0500							
7.00	101.00	0.0500							
<----- TRAVEL TIME TABLE ----->									
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME				
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)				
0.05	100.05	.321E+02	0.0	0.28	35.15				
0.09	100.09	.721E+02	0.1	0.42	23.51				
0.14	100.14	.120E+03	0.1	0.53	18.76				
0.19	100.19	.176E+03	0.2	0.62	16.03				
0.24	100.24	.240E+03	0.3	0.70	14.19				
0.28	100.28	.313E+03	0.4	0.77	12.85				
0.33	100.33	.393E+03	0.6	0.84	11.81				
0.39	100.39	.498E+03	0.8	0.97	10.26				
0.44	100.44	.614E+03	1.1	1.07	9.26				

HRP7-PR-SWM_2-100 YEAR.OUT

CALIB					
NASHYD (1041)	Area (ha)=	11.30	Curve Number (CN)=	77.0	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.26			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

HRP7-PR-SWM_2-100 YEAR.OUT

PEAK FLOW (cms)=	1.315 (i)
TIME TO PEAK (hrs)=	12.083
RUNOFF VOLUME (mm)=	55.362
TOTAL RAINFALL (mm)=	103.200
RUNOFF COEFFICIENT	= 0.536

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3				
ID1= 1 (1041):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (0029):	11.30	1.315	12.08	55.36
	30.43	3.589	12.07	68.40
ID = 3 (0018):	41.73	4.886	12.07	64.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0241)	Area (ha)=	12.29		
ID= 1 DT= 2.0 min	Total Imp(%)=	73.00	Dir. Conn.(%)=	73.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.97	3.32	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	286.24	40.00	
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86

Unit Hyd Qpeak (cms)= 1.654

HRP7-PR-SWM_2-100 YEAR.OUT									
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86		
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86		
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86		
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86		
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86		
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86		
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24		
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24		
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24		
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24		
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		

HRP7-PR-SWM_2-100 YEAR.OUT									
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24		
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24		
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24		
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24		
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24		
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24		
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24		
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24		
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24		
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24		
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24		
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24		

Max. Eff. Inten. (mm/hr)=	113.93	80.45	
over (min)=	5.00	10.00	
Storage Coeff. (min)=	3.70 (ii)	8.20 (ii)	
Unit Hyd. Tpeak (min)=	4.00	10.00	
Unit Hyd. Tpeak (cms)=	0.29	0.13	
			TOTALS
PEAK FLOW (cms)=	2.79	0.98	3.345 (iii)
TIME TO PEAK (hrs)=	12.00	12.03	12.00
RUNOFF VOLUME (mm)=	101.69	61.12	90.74
TOTAL RAINFALL (mm)=	103.20	103.20	103.20
RUNOFF COEFFICIENT =	0.99	0.59	0.88

HRP7-PR-SWM_2-100 YEAR.OUT

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0021) 54.020 4.963 12.07 65.60
OUTFLOW: ID= 1 (0211) 54.020 4.204 12.25 65.59

PEAK FLOW REDUCTION [Qout/Qin](%)= 84.71
TIME SHIFT OF PEAK FLOW (min)= 10.50
MAXIMUM STORAGE USED (ha.m.)= 0.5746

CALIB
STANDHYD (0142)
ID= 1 DT= 3.0 min | Area (ha)= 10.92
Total Imp(%)= 53.00 Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.79 5.13
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 269.81 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24

HRP7-PR-SWM_2-100 YEAR.OUT

2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24

Max.Eff.Inten.(mm/hr)= 113.93 51.85
over (min) 6.00 12.00
Storage Coeff. (min)= 3.57 (ii) 9.96 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.25 0.11

TOTALS
PEAK FLOW (cms)= 1.80 0.52 2.284 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 101.79 40.18 72.79
TOTAL RAINFALL (mm)= 183.20 183.20 183.20
RUNOFF COEFFICIENT = 0.99 0.39 0.71

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)
1 + 2 = 3 AREA QPEAK TPEAK R.V.

HRP7-PR-SWM_2-100 YEAR.OUT					
		(ha)	(cms)	(hrs)	(mm)
ID1=	1 (0142):	10.92	2.284	12.00	72.79
+	ID2= 2 (0211):	54.02	4.204	12.25	65.59
=====					
ID	= 3 (0023):	64.94	5.020	12.07	66.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

OVERFLOW IS OFF				
RESERVOIR(0024) IN= 2----> OUT= 1 DT= 3.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0030	0.5900
	0.0370	0.1125	1.9000	0.7700
	0.0530	0.2275	6.4000	1.1000
	0.0650	0.3450	9.2000	1.2500
	0.0750	0.4630	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
INFLOW : ID= 2 (0023) 64.940 5.020 12.07 66.80				
OUTFLOW: ID= 1 (0024) 64.940 4.270 12.40 65.40				

PEAK FLOW REDUCTION [Qout/Qin](%)= 85.05				
TIME SHIFT OF PEAK FLOW (min)= 19.50				
MAXIMUM STORAGE USED (ha.m.)= 0.9438				

CALIB				
STANDHYD (0143)				
ID= 1 DT= 1.0 min				

IMPERVIOUS PERVIOUS (i)				
Surface Area	(ha)=	0.46	0.30	
Dep. Storage	(mm)=	1.50	1.50	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	74.03	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	1.03	6.017	2.06	12.017	14.93	18.02	1.86
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86
0.083	1.03	6.083	2.06	12.083	14.86	18.08	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.117	1.03	6.117	2.06	12.117	14.86	18.12	1.86
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.183	1.03	6.183	2.06	12.183	14.86	18.18	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.217	1.03	6.217	2.06	12.217	14.86	18.22	1.86
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86
0.283	1.03	6.283	2.06	12.283	14.86	18.28	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.317	1.03	6.317	2.06	12.317	14.86	18.32	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86
0.383	1.03	6.383	2.06	12.383	14.86	18.38	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86
0.483	1.03	6.483	2.06	12.483	14.86	18.48	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.517	1.03	6.517	2.06	12.517	7.64	18.52	1.86
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.617	1.03	6.617	2.06	12.617	7.64	18.62	1.86
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86

HRP7-PR-SWM_2-100 YEAR.OUT							
0.683	1.03	6.683	2.06	12.683	7.64	18.68	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.717	1.03	6.717	2.06	12.717	7.64	18.72	1.86
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86
0.783	1.03	6.783	2.06	12.783	7.64	18.78	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.817	1.03	6.817	2.06	12.817	7.64	18.82	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86
0.883	1.03	6.883	2.06	12.883	7.64	18.88	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86
0.983	1.03	6.983	2.06	12.983	7.64	18.98	1.86
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86
1.017	1.03	7.017	2.06	13.017	1.45	19.02	1.86
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86
1.083	1.03	7.083	2.06	13.083	1.44	19.08	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.117	1.03	7.117	2.06	13.117	1.44	19.12	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.183	1.03	7.183	2.06	13.183	1.44	19.18	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.217	1.03	7.217	2.06	13.217	1.44	19.22	1.86
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.283	1.03	7.283	2.06	13.283	1.44	19.28	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.317	1.03	7.317	2.06	13.317	1.44	19.32	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.383	1.03	7.383	2.06	13.383	1.44	19.38	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.483	1.03	7.483	2.06	13.483	1.44	19.48	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.517	1.03	7.517	2.06	13.517	8.45	19.52	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.617	1.03	7.617	2.06	13.617	8.46	19.62	1.86
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.683	1.03	7.683	2.06	13.683	8.46	19.68	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.717	1.03	7.717	2.06	13.717	8.46	19.72	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.767	1.86	7.767	2.06	13.767	8.46	19.77	1.86
1.783	1.86	7.783	2.06	13.783	8.46	19.78	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.817	1.86	7.817	2.06	13.817	8.46	19.82	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.883	1.86	7.883	2.06	13.883	8.46	19.88	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.917	1.86	7.917	2.06	13.917	8.46	19.92	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86
1.983	1.86	7.983	2.06	13.983	8.46	19.98	1.86
2.000	1.86	8.000	2.07	14.000	8.46	20.00	1.86
2.017	1.34	8.017	2.79	14.017	3.11	20.02	1.24
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24

HRP7-PR-SWM_2-100 YEAR.OUT									
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.183	1.34	8.183	2.79	14.183	3.10	20.18	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.217	1.34	8.217	2.79	14.217	3.10	20.22	1.24		
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		
2.283	1.34	8.283	2.79	14.283	3.10	20.28	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.317	1.34	8.317	2.79	14.317	3.10	20.32	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24		
2.383	1.34	8.383	2.79	14.383	3.10	20.38	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24		
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24		
2.483	1.34	8.483	2.79	14.483	3.10	20.48	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.517	1.34	8.517	2.79	14.517	3.10	20.52	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24		
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.617	1.34	8.617	2.79	14.617	3.10	20.62	1.24		
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.683	1.34	8.683	2.79	14.683	3.10	20.68	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.717	1.34	8.717	2.79	14.717	3.10	20.72	1.24		
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24		
2.783	1.34	8.783	2.79	14.783	3.10	20.78	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.817	1.34	8.817	2.79	14.817	3.10	20.82	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.883	1.34	8.883	2.79	14.883	3.10	20.88	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24		
2.983	1.34	8.983	2.79	14.983	3.10	20.98	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.017	1.34	9.017	3.30	15.017	3.10	21.02	1.24		
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.117	1.34	9.117	3.30	15.117	3.10	21.12	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.183	1.34	9.183	3.30	15.183	3.10	21.18	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.217	1.34	9.217	3.30	15.217	3.10	21.22	1.24		
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.283	1.34	9.283	3.30	15.283	3.10	21.28	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.317	1.34	9.317	3.30	15.317	3.10	21.32	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.383	1.34	9.383	3.30	15.383	3.10	21.38	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.483	1.34	9.483	3.30	15.483	3.10	21.48	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.517	1.34	9.517	3.72	15.517	3.10	21.52	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		

HRP7-PR-SWM_2-100 YEAR.OUT							
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24
3.617	1.34	9.617	3.72	15.617	3.10	21.62	1.24
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24
3.683	1.34	9.683	3.72	15.683	3.10	21.68	1.24
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24
3.717	1.34	9.717	3.72	15.717	3.10	21.72	1.24
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24
3.783	1.34	9.783	3.72	15.783	3.10	21.78	1.24
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24
3.817	1.34	9.817	3.72	15.817	3.10	21.82	1.24
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24
3.883	1.34	9.883	3.72	15.883	3.10	21.88	1.24
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24
3.983	1.34	9.983	3.72	15.983	3.10	21.98	1.24
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24
4.017	1.65	10.017	4.75	16.017	1.86	22.02	1.24
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24
4.117	1.65	10.117	4.75	16.117	1.86	22.12	1.24
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24
4.183	1.65	10.183	4.75	16.183	1.86	22.18	1.24
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24
4.217	1.65	10.217	4.75	16.217	1.86	22.22	1.24
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24
4.283	1.65	10.283	4.75	16.283	1.86	22.28	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.317	1.65	10.317	4.75	16.317	1.86	22.32	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24
4.383	1.65	10.383	4.75	16.383	1.86	22.38	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24
4.483	1.65	10.483	4.75	16.483	1.86	22.48	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.517	1.65	10.517	4.60	16.517	1.86	22.52	1.24
4.533	1.65	10.533	4.60	16.533	1.86	22.53	1.24
4.550	1.65	10.550	4.60	16.550	1.86	22.55	1.24
4.567	1.65	10.567	4.60	16.567	1.86	22.57	1.24
4.583	1.65	10.583	4.60	16.583	1.86	22.58	1.24
4.600	1.65	10.600	4.60	16.600	1.86	22.60	1.24
4.617	1.65	10.617	4.60	16.617	1.86	22.62	1.24
4.633	1.65	10.633	4.60	16.633	1.86	22.63	1.24
4.650	1.65	10.650	4.60	16.650	1.86	22.65	1.24
4.667	1.65	10.667	4.60	16.667	1.86	22.67	1.24
4.683	1.65	10.683	4.60	16.683	1.86	22.68	1.24
4.700	1.65	10.700	4.60	16.700	1.86	22.70	1.24
4.717	1.65	10.717	4.60	16.717	1.86	22.72	1.24
4.733	1.65	10.733	4.60	16.733	1.86	22.73	1.24
4.750	1.65	10.750	4.60	16.750	1.86	22.75	1.24
4.767	1.65	10.767	4.60	16.767	1.86	22.77	1.24
4.783	1.65	10.783	4.60	16.783	1.86	22.78	1.24
4.800	1.65	10.800	4.60	16.800	1.86	22.80	1.24
4.817	1.65	10.817	4.60	16.817	1.86	22.82	1.24
4.833	1.65	10.833	4.60	16.833	1.86	22.83	1.24
4.850	1.65	10.850	4.60	16.850	1.86	22.85	1.24
4.867	1.65	10.867	4.60	16.867	1.86	22.87	1.24
4.883	1.65	10.883	4.60	16.883	1.86	22.88	1.24
4.900	1.65	10.900	4.60	16.900	1.86	22.90	1.24
4.917	1.65	10.917	4.60	16.917	1.86	22.92	1.24
4.933	1.65	10.933	4.60	16.933	1.86	22.93	1.24
4.950	1.65	10.950	4.60	16.950	1.86	22.95	1.24
4.967	1.65	10.967	4.60	16.967	1.86	22.97	1.24
4.983	1.65	10.983	4.60	16.983	1.86	22.98	1.24
5.000	1.65	11.000	4.60	17.000	1.86	23.00	1.24
5.017	1.65	11.017	9.91	17.017	1.86	23.02	1.24

HRP7-PR-SWM_2-100 YEAR.OUT

HRP7-PR-SWM_2-100 YEAR.OUT

5.033	1.65	[11.033	9.91	17.033	1.86	23.03	1.24
5.050	1.65	[11.050	9.91	17.050	1.86	23.05	1.24
5.067	1.65	[11.067	9.91	17.067	1.86	23.07	1.24
5.083	1.65	[11.083	9.91	17.083	1.86	23.08	1.24
5.100	1.65	[11.100	9.91	17.100	1.86	23.10	1.24
5.117	1.65	[11.117	9.91	17.117	1.86	23.12	1.24
5.133	1.65	[11.133	9.91	17.133	1.86	23.13	1.24
5.150	1.65	[11.150	9.91	17.150	1.86	23.15	1.24
5.167	1.65	[11.167	9.91	17.167	1.86	23.17	1.24
5.183	1.65	[11.183	9.91	17.183	1.86	23.18	1.24
5.200	1.65	[11.200	9.91	17.200	1.86	23.20	1.24
5.217	1.65	[11.217	9.91	17.217	1.86	23.22	1.24
5.233	1.65	[11.233	9.91	17.233	1.86	23.23	1.24
5.250	1.65	[11.250	9.91	17.250	1.86	23.25	1.24
5.267	1.65	[11.267	9.91	17.267	1.86	23.27	1.24
5.283	1.65	[11.283	9.91	17.283	1.86	23.28	1.24
5.300	1.65	[11.300	9.91	17.300	1.86	23.30	1.24
5.317	1.65	[11.317	9.91	17.317	1.86	23.32	1.24
5.333	1.65	[11.333	9.91	17.333	1.86	23.33	1.24
5.350	1.65	[11.350	9.91	17.350	1.86	23.35	1.24
5.367	1.65	[11.367	9.91	17.367	1.86	23.37	1.24
5.383	1.65	[11.383	9.91	17.383	1.86	23.38	1.24
5.400	1.65	[11.400	9.91	17.400	1.86	23.40	1.24
5.417	1.65	[11.417	9.91	17.417	1.86	23.42	1.24
5.433	1.65	[11.433	9.91	17.433	1.86	23.43	1.24
5.450	1.65	[11.450	9.91	17.450	1.86	23.45	1.24
5.467	1.65	[11.467	9.91	17.467	1.86	23.47	1.24
5.483	1.65	[11.483	9.91	17.483	1.86	23.48	1.24
5.500	1.65	[11.500	9.91	17.500	1.86	23.50	1.24
5.517	1.65	[11.517	42.93	17.517	1.86	23.52	1.24
5.533	1.65	[11.533	42.93	17.533	1.86	23.53	1.24
5.550	1.65	[11.550	42.93	17.550	1.86	23.55	1.24
5.567	1.65	[11.567	42.93	17.567	1.86	23.57	1.24
5.583	1.65	[11.583	42.93	17.583	1.86	23.58	1.24
5.600	1.65	[11.600	42.93	17.600	1.86	23.60	1.24
5.617	1.65	[11.617	42.93	17.617	1.86	23.62	1.24
5.633	1.65	[11.633	42.93	17.633	1.86	23.63	1.24
5.650	1.65	[11.650	42.93	17.650	1.86	23.65	1.24
5.667	1.65	[11.667	42.93	17.667	1.86	23.67	1.24
5.683	1.65	[11.683	42.93	17.683	1.86	23.68	1.24
5.700	1.65	[11.700	42.93	17.700	1.86	23.70	1.24
5.717	1.65	[11.717	42.93	17.717	1.86	23.72	1.24
5.733	1.65	[11.733	42.93	17.733	1.86	23.73	1.24
5.750	1.65	[11.750	42.93	17.750	1.86	23.75	1.24
5.767	1.65	[11.767	113.93	17.767	1.86	23.77	1.24
5.783	1.65	[11.783	113.93	17.783	1.86	23.78	1.24
5.800	1.65	[11.800	113.93	17.800	1.86	23.80	1.24
5.817	1.65	[11.817	113.93	17.817	1.86	23.82	1.24
5.833	1.65	[11.833	113.93	17.833	1.86	23.83	1.24
5.850	1.65	[11.850	113.93	17.850	1.86	23.85	1.24
5.867	1.65	[11.867	113.93	17.867	1.86	23.87	1.24
5.883	1.65	[11.883	113.93	17.883	1.86	23.88	1.24
5.900	1.65	[11.900	113.93	17.900	1.86	23.90	1.24
5.917	1.65	[11.917	113.93	17.917	1.86	23.92	1.24
5.933	1.65	[11.933	113.93	17.933	1.86	23.93	1.24
5.950	1.65	[11.950	113.93	17.950	1.86	23.95	1.24
5.967	1.65	[11.967	113.93	17.967	1.86	23.97	1.24
5.983	1.65	[11.983	113.93	17.983	1.86	23.98	1.24
6.000	1.65	[12.000	113.93	18.000	1.86	24.00	1.24

Max.Eff.Inten.(mm/hr)= 113.93 68.20
over (min) 5.00 8.00
Storage Coeff. (min)= 1.66 (ii) 7.84 (iii)
Unit Hyd. Tpeak (min)= 5.00 8.00
Unit Hyd. peak (cms)= 0.40 0.14

TOTALS
PEAK FLOW (cms)= 0.15 0.06 0.201 (iii)
TIME TO PEAK (hrs)= 12.00 12.03 12.00
RUNOFF VOLUME (mm)= 101.69 51.58 79.15
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.50 0.77

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0026) |
1 + 2 = 3
ID1= 1 (0143): 0.84 0.201 12.00 79.15
+ ID2= 2 (0024): 64.94 4.270 12.40 65.40

ID = 3 (0026): 65.78 4.274 8.27 44.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0244) |
ID= 1 DT= 4.0 min
Area (ha)= 6.58
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.96 3.62
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 209.44 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN ' TIME RAIN ' TIME RAIN ' TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.067 1.03 | 6.067 2.06 | 12.067 14.87 | 18.07 1.86
0.133 1.03 | 6.133 2.06 | 12.133 14.86 | 18.13 1.86
0.200 1.03 | 6.200 2.06 | 12.200 14.86 | 18.20 1.86
0.267 1.03 | 6.267 2.06 | 12.267 14.86 | 18.27 1.86
0.333 1.03 | 6.333 2.06 | 12.333 14.86 | 18.33 1.86
0.400 1.03 | 6.400 2.06 | 12.400 14.86 | 18.40 1.86
0.467 1.03 | 6.467 2.06 | 12.467 14.86 | 18.47 1.86
0.533 1.03 | 6.533 2.06 | 12.533 11.25 | 18.53 1.86
0.600 1.03 | 6.600 2.06 | 12.600 7.64 | 18.60 1.86
0.667 1.03 | 6.667 2.06 | 12.667 7.64 | 18.67 1.86
0.733 1.03 | 6.733 2.06 | 12.733 7.64 | 18.73 1.86
0.800 1.03 | 6.800 2.06 | 12.800 7.64 | 18.80 1.86
0.867 1.03 | 6.867 2.06 | 12.867 7.64 | 18.87 1.86
0.933 1.03 | 6.933 2.06 | 12.933 7.64 | 18.93 1.86
1.000 1.03 | 7.000 2.06 | 13.000 7.64 | 19.00 1.86
1.067 1.03 | 7.067 2.06 | 13.067 1.45 | 19.07 1.86
1.133 1.03 | 7.133 2.06 | 13.133 1.44 | 19.13 1.86
1.200 1.03 | 7.200 2.06 | 13.200 1.44 | 19.20 1.86
1.267 1.03 | 7.267 2.06 | 13.267 1.44 | 19.27 1.86
1.333 1.03 | 7.333 2.06 | 13.333 1.44 | 19.33 1.86
1.400 1.03 | 7.400 2.06 | 13.400 1.44 | 19.40 1.86
1.467 1.03 | 7.467 2.06 | 13.467 1.44 | 19.47 1.86
1.533 1.03 | 7.533 2.06 | 13.533 4.95 | 19.53 1.86
1.600 1.03 | 7.600 2.06 | 13.600 8.46 | 19.60 1.86
1.667 1.03 | 7.667 2.06 | 13.667 8.46 | 19.67 1.86
1.733 1.03 | 7.733 2.06 | 13.733 8.46 | 19.73 1.86
1.800 1.65 | 7.800 2.06 | 13.800 8.46 | 19.80 1.86
1.867 1.86 | 7.867 2.06 | 13.867 8.46 | 19.87 1.86
1.933 1.86 | 7.933 2.06 | 13.933 8.46 | 19.93 1.86
2.000 1.86 | 8.000 2.06 | 14.000 8.46 | 20.00 1.86
2.067 1.34 | 8.067 2.79 | 14.067 3.10 | 20.07 1.24
2.133 1.34 | 8.133 2.79 | 14.133 3.10 | 20.13 1.24
2.200 1.34 | 8.200 2.79 | 14.200 3.10 | 20.20 1.24
2.267 1.34 | 8.267 2.79 | 14.267 3.10 | 20.27 1.24
2.333 1.34 | 8.333 2.79 | 14.333 3.10 | 20.33 1.24
2.400 1.34 | 8.400 2.79 | 14.400 3.10 | 20.40 1.24
2.467 1.34 | 8.467 2.79 | 14.467 3.10 | 20.47 1.24
2.533 1.34 | 8.533 2.79 | 14.533 3.10 | 20.53 1.24
2.600 1.34 | 8.600 2.79 | 14.600 3.10 | 20.60 1.24
2.667 1.34 | 8.667 2.79 | 14.667 3.10 | 20.67 1.24
2.733 1.34 | 8.733 2.79 | 14.733 3.10 | 20.73 1.24
2.800 1.34 | 8.800 2.79 | 14.800 3.10 | 20.80 1.24
2.867 1.34 | 8.867 2.79 | 14.867 3.10 | 20.87 1.24
2.933 1.34 | 8.933 2.79 | 14.933 3.10 | 20.93 1.24
3.000 1.34 | 9.000 2.79 | 15.000 3.10 | 21.00 1.24
3.067 1.34 | 9.067 3.30 | 15.067 3.10 | 21.07 1.24
3.133 1.34 | 9.133 3.30 | 15.133 3.10 | 21.13 1.24
3.200 1.34 | 9.200 3.30 | 15.200 3.10 | 21.20 1.24
3.267 1.34 | 9.267 3.30 | 15.267 3.10 | 21.27 1.24
3.333 1.34 | 9.333 3.30 | 15.333 3.10 | 21.33 1.24
3.400 1.34 | 9.400 3.30 | 15.400 3.10 | 21.40 1.24
3.467 1.34 | 9.467 3.30 | 15.467 3.10 | 21.47 1.24
3.533 1.34 | 9.533 3.51 | 15.533 3.10 | 21.53 1.24
3.600 1.34 | 9.600 3.72 | 15.600 3.10 | 21.60 1.24
3.667 1.34 | 9.667 3.72 | 15.667 3.10 | 21.67 1.24
3.733 1.34 | 9.733 3.72 | 15.733 3.10 | 21.73 1.24
3.800 1.34 | 9.800 3.72 | 15.800 3.10 | 21.80 1.24
3.867 1.34 | 9.867 3.72 | 15.867 3.10 | 21.87 1.24
3.933 1.34 | 9.933 3.72 | 15.933 3.10 | 21.93 1.24
4.000 1.34 | 10.000 3.72 | 16.000 3.10 | 22.00 1.24
4.067 1.65 | 10.067 4.75 | 16.067 1.86 | 22.07 1.24
4.133 1.65 | 10.133 4.75 | 16.133 1.86 | 22.13 1.24
4.200 1.65 | 10.200 4.75 | 16.200 1.86 | 22.20 1.24
4.267 1.65 | 10.267 4.75 | 16.267 1.86 | 22.27 1.24

HRP7-PR-SWM_2-100 YEAR.OUT											
4.333	1.65	[10.333	4.75	[16.333	1.86	[22.33	1.24				
4.400	1.65	[10.400	4.75	[16.400	1.86	[22.40	1.24				
4.467	1.65	[10.467	4.75	[16.467	1.86	[22.47	1.24				
4.533	1.65	[10.533	5.57	[16.533	1.86	[22.53	1.24				
4.600	1.65	[10.600	6.40	[16.600	1.86	[22.60	1.24				
4.667	1.65	[10.667	6.40	[16.667	1.86	[22.67	1.24				
4.733	1.65	[10.733	6.40	[16.733	1.86	[22.73	1.24				
4.800	1.65	[10.800	6.40	[16.800	1.86	[22.80	1.24				
4.867	1.65	[10.867	6.40	[16.867	1.86	[22.87	1.24				
4.933	1.65	[10.933	6.40	[16.933	1.86	[22.93	1.24				
5.000	1.65	[11.000	6.40	[17.000	1.86	[23.00	1.24				
5.067	1.65	[11.067	9.91	[17.067	1.86	[23.07	1.24				
5.133	1.65	[11.133	9.91	[17.133	1.86	[23.13	1.24				
5.200	1.65	[11.200	9.91	[17.200	1.86	[23.20	1.24				
5.267	1.65	[11.267	9.91	[17.267	1.86	[23.27	1.24				
5.333	1.65	[11.333	9.91	[17.333	1.86	[23.33	1.24				
5.400	1.65	[11.400	9.91	[17.400	1.86	[23.40	1.24				
5.467	1.65	[11.467	9.91	[17.467	1.86	[23.47	1.24				
5.533	1.65	[11.533	26.42	[17.533	1.86	[23.53	1.24				
5.600	1.65	[11.600	42.93	[17.600	1.86	[23.60	1.24				
5.667	1.65	[11.667	42.93	[17.667	1.86	[23.67	1.24				
5.733	1.65	[11.733	42.93	[17.733	1.86	[23.73	1.24				
5.800	1.65	[11.800	96.17	[17.800	1.86	[23.80	1.24				
5.867	1.65	[11.867	113.93	[17.867	1.86	[23.87	1.24				
5.933	1.65	[11.933	113.93	[17.933	1.86	[23.93	1.24				
6.000	1.65	[12.000	113.93	[18.000	1.86	[24.00	1.24				

Max.Eff.Inten.(mm/hr)=	113.93	66.99	
over (min)	5.00	12.00	
Storage Coeff. (min)=	3.87 (ii)	10.33 (ii)	
Unit Hyd. Tpeak (min)=	4.00	12.00	
Unit Hyd. peak (cms)=	0.31	0.10	
PEAK FLOW (cms)=	0.93	0.48	1.384 (iii)
TIME TO PEAK (hrs)=	12.00	12.07	12.00
RUNOFF VOLUME (mm)=	101.70	51.59	74.14
TOTAL RAINFALL (mm)=	103.20	103.20	103.20
RUNOFF COEFFICIENT =	0.99	0.50	0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0020)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0244):	6.58	1.384	12.00	74.14
+ ID2= 2 (0026):	65.78	4.274	8.27	44.06
ID = 3 (0028):	72.36	4.302	8.27	46.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L	(v 6.1.2002)
V V I SS U U A A L	
V V I SS U U A A A A L	
V V I SS U U A A L	
V V I SSSS UUUU A A LLLL	
000 TTTT TTTT H H Y Y M M 000 TM	
0 0 T T H H Y Y MM MM 0 0	
0 0 T T H H Y Y M M 0 0	
000 T H H Y Y M 000	

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\vo2in.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\bf90252a-18d8-4b71-a349-0f8f5aae6506\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\bf90252a-18d8-4b71-a349-0f8f5aae6506\scenar

DATE: 03/24/2023 TIME: 10:51:15

USER: HRP7-PR-SWM_2-100 YEAR.OUT

COMMENTS: _____

** SIMULATION : Run 05

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\2f7a6968-fd3c-4c50-b391-74185cad43f3\95accb52
Ptotal=115.20 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38

CALIB	
NASHYD (1040)	Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.15	6.083	2.30	12.083	16.00	18.08	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38

HRP7-PR-SWM_2-100 YEAR.OUT

2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 1.104 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 62.307
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.541

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0240)	Area (ha)= 20.08
ID= 1 DT= 3.0 min	Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.43	11.65
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	365.88	100.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07

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0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38

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4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)=	127.18	86.35
over (min)	6.00	18.00
Storage Coeff. (min)=	4.10 (ii)	17.07 (ii)
Unit Hyd. Tpeak (min)=	6.00	18.00
Unit Hyd. peak (cms)=	0.23	0.07
PEAK FLOW (cms)=	2.90	1.58
TIME TO PEAK (hrs)=	12.00	12.15
RUNOFF VOLUME (mm)=	113.70	87.31
TOTAL RAINFALL (mm)=	115.20	115.20
RUNOFF COEFFICIENT =	0.99	0.59

TOTALS

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0038)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1040):	10.35	1.104	12.17	62.31
+ ID2= 2 (0240):	20.08	4.082	12.00	87.31
ID = 3 (0038):	30.43	4.890	12.00	78.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0029)	Routing time step (min)'= 2.00
IN= 2----> OUT= 1	

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV. TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.321E+02	0.0	0.28	35.15
0.09	100.09	.721E+02	0.1	0.42	23.51
0.14	100.14	.120E+03	0.1	0.53	18.76
0.19	100.19	.176E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.498E+03	0.8	0.97	10.26
0.44	100.44	.614E+03	1.1	1.07	9.26
0.50	100.50	.741E+03	1.4	1.16	8.55
0.55	100.55	.879E+03	1.8	1.24	8.01
0.61	100.61	.103E+04	2.3	1.31	7.60
0.66	100.66	.119E+04	2.7	1.37	7.26
0.72	100.72	.136E+04	3.2	1.42	6.98

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0.78	100.78	.154E+04	3.8	1.47	6.74
0.83	100.83	.173E+04	4.4	1.52	6.53
0.89	100.89	.194E+04	5.1	1.56	6.35
0.94	100.94	.215E+04	5.8	1.60	6.19
1.00	101.00	.238E+04	6.6	1.64	6.05
<---- hydrograph ---->	<-pipe / channel->				
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0038)	30.43	4.89	12.00	78.80	0.87
OUTFLOW: ID= 1 (0029)	30.43	4.28	12.07	78.80	0.82

CALIB	Area (ha)=	11.30	Curve Number (CN)=	77.0
NASHYD (1041)	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.26		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38

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5.083	1.84	[11.083	11.06	[17.083	2.07	[23.08	1.38
5.167	1.84	[11.167	11.06	[17.167	2.07	[23.17	1.38
5.250	1.84	[11.250	11.06	[17.250	2.07	[23.25	1.38
5.333	1.84	[11.333	11.06	[17.333	2.07	[23.33	1.38
5.417	1.84	[11.417	11.06	[17.417	2.07	[23.42	1.38
5.500	1.84	[11.500	11.06	[17.500	2.07	[23.50	1.38
5.583	1.84	[11.583	47.92	[17.583	2.07	[23.58	1.38
5.667	1.84	[11.667	47.92	[17.667	2.07	[23.67	1.38
5.750	1.84	[11.750	47.92	[17.750	2.07	[23.75	1.38
5.833	1.84	[11.833	127.17	[17.833	2.07	[23.83	1.38
5.917	1.84	[11.917	127.18	[17.917	2.07	[23.92	1.38
6.000	1.84	[12.000	127.18	[18.000	2.07	[24.00	1.38

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.554 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 65.222
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.566

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)					
1 + 2 = 3					

		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):		11.30	1.554	12.08	65.22
+ ID2= 2 (0029):		30.43	4.281	12.07	78.00
=====					
ID = 3 (0018):		41.73	5.814	12.07	75.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB							
STANDHYD (0241)							
ID= 1 DT= 2.0 min							

		Area	(ha)=	12.29			
		Total Imp(%)=	73.00	Dir. Conn.(%)=	73.00		

		IMPERVIOUS	PERVIOUS (i)				
Surface Area	(ha)=	8.97	3.32				
Dep. Storage	(mm)=	1.50	1.50				
Average Slope	(%)=	2.00	2.00				
Length	(m)=	286.24	40.00				
Mannings n	=	0.013	0.250				

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07				
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07				
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07				
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07				
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07				
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07				
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07				
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07				
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07				
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07				
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07				
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07				
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07				
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07				
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07				
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07				
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07				
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07				
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07				
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07				
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07				
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07				
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07				
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07				
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07				
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07				
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07				
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07				
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07				
1.000	1.15	7.000	2.30	13.000	8.51	19.00	2.07				
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07				
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07				
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07				

HRP7-PR-SWM_2-100 YEAR.OUT

1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07
1.767	1.61	7.767	2.30	13.767	9.45	19.77	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38

HRP7-PR-SWM_2-100 YEAR.OUT

HRP7-PR-SWM_2-100 YEAR.OUT

4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.500	1.84	11.500	11.10	17.500	2.07	23.50	1.38
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.767	1.84	11.767	87.66	17.767	2.07	23.77	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38
6.000	1.84	12.000	127.03	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 93.56
over (min) 5.00 8.00
Storage Coeff. (min)= 3.54 (ii) 7.85 (ii)
Unit Hyd. Tpeak (min)= 4.00 8.00
Unit Hyd. peak (cms)= 0.30 0.14

TOTALS

PEAK FLOW (cms)= 3.13 0.70 3.814 (iii)
TIME TO PEAK (hrs)= 12.00 12.03 12.00
RUNOFF VOLUME (mm)= 113.70 71.33 102.26
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.62 0.89

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0021)|
1 + 2 = 3
ID1= 1 (0018): 41.73 5.814 12.07 75.12

+ ID2= 2 (0241): 12.29 3.814 12.00 102.26

ID = 3 (0021): 54.02 5.899 12.07 75.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0211)| OVERFLOW IS OFF
| IN= 2--> OUT= 1 |
DT= 3.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 4.2170 0.5750
0.0310 0.4090 | 5.0100 0.6210
2.1110 0.5050 | 5.8210 0.6600
3.3030 0.5320 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0021) 54.020 5.899 12.07 75.48
OUTFLOW: ID= 1 (0211) 54.020 4.999 12.23 75.48

PEAK FLOW REDUCTION [Qout/Qin](%)= 84.74
TIME SHIFT OF PEAK FLOW (min)= 9.00
MAXIMUM STORAGE USED (ha.m.)= 0.6206

| CALIB |
| STANDHYD (0142)| Area (ha)= 10.92
| ID= 1 DT= 3.0 min | Total Imp(%)= 53.00 Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.79 5.13
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 269.81 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.050 1.15 | 6.050 2.30 | 12.050 16.59 | 18.05 2.07
0.100 1.15 | 6.100 2.30 | 12.100 16.59 | 18.10 2.07
0.150 1.15 | 6.150 2.30 | 12.150 16.59 | 18.15 2.07
0.200 1.15 | 6.200 2.30 | 12.200 16.59 | 18.20 2.07
0.250 1.15 | 6.250 2.30 | 12.250 16.59 | 18.25 2.07
0.300 1.15 | 6.300 2.30 | 12.300 16.59 | 18.30 2.07
0.350 1.15 | 6.350 2.30 | 12.350 16.59 | 18.35 2.07
0.400 1.15 | 6.400 2.30 | 12.400 16.59 | 18.40 2.07
0.450 1.15 | 6.450 2.30 | 12.450 16.59 | 18.45 2.07
0.500 1.15 | 6.500 2.30 | 12.500 16.59 | 18.50 2.07
0.550 1.15 | 6.550 2.30 | 12.550 8.52 | 18.55 2.07
0.600 1.15 | 6.600 2.30 | 12.600 8.52 | 18.60 2.07
0.650 1.15 | 6.650 2.30 | 12.650 8.52 | 18.65 2.07
0.700 1.15 | 6.700 2.30 | 12.700 8.52 | 18.70 2.07
0.750 1.15 | 6.750 2.30 | 12.750 8.52 | 18.75 2.07
0.800 1.15 | 6.800 2.30 | 12.800 8.52 | 18.80 2.07
0.850 1.15 | 6.850 2.30 | 12.850 8.52 | 18.85 2.07
0.900 1.15 | 6.900 2.30 | 12.900 8.52 | 18.90 2.07
0.950 1.15 | 6.950 2.30 | 12.950 8.52 | 18.95 2.07
1.000 1.15 | 7.000 2.30 | 13.000 8.52 | 19.00 2.07
1.050 1.15 | 7.050 2.30 | 13.050 1.61 | 19.05 2.07
1.100 1.15 | 7.100 2.30 | 13.100 1.61 | 19.10 2.07
1.150 1.15 | 7.150 2.30 | 13.150 1.61 | 19.15 2.07
1.200 1.15 | 7.200 2.30 | 13.200 1.61 | 19.20 2.07
1.250 1.15 | 7.250 2.30 | 13.250 1.61 | 19.25 2.07
1.300 1.15 | 7.300 2.30 | 13.300 1.61 | 19.30 2.07
1.350 1.15 | 7.350 2.30 | 13.350 1.61 | 19.35 2.07
1.400 1.15 | 7.400 2.30 | 13.400 1.61 | 19.40 2.07
1.450 1.15 | 7.450 2.30 | 13.450 1.61 | 19.45 2.07
1.500 1.15 | 7.500 2.30 | 13.500 1.62 | 19.50 2.07
1.550 1.15 | 7.550 2.30 | 13.550 9.45 | 19.55 2.07
1.600 1.15 | 7.600 2.30 | 13.600 9.45 | 19.60 2.07
1.650 1.15 | 7.650 2.30 | 13.650 9.45 | 19.65 2.07
1.700 1.15 | 7.700 2.30 | 13.700 9.45 | 19.70 2.07
1.750 1.15 | 7.750 2.30 | 13.750 9.45 | 19.75 2.07
1.800 2.07 | 7.800 2.30 | 13.800 9.45 | 19.80 2.07
1.850 2.07 | 7.850 2.30 | 13.850 9.45 | 19.85 2.07
1.900 2.07 | 7.900 2.30 | 13.900 9.45 | 19.90 2.07
1.950 2.07 | 7.950 2.30 | 13.950 9.45 | 19.95 2.07
2.000 2.07 | 8.000 2.30 | 14.000 9.44 | 20.00 2.07
2.050 1.50 | 8.050 3.11 | 14.050 3.46 | 20.05 1.38
2.100 1.50 | 8.100 3.11 | 14.100 3.46 | 20.10 1.38
2.150 1.50 | 8.150 3.11 | 14.150 3.46 | 20.15 1.38

HRP7-PR-SWM-2-100 Year. OUT							
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38
Max. Eff. Inten. (mm/hr)			127.18	62.00			
Storage Coeff. (min)			6.00	12.00			
Unit Hyd. T.peak (min)			3.42 (ii)	9.53 (ii)			
Unit Hyd. peak (cms)			0.26	0.11			
				TOTALS (iii)			
PEAK FLOW (cms)			2.01	0.64	2.607		
TIME TO PEAK (hrs)			12.00	12.05	12.00		
RUNOFF VOLUME (mm)			113.70	47.99	82.82		

			HRP7-PR-SWM_2-100 YEAR.OUT
TOTAL RAINFALL (mm)=	115.20	115.20	115.20
RUNOFF COEFFICIENT =	0.99	0.42	0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0142):	10.92	2.607	12.00	82.82
+ ID2= 2 (0211):	54.02	4.999	12.23	75.48
ID = 3 (0023):	64.94	6.266	12.05	76.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024) IN= 2 ----> OUT= 1 DT= 3.0 min	OVERFLOW IS OFF				
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0030	0.5800	
	0.0370	0.1125	1.9000	0.7700	
	0.0530	0.2275	6.4000	1.1000	
	0.0650	0.3450	9.2000	1.2500	
	0.0750	0.4630	0.0000	0.0000	
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW: ID= 2 (0023)	64.940	6.266	12.05	76.71	
OUTFLOW: ID= 1 (0024)	64.940	5.159	12.38	75.28	

PEAK FLOW REDUCTION [Qout/Qin](%)= 82.33
TIME SHIFT OF PEAK FLOW (min)= 19.50
MAXIMUM STORAGE USED (ha.m.)= 1.0090

CALIB			
STANDHYD (0143)	Area (ha)=	0.84	
ID= 1 DT= 1.0 min	Total Imp(%)=	55.00	Dir. Conn.(%)= 55.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.46	0.38
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	74.83	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	1.15	6.917	2.30	12.017	16.66	18.02	2.07
0.033	1.15	6.933	2.30	12.033	16.59	18.03	2.07
0.050	1.15	6.950	2.30	12.050	16.59	18.03	2.07
0.067	1.15	6.967	2.30	12.067	16.59	18.07	2.07
0.083	1.15	6.983	2.30	12.083	16.59	18.08	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.117	1.15	6.117	2.30	12.117	16.59	18.12	2.07
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.183	1.15	6.183	2.30	12.183	16.59	18.18	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.217	1.15	6.217	2.30	12.217	16.59	18.22	2.07
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.267	1.15	6.267	2.30	12.267	16.59	18.26	2.07
0.283	1.15	6.283	2.30	12.283	16.59	18.28	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.317	1.15	6.317	2.30	12.317	16.59	18.32	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07
0.383	1.15	6.383	2.30	12.383	16.59	18.38	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07

HRP7-PR-SWM_2-100 YEAR.OUT									
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07		
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07		
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07		
0.483	1.15	6.483	2.30	12.483	16.59	18.48	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.517	1.15	6.517	2.30	12.517	8.53	18.52	2.07		
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07		
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07		
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07		
0.583	1.15	6.583	2.30	12.583	8.52	18.58	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.617	1.15	6.617	2.30	12.617	8.52	18.62	2.07		
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07		
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.683	1.15	6.683	2.30	12.683	8.52	18.68	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.717	1.15	6.717	2.30	12.717	8.52	18.72	2.07		
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07		
0.783	1.15	6.783	2.30	12.783	8.52	18.78	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.817	1.15	6.817	2.30	12.817	8.52	18.82	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07		
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07		
0.883	1.15	6.883	2.30	12.883	8.52	18.88	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07		
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07		
0.983	1.15	6.983	2.30	12.983	8.52	18.98	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.017	1.15	7.017	2.30	13.017	1.62	19.02	2.07		
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07		
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07		
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07		
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.117	1.15	7.117	2.30	13.117	1.61	19.12	2.07		
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07		
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.183	1.15	7.183	2.30	13.183	1.61	19.18	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.217	1.15	7.217	2.30	13.217	1.61	19.22	2.07		
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07		
1.283	1.15	7.283	2.30	13.283	1.61	19.28	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.317	1.15	7.317	2.30	13.317	1.61	19.32	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07		
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07		
1.383	1.15	7.383	2.30	13.383	1.61	19.38	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07		
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07		
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.483	1.15	7.483	2.30	13.483	1.61	19.48	2.07		
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07		
1.517	1.15	7.517	2.30	13.517	9.43	19.52	2.07		
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07		
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07		
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07		
1.583	1.15	7.583	2.30	13.583	9.45	19.58	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.617	1.15	7.617	2.30	13.617	9.45	19.62	2.07		
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07		
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.683	1.15	7.683	2.30	13.683	9.45	19.68	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.717	1.15	7.717	2.30	13.717	9.45	19.72	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.767	2.07	7.767	2.30	13.767	9.45	19.77	2.07		
1.783	2.07	7.783	2.30	13.783	9.45	19.78	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.817	2.07	7.817	2.30	13.817	9.45	19.82	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		

HRP7-PR-SWM_2-100 YEAR.OUT									
1.883	2.07	7.883	2.30	13.883	9.45	19.88	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
1.983	2.07	7.983	2.30	13.983	9.45	19.98	2.07		
2.000	2.07	8.000	2.31	14.000	9.45	20.00	2.07		
2.017	1.50	8.017	3.11	14.017	3.47	20.02	1.39		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.117	1.50	8.117	3.11	14.117	3.46	20.12	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.183	1.50	8.183	3.11	14.183	3.46	20.18	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.217	1.50	8.217	3.11	14.217	3.46	20.22	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.283	1.50	8.283	3.11	14.283	3.46	20.28	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.317	1.50	8.317	3.11	14.317	3.46	20.32	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.383	1.50	8.383	3.11	14.383	3.46	20.38	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.483	1.50	8.483	3.11	14.483	3.46	20.48	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.517	1.50	8.517	3.11	14.517	3.46	20.52	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.617	1.50	8.617	3.11	14.617	3.46	20.62	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.683	1.50	8.683	3.11	14.683	3.46	20.68	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.717	1.50	8.717	3.11	14.717	3.46	20.72	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.76	1.38		
2.783	1.50	8.783	3.11	14.783	3.46	20.78	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.817	1.50	8.817	3.11	14.817	3.46	20.82	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.883	1.50	8.883	3.11	14.883	3.46	20.88	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
2.983	1.50	8.983	3.11	14.983	3.46	20.98	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.017	1.50	9.017	3.69	15.017	3.46	21.02	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.117	1.50	9.117	3.69	15.117	3.46	21.12	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.183	1.50	9.183	3.69	15.183	3.46	21.18	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.217	1.50	9.217	3.69	15.217	3.46	21.22	1.38		
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.26	1.38		
3.283	1.50	9.283	3.69	15.283	3.46	21.28	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.317	1.50	9.317	3.69	15.317	3.46	21.32	1.38		

HRP7-PR-SWM_2-100 YEAR.OUT									
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38		
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38		
3.383	1.50	9.383	3.69	15.383	3.46	21.38	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38		
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38		
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.483	1.50	9.483	3.69	15.483	3.46	21.48	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.517	1.50	9.517	4.15	15.517	3.46	21.52	1.38		
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38		
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38		
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38		
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.617	1.50	9.617	4.15	15.617	3.46	21.62	1.38		
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38		
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38		
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38		
3.683	1.50	9.683	4.15	15.683	3.46	21.68	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.717	1.50	9.717	4.15	15.717	3.46	21.72	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38		
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38		
3.783	1.50	9.783	4.15	15.783	3.46	21.78	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.817	1.50	9.817	4.15	15.817	3.46	21.82	1.38		
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38		
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
3.883	1.50	9.883	4.15	15.883	3.46	21.88	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38		
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38		
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38		
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38		
3.983	1.50	9.983	4.15	15.983	3.46	21.98	1.38		
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38		
4.017	1.84	10.017	5.30	16.017	2.08	22.02	1.38		
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38		
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38		
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38		
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.117	1.84	10.117	5.30	16.117	2.07	22.12	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38		
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38		
4.183	1.84	10.183	5.30	16.183	2.07	22.18	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.217	1.84	10.217	5.30	16.217	2.07	22.22	1.38		
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38		
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.283	1.84	10.283	5.30	16.283	2.07	22.28	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		
4.317	1.84	10.317	5.30	16.317	2.07	22.32	1.38		
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38		
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38		
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38		
4.383	1.84	10.383	5.30	16.383	2.07	22.38	1.38		
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38		
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38		
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38		
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38		
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38		
4.483	1.84	10.483	5.30	16.483	2.07	22.48	1.38		
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38		
4.517	1.84	10.517	7.14	16.517	2.07	22.52	1.38		
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38		
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38		
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38		
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38		
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38		
4.617	1.84	10.617	7.14	16.617	2.07	22.62	1.38		
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38		
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38		
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38		
4.683	1.84	10.683	7.14	16.683	2.07	22.68	1.38		
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38		
4.717	1.84	10.717	7.14	16.717	2.07	22.72	1.38		
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38		
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38		
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38		

HRP7-PR-SWM_2-100 YEAR.OUT							
4.783	1.84	10.783	7.14	16.783	2.07	22.78	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.817	1.84	10.817	7.14	16.817	2.07	22.82	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38
4.883	1.84	10.883	7.14	16.883	2.07	22.88	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38
4.983	1.84	10.983	7.14	16.983	2.07	22.98	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.017	1.84	11.017	11.06	17.017	2.07	23.02	1.38
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.117	1.84	11.117	11.06	17.117	2.07	23.12	1.38
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.183	1.84	11.183	11.06	17.183	2.07	23.18	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.217	1.84	11.217	11.06	17.217	2.07	23.22	1.38
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38
5.283	1.84	11.283	11.06	17.283	2.07	23.28	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.317	1.84	11.317	11.06	17.317	2.07	23.32	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38
5.383	1.84	11.383	11.06	17.383	2.07	23.38	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.483	1.84	11.483	11.06	17.483	2.07	23.48	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.517	1.84	11.517	47.91	17.517	2.07	23.52	1.38
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.617	1.84	11.617	47.92	17.617	2.07	23.62	1.38
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.683	1.84	11.683	47.92	17.683	2.07	23.68	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.717	1.84	11.717	47.92	17.717	2.07	23.72	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.767	1.84	11.767	127.14	17.767	2.07	23.77	1.38
5.783	1.84	11.783	127.18	17.783	2.07	23.78	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.817	1.84	11.817	127.18	17.817	2.07	23.82	1.38
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38
5.883	1.84	11.883	127.18	17.883	2.07	23.88	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38
5.983	1.84	11.983	127.18	17.983	2.07	23.98	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

HRP7-PR-SWM_2-100 YEAR.OUT

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0143):	6.84	0.229	12.00	89.91
+ ID2= 2 (0024):	64.94	5.159	12.38	75.28
=====				
ID = 3 (0026):	65.78	5.164	8.25	50.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0244)			
ID= 1 DT= 4.0 min	Area (ha)=	6.58	
	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00
=====			
Surface Area	(ha)=	2.96	3.62
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	209.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.067	1.15	6.067	2.30	12.067	16.60	18.07	2.07
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07
0.533	1.15	6.533	2.30	12.533	16.59	18.53	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07
1.533	1.15	7.533	2.30	13.533	5.53	19.53	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07
1.800	1.84	7.800	2.30	13.800	9.45	19.80	2.07
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38

3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.533	1.50	9.533	3.92	15.533	3.46	21.53	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.533	1.84	10.533	6.22	16.533	2.07	22.53	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.533	1.84	11.533	29.49	17.533	2.07	23.53	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.800	1.84	11.800	107.36	17.800	2.07	23.80	1.38
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 78.97
over (min) 5.00 12.00
Storage Coeff. (min)= 2.94 (ii) 9.88 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.32 0.11

PEAK FLOW (cms)= 1.04 0.58 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.07 1.587 (iii)
Unit Hyd. Tpeak (min)= 4.00 12.00
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0244):	6.58	1.587	12.00	84.63
+ ID2= 2 (0026):	65.78	5.164	8.25	50.70
=====				
ID = 3 (0028):	72.36	5.195	8.25	53.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 HRP7-PR-SWM_2-100 YEAR.OUT
O O T T H H Y Y MM MM O O TM
O O T T H H Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voind.dat
Output filename: C:\Users\Abir\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\087765f0-f448-4bc6-885a-f93c9952e861\scenar
Summary filename: C:\Users\Abir\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\087765f0-f448-4bc6-885a-f93c9952e861\scenar

DATE: 03/24/2023 TIME: 10:51:14

USER:

COMMENTS: _____

** SIMULATION : Run 06

MASS STORM Filename: C:\Users\Abir\AppData\Local\Temp\
2f7a6968-fd3c-4c50-b391-74185cad43f3\2985551a
Ptotal=127.20 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29	
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29	
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29	
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29	
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29	
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29	
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29	
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29	
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53	
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53	
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53	
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53	
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53	
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53	
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53	
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53	
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53	
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53	
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53	
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53	
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53	
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53	
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53	
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53	

CALIB
NASHYD (1040) Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29	
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29	
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29	
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29	
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29	
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29	
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29	

0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29	
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29	
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29	
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29	
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29	
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29	
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29	
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29	
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29	
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29	
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29	
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29	
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29	
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29	
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29	
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29	
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29	
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53	
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53	
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53	
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53	
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53	
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53	
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53	
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53	
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53	
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53	
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53	
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53	
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53	
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53	
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53	
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53	
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53	
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53	
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53	
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53	
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53	
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53	
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53	
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53	
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53	
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53	
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53	
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53	
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53	
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53	
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53	
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53	
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53	
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53	
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53	
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53	
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53	
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53	
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53	
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53	
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53	
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53	
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53	
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53	
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53	
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53	
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53	
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53	

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 1.283 (I)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 72.171
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.567

(I) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0240) Area (ha)= 20.08 ID= 1 DT= 3.0 min Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00	IMPERVIOUS Surface Area (ha)= 8.43 Dep. Storage (mm)= 1.50 Average Slope (%)= 2.00 Length (m)= 365.88	PERVIOUS (I) 11.65 1.50 2.00 100.00

Mannings n = 0.013 0.250 HRP7-PR-SWM_2-100 YEAR.OUT

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29		
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29		
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29		
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29		
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29		
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29		
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29		
0.500	1.27	6.500	2.54	12.500	18.31	18.50	2.29		
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		

HRP7-PR-SWM_2-100 YEAR.OUT									
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53		
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53		
5.500	2.04	11.500	12.23	17.500	2.29	23.50	1.53		
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53		
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53		
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53		
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53		
5.750	2.04	11.750	52.96	17.750	2.29	23.75	1.53		
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53		
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53		
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53		
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53		
6.000	2.04	12.000	140.36	18.000	2.29	24.00	1.53		

Max.Eff.Inten.(mm/hr)=	140.43	99.21	
over (min)	6.00	18.00	
Storage Coeff. (min)=	3.95 (ii)	16.21 (ii)	
Unit Hyd. Tpeak (min)=	6.00	18.00	
Unit Hyd. peak (cms)=	0.24	0.07	
PEAK FLOW (cms)=	3.21	1.86	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.15	4.615 (iii)
RUNOFF VOLUME (mm)=	125.70	78.39	12.00
TOTAL RAINFALL (mm)=	127.20	127.20	98.26
RUNOFF COEFFICIENT =	0.99	0.62	0.77

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (0.1) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0038)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1040):	10.35	1.283	12.17	72.17
+ ID2= 2 (0240):	20.08	4.615	12.00	98.26
=====				
ID = 3 (0038):	30.43	5.559	12.00	89.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP7-PR-SWM_2-100 YEAR.OUT

7.00101.000.0500

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.321E+02	0.6	0.28	35.15
0.09	100.09	.721E+02	0.1	0.42	23.51
0.14	100.14	.120E+03	0.1	0.53	18.76
0.19	100.19	.176E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.490E+03	0.8	0.97	10.26
0.44	100.44	.614E+03	1.1	1.07	9.28
0.50	100.50	.741E+03	1.4	1.16	8.55
0.55	100.55	.879E+03	1.8	1.24	8.01
0.61	100.61	.103E+04	2.3	1.31	7.60
0.66	100.66	.119E+04	2.7	1.37	7.26
0.72	100.72	.136E+04	3.2	1.42	6.98
0.78	100.78	.154E+04	3.8	1.47	6.74
0.83	100.83	.173E+04	4.4	1.52	6.53
0.89	100.89	.194E+04	5.1	1.56	6.35
0.94	100.94	.215E+04	5.8	1.60	6.19
1.00	101.00	.238E+04	6.6	1.64	6.05

<---- hydrograph ----><-pipe / channel-->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0038)	30.43	5.56	12.00	89.38	0.93	1.59
OUTFLOW: ID= 1 (0029)	30.43	4.89	12.07	89.38	0.87	1.55

CALIB			
NASHYD (1041)	Area (ha)=	11.30	Curve Number (CN)= 77.0
D= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
-----	U.H. Tp(hrs)=	0.26	
NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.			

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	1.27	6.003	2.54	12.003	18.33	18.08	2.29		
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29		
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29		
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29		
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29		
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29		
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29		
2.083	2.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		

HRP7-PR-SWM_2-100 YEAR.OUT									
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53		
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53		
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53		
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53		
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53		
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53		
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53		
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53		

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW (cms)= 1.799 (l)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 75.341
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.592

(l) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):	11.30	1.799	12.08	75.34
+ ID2= 2 (0029):	30.43	4.887	12.07	89.38
=====				
ID = 3 (0018):	41.73	6.662	12.07	85.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0241)	Area (ha)=	12.29	
ID= 1 DT= 2.0 min	Total Imp(%)=	73.00	Dir. Conn.(%)= 73.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	8.97	3.32
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	286.24	40.00
Mannings n	=	0.013	0.250

HRP7-PR-SWM_2-100 YEAR.OUT									
0.500	1.27	6.500	2.54	12.500	18.39	18.50	2.29		
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29		
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29		
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29		
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29		
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29		
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29		
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29		
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29		
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29		
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29		
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29		
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29		
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29		
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29		
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29		
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29		
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29		
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29		
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29		
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29		
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29		
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29		
1.767	1.27	7.767	2.54	13.767	10.43	19.77	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29		
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29		
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29		
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53		
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53		
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53		
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53		
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53		
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53		
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53		
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53		
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53		
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53		
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53		

HRP7-PR-SWM_2-100_YEAR.OUT									
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53		
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53		
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53		
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53		
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53		
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53		
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53		
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53		
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53		
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53		
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53		
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53		
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53		
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53		
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53		
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53		
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53		
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53		
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53		
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53		
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53		
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53		
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53		
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53		
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53		
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53		
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53		
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53		
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53		
5.900	2.04	11.900	140.92	17.900	2.29	23.90	1.53		
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53		
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53		
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53		
Max.Eff.Inten.(mm/hr)= 140.43 186.86									
over (min) 5.98 8.08									
Storage Coeff. (min) 3.48 5.54 (ii)									
Unit Hyd. Tpeak (min) 4.00 6.00									
Unit Hyd. peak (cms)= 0.31 0.15									
TOTALS									
PEAK FLOW (cms)= 3.46 0.81 4.257 (iii)									

HRP7-PR-SWM_2-100 YEAR.OUT

TIME TO PEAK	(hrs)=	12.00	12.03	12.00
RUNOFF VOLUME	(mm)=	125.70	81.77	113.84
TOTAL RAINFALL	(mm)=	127.20	127.20	127.20
RUNOFF COEFFICIENT	=	0.99	0.64	0.89

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0018):	41.73	6.662	12.07	85.58
+ ID2= 2 (0241):	12.29	4.257	12.00	113.84
ID = 3 (0021):	54.02	6.756	12.07	85.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0211)

OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	4.2170	0.5750
0.8310	0.4090	5.0100	0.6210
2.1110	0.5050	5.8210	0.6600
3.3030	0.5320	0.0000	0.0000

INFLOW : ID= 2 (0021)	54.020	6.756	12.07	85.53
OUTFLOW: ID= 1 (0211)	54.020	5.815	12.23	85.53

PEAK FLOW REDUCTION [Qout/Qin](%)= 86.08
TIME SHIFT OF PEAK FLOW (min)= 9.00
MAXIMUM STORAGE USED (ha.m.)= 0.6599

CALIB

STANDHYD (0142)	Area (ha)=	10.92
ID= 1 DT= 3.0 min	Total Imp(%)=	53.00
	Dir. Conn.(%)=	53.00

Surface Area	(ha)=	5.79	5.13
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	269.81	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.27	6.050	2.54	12.050	18.32
0.100	1.27	6.100	2.54	12.100	18.32
0.150	1.27	6.150	2.54	12.150	18.32
0.200	1.27	6.200	2.54	12.200	18.32
0.250	1.27	6.250	2.54	12.250	18.32
0.300	1.27	6.300	2.54	12.300	18.32
0.350	1.27	6.350	2.54	12.350	18.32
0.400	1.27	6.400	2.54	12.400	18.32
0.450	1.27	6.450	2.54	12.450	18.32
0.500	1.27	6.500	2.54	12.500	18.31
0.550	1.27	6.550	2.54	12.550	9.41
0.600	1.27	6.600	2.54	12.600	9.41
0.650	1.27	6.650	2.54	12.650	9.41
0.700	1.27	6.700	2.54	12.700	9.41
0.750	1.27	6.750	2.54	12.750	9.41
0.800	1.27	6.800	2.54	12.800	9.41
0.850	1.27	6.850	2.54	12.850	9.41
0.900	1.27	6.900	2.54	12.900	9.41
0.950	1.27	6.950	2.54	12.950	9.41
1.000	1.27	7.000	2.54	13.000	9.41
1.050	1.27	7.050	2.54	13.050	1.78
1.100	1.27	7.100	2.54	13.100	1.78
1.150	1.27	7.150	2.54	13.150	1.78
1.200	1.27	7.200	2.54	13.200	1.78

HRP7-PR-SWM_2-100 YEAR.OUT

1.250	1.27	7.250	2.54	13.250	1.78
1.300	1.27	7.300	2.54	13.300	1.78
1.350	1.27	7.350	2.54	13.350	1.78
1.400	1.27	7.400	2.54	13.400	1.78
1.450	1.27	7.450	2.54	13.450	1.78
1.500	1.27	7.500	2.54	13.500	1.79
1.550	1.27	7.550	2.54	13.550	10.43
1.600	1.27	7.600	2.54	13.600	10.43
1.650	1.27	7.650	2.54	13.650	10.43
1.700	1.27	7.700	2.54	13.700	10.43
1.750	1.27	7.750	2.54	13.750	10.43
1.800	2.29	7.800	2.54	13.800	10.43
1.850	2.29	7.850	2.54	13.850	10.43
1.900	2.29	7.900	2.54	13.900	10.43
1.950	2.29	7.950	2.54	13.950	10.43
2.000	2.29	8.000	2.54	14.000	10.43
2.050	1.65	8.050	3.43	14.050	3.82
2.100	1.65	8.100	3.43	14.100	3.82
2.150	1.65	8.150	3.43	14.150	3.82
2.200	1.65	8.200	3.43	14.200	3.82
2.250	1.65	8.250	3.43	14.250	3.82
2.300	1.65	8.300	3.43	14.300	3.82
2.350	1.65	8.350	3.43	14.350	3.82
2.400	1.65	8.400	3.43	14.400	3.82
2.450	1.65	8.450	3.43	14.450	3.82
2.500	1.65	8.500	3.43	14.500	3.82
2.550	1.65	8.550	3.43	14.550	3.82
2.600	1.65	8.600	3.43	14.600	3.82
2.650	1.65	8.650	3.43	14.650	3.82
2.700	1.65	8.700	3.43	14.700	3.82
2.750	1.65	8.750	3.43	14.750	3.82
2.800	1.65	8.800	3.43	14.800	3.82
2.850	1.65	8.850	3.43	14.850	3.82
2.900	1.65	8.900	3.43	14.900	3.82
2.950	1.65	8.950	3.43	14.950	3.82
3.000	1.65	9.000	3.43	15.000	3.82
3.050	1.65	9.050	4.07	15.050	3.82
3.100	1.65	9.100	4.07	15.100	3.82
3.150	1.65	9.150	4.07	15.150	3.82
3.200	1.65	9.200	4.07	15.200	3.82
3.250	1.65	9.250	4.07	15.250	3.82
3.300	1.65	9.300	4.07	15.300	3.82
3.350	1.65	9.350	4.07	15.350	3.82
3.400	1.65	9.400	4.07	15.400	3.82
3.450	1.65	9.450	4.07	15.450	3.82
3.500	1.65	9.500	4.07	15.500	3.82
3.550	1.65	9.550	4.58	15.550	3.82
3.600	1.65	9.600	4.58	15.600	3.82
3.650	1.65	9.650	4.58	15.650	3.82
3.700	1.65	9.700	4.58	15.700	3.82
3.750	1.65	9.750	4.58	15.750	3.82
3.800	1.65	9.800	4.58	15.800	3.82
3.850	1.65	9.850	4.58	15.850	3.82
3.900	1.65	9.900	4.58	15.900	3.82
3.950	1.65	9.950	4.58	15.950	3.82
4.000	1.65	10.000	4.58	16.000	3.81
4.050	2.04	10.050	5.85	16.050	2.29
4.100	2.04	10.100	5.85	16.100	2.29
4.150	2.04	10.150	5.85	16.150	2.29
4.200	2.04	10.200	5.85	16.200	2.29
4.250	2.04	10.250	5.85	16.250	2.29
4.300	2.04	10.300	5.85	16.300	2.29
4.350	2.04	10.350	5.85	16.350	2.29
4.400	2.04	10.400	5.85	16.400	2.29
4.450	2.04	10.450	5.85	16.450	2.29
4.500	2.04	10.500	5.85	16.500	2.29
4.550	2.04	10.550	7.89	16.550	2.29
4.600	2.04	10.600	7.89	16.600	2.29
4.650	2.04	10.650	7.89	16.650	2.29
4.700	2.04	10.700	7.89	16.700	2.29
4.750	2.04	10.750	7.89	16.750	2.29
4.800	2.04	10.800	7.89	16.800	2.29
4.850	2.04	10.850	7.89	16.850	2.29
4.900	2.04	10.900	7.89	16.900	2.29
4.950	2.04	10.950	7.89	16.950	2.29
5.000	2.04	11.000	7.89	17.000	2.29
5.050	2.04	11.050	12.21	17.050	2.29
5.100	2.04	11.100	12.21	17.100	2.29
5.150	2.04	11.150	12.21	17.150	2.29
5.200	2.04	11.200	12.21	17.200	2.29
5.250	2.04	11.250	12.21	17.250	2.29
5.300	2.04	11.300	12.21	17.300	2.29
5.350	2.04	11.350	12.21	17.350	2.29
5.400	2.04	11.400	12.21	17.400	2.29
5.450	2.04	11.450	12.21	17.450	2.29
5.500	2.04	11.500	12.23	17.500	2.29
5.550	2.04	11.550	52.92	17.550	2.29

HRP7-PR-SWM_2-100 YEAR.OUT

5.600	2.04	[11.600	52.92	[17.600	2.29		23.60	1.53
5.650	2.04	[11.650	52.92	[17.650	2.29		23.65	1.53
5.700	2.04	[11.700	52.92	[17.700	2.29		23.70	1.53
5.750	2.04	[11.750	52.96	[17.750	2.29		23.75	1.53
5.800	2.04	[11.800	140.43	[17.800	2.29		23.80	1.53
5.850	2.04	[11.850	140.43	[17.850	2.29		23.85	1.53
5.900	2.04	[11.900	140.43	[17.900	2.29		23.90	1.53
5.950	2.04	[11.950	140.43	[17.950	2.29		23.95	1.53
6.000	2.04	[12.000	140.36	[18.000	2.29		24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 72.61
over (min)= 6.00 12.00
Storage Coeff. (min)= 3.29 (ii) 9.16 (iii)
Unit Hyd. Tpeak (min)= 6.00 12.00
Unit Hyd. peak (cms)= 0.26 0.11

TOTALS
PEAK FLOW (cms)= 2.23 0.76 2.936 (iii)
TIME TO PEAK (hrs)= 12.00 12.05 12.00
RUNOFF VOLUME (mm)= 125.70 56.15 93.01
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.99 0.44 0.73

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0142):	10.92	2.936	12.00	93.01
+ ID2= 2 (0211):	54.02	5.815	12.23	85.53
=====				
ID = 3 (0023):	64.94	7.224	12.05	86.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)
IN= 2----> OUT= 1
DT= 3.0 min

OVERFLOW IS OFF			
OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0830	0.5800
0.0370	0.1125	1.9000	0.7700
0.0530	0.2275	6.4000	1.1000
0.0650	0.3450	9.2000	1.2500
0.0750	0.4630	0.0000	0.0000

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
INFLOW : ID= 2 (0023)	64.940	7.224	12.05	86.79
OUTFLOW: ID= 1 (0024)	64.940	6.009	12.35	85.33

PEAK FLOW REDUCTION [Qout/Qin](%)= 83.18
TIME SHIFT OF PEAK FLOW (min)= 18.00
MAXIMUM STORAGE USED (ha.m.)= 1.0715

CALIB
STANDHYD (0143)
ID= 1 DT= 1.0 min

Area (ha)=	0.84
Total Imp(%)=	55.00
Dir. Conn.(%)=	55.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.46	0.38
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	74.83	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.27	6.017	2.54	12.017	18.40	18.02	2.29
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29
0.083	1.27	6.083	2.54	12.083	18.32	18.08	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29

HRP7-PR-SWM_2-100 YEAR.OUT

0.117	1.27		6.117	2.54	[12.117	18.32		18.12	2.29
0.133	1.27		6.133	2.54	[12.133	18.32		18.13	2.29
0.150	1.27		6.150	2.54	[12.150	18.32		18.15	2.29
0.167	1.27		6.167	2.54	[12.167	18.32		18.17	2.29
0.183	1.27		6.183	2.54	[12.183	18.32		18.18	2.29
0.200	1.27		6.200	2.54	[12.200	18.32		18.20	2.29
0.217	1.27		6.217	2.54	[12.217	18.32		18.22	2.29
0.233	1.27		6.233	2.54	[12.233	18.32		18.23	2.29
0.250	1.27		6.250	2.54	[12.250	18.32		18.25	2.29
0.267	1.27		6.267	2.54	[12.267	18.32		18.27	2.29
0.283	1.27		6.283	2.54	[12.283	18.32		18.28	2.29
0.300	1.27		6.300	2.54	[12.300	18.32		18.30	2.29
0.317	1.27		6.317	2.54	[12.317	18.32		18.32	2.29
0.333	1.27		6.333	2.54	[12.333	18.32		18.33	2.29
0.350	1.27		6.350	2.54	[12.350	18.32		18.35	2.29
0.367	1.27		6.367	2.54	[12.367	18.32		18.37	2.29
0.383	1.27		6.383	2.54	[12.383	18.32		18.38	2.29
0.400	1.27		6.400	2.54	[12.400	18.32		18.40	2.29
0.417	1.27		6.417	2.54	[12.417	18.32		18.42	2.29
0.433	1.27		6.433	2.54	[12.433	18.32		18.43	2.29
0.450	1.27		6.450	2.54	[12.450	18.32		18.45	2.29
0.467	1.27		6.467	2.54	[12.467	18.32		18.47	2.29
0.483	1.27		6.483	2.54	[12.483	18.32		18.48	2.29
0.500	1.27		6.500	2.54	[12.500	18.32		18.50	2.29
0.517	1.27		6.517	2.54	[12.517	9.42		18.52	2.29
0.533	1.27		6.533	2.54	[12.533	9.41		18.53	2.29
0.550	1.27		6.550	2.54	[12.550	9.41		18.55	2.29
0.567	1.27		6.567	2.54	[12.567	9.41		18.57	2.29
0.583	1.27		6.583	2.54	[12.583	9.41		18.58	2.29
0.600	1.27		6.600	2.54	[12.600	9.41		18.60	2.29
0.617	1.27		6.617	2.54	[12.617	9.41		18.62	2.29
0.633	1.27		6.633	2.54	[12.633	9.41		18.63	2.29
0.650	1.27		6.650	2.54	[12.650	9.41		18.65	2.29
0.667	1.27		6.667	2.54	[12.667	9.41		18.67	2.29
0.683	1.27		6.683	2.54	[12.683	9.41		18.68	2.29
0.700	1.27		6.700	2.54	[12.700	9.41		18.70	2.29
0.717	1.27		6.717	2.54	[12.717	9.41		18.72	2.29
0.733	1.27		6.733	2.54	[12.733	9.41		18.73	2.29
0.750	1.27		6.750	2.54	[12.750	9.41		18.75	2.29
0.767	1.27		6.767	2.54	[12.767	9.41		18.77	2.29
0.783	1.27		6.783	2.54	[12.783	9.41		18.78	2.29
0.800	1.27		6.800	2.54	[12.800	9.41		18.80	2.29
0.817	1.27		6.817	2.54	[12.817	9.41		18.82	2.29
0.833	1.27		6.833	2.54	[12.833	9.41		18.83	2.29
0.850	1.27		6.850	2.54	[12.850	9.41		18.85	2.29
0.867	1.27		6.867	2.54	[12.867	9.41		18.87	2.29
0.883	1.27		6.883	2.54	[12.883	9.41		18.88	2.29
0.900	1.27		6.900	2.54	[12.900	9.41		18.90	2.29
0.917	1.27		6.917	2.54	[12.917	9.41		18.92	2.29
0.933	1.27		6.933	2.54	[12.933	9.41		18.93	2.29
0.950	1.27		6.950	2.54	[12.950	9.41		18.95	2.29
0.967	1.27		6.967	2.54	[12.967	9.41		18.97	2.29
0.983	1.27		6.983	2.54	[12.983	9.41		18.98	2.29
1.000	1.27		7.000	2.54	[13.000	9.41		19.00	2.29
1.017	1.27		7.017	2.54	[13.017	1.78		19.02	2.29
1.033	1.27		7.033	2.54	[13.033	1.78		19.03	2.29
1.050	1.27		7.050	2.54	[13.050	1.78		19.05	2.29
1.067	1.27		7.067	2.54	[13.067	1.78		19.07	2.29
1.083	1.27		7.083	2.54	[13.083	1.78		19.08	2.29
1.100	1.27		7.100	2.54	[13.100	1.78		19.10	2.29
1.117	1.27		7.117	2.54	[13.117	1.78		19.12	2.29
1.133	1.27		7.133	2.54	[13.133	1.78		19.13	2.29
1.150	1.27		7.150	2.54	[13.150	1.78		19.15	2.29
1.167	1.27		7.167	2.54	[13.167	1.78		19.17	2.29
1.183	1.27		7.183	2.54	[13.183	1.78		19.18	2.29
1.200	1.27		7.200	2.54	[13.200	1.78		19.20	2.29
1.217	1.27		7.217	2.54	[13.217	1.78		19.22	2.29
1.233	1.27		7.233	2.54	[13.233	1.78		19.23	2.29
1.250	1.27		7.250	2.54	[13.250	1.78		19.25	2.29
1.267	1.27		7.267	2.54	[13.267	1.78		19.27	2.29
1.283	1.27		7.283	2.54	[13.283	1.78		19.28	2.29
1.300	1.27		7.300	2.54	[13.300	1.78		19.30	2.29
1.317	1.27		7.317	2.54	[13.317	1.78		19.32	2.29
1.333	1.27		7.333	2.54	[13.333	1.78		19.33	2.29
1.350	1.27		7.350	2.54	[13.350	1.78		19.35	2.29
1.367	1.27		7.367	2.54	[13.367	1.78		19.37	2.29
1.383	1.27		7.383	2.54	[13.383	1.78		19.38	2.29
1.400	1.27		7.400	2.54	[13.400	1.78		19.40	2.29
1.417	1.27		7.417	2.54	[13.417	1.78		19.42	2.29
1.433	1.27		7.433	2.54	[13.433	1.78		19.43	2.29
1.450	1.27		7.450	2.54	[13.450	1.78		19.45	2.29
1.467	1.27		7.467	2.54	[13.467	1.78		19.47	2.29
1.483	1.27		7.483	2.54	[13.483	1.78		19.48	2.29
1.500	1.27		7.500	2.54	[13.500	1.78		19.50	2.29
1.517	1.27		7.517	2.54	[13.517	10.41		19.52	2.29
1.533	1.27		7.533	2.54	[13.533	10.43		19.53	2.29
1.550	1.27		7.550	2.54	[13.550	10.43		19.55	2.29

HRP7-PR-SWM_2-100 YEAR.OUT									
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.617	1.27	7.617	2.54	13.617	10.43	19.62	2.29		
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.683	1.27	7.683	2.54	13.683	10.43	19.68	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.717	1.27	7.717	2.54	13.717	10.43	19.72	2.29		
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.767	2.29	7.767	2.54	13.767	10.43	19.77	2.29		
1.783	2.29	7.783	2.54	13.783	10.43	19.78	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.817	2.29	7.817	2.54	13.817	10.43	19.82	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29		
1.883	2.29	7.883	2.54	13.883	10.43	19.88	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29		
1.983	2.29	7.983	2.54	13.983	10.43	19.98	2.29		
2.000	2.29	8.000	2.55	14.000	10.43	20.00	2.29		
2.017	1.65	8.017	3.43	14.017	3.83	20.02	1.53		
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.117	1.65	8.117	3.43	14.117	3.82	20.12	1.53		
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.183	1.65	8.183	3.43	14.183	3.82	20.18	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.217	1.65	8.217	3.43	14.217	3.82	20.22	1.53		
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53		
2.283	1.65	8.283	3.43	14.283	3.82	20.28	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.317	1.65	8.317	3.43	14.317	3.82	20.32	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53		
2.383	1.65	8.383	3.43	14.383	3.82	20.38	1.53		
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53		
2.483	1.65	8.483	3.43	14.483	3.82	20.48	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.517	1.65	8.517	3.43	14.517	3.82	20.52	1.53		
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.617	1.65	8.617	3.43	14.617	3.82	20.62	1.53		
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.683	1.65	8.683	3.43	14.683	3.82	20.68	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.717	1.65	8.717	3.43	14.717	3.82	20.72	1.53		
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53		
2.783	1.65	8.783	3.43	14.783	3.82	20.78	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.817	1.65	8.817	3.43	14.817	3.82	20.82	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53		
2.883	1.65	8.883	3.43	14.883	3.82	20.88	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53		
2.983	1.65	8.983	3.43	14.983	3.82	20.98	1.53		
3.000	1.65	9.000	3.44	15.000	3.82	21.00	1.53		

HRP7-PR-SWM_2-100 YEAR.OUT									
3.017	1.65	9.017	4.07	15.017	3.82	21.02	1.53		
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.117	1.65	9.117	4.07	15.117	3.82	21.12	1.53		
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.183	1.65	9.183	4.07	15.183	3.82	21.18	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.217	1.65	9.217	4.07	15.217	3.82	21.22	1.53		
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53		
3.283	1.65	9.283	4.07	15.283	3.82	21.28	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.317	1.65	9.317	4.07	15.317	3.82	21.32	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53		
3.383	1.65	9.383	4.07	15.383	3.82	21.38	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53		
3.483	1.65	9.483	4.07	15.483	3.82	21.48	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.517	1.65	9.517	4.58	15.517	3.82	21.52	1.53		
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53		
3.550	1.65	9.550	4.58	15.550	3.82	21.55	1.53		
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53		
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53		
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53		
3.617	1.65	9.617	4.58	15.617	3.82	21.62	1.53		
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53		
3.650	1.65	9.650	4.58	15.650	3.82	21.65	1.53		
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53		
3.683	1.65	9.683	4.58	15.683	3.82	21.68	1.53		
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53		
3.717	1.65	9.717	4.58	15.717	3.82	21.72	1.53		
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53		
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53		
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53		
3.783	1.65	9.783	4.58	15.783	3.82	21.78	1.53		
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53		
3.817	1.65	9.817	4.58	15.817	3.82	21.82	1.53		
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53		
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53		
3.883	1.65	9.883	4.58	15.883	3.82	21.88	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53		
3.983	1.65	9.983	4.58	15.983	3.82	21.98	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.017	2.04	10.017	5.85	16.017	2.29	22.02	1.53		
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.117	2.04	10.117	5.85	16.117	2.29	22.12	1.53		
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.183	2.04	10.183	5.85	16.183	2.29	22.18	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.217	2.04	10.217	5.85	16.217	2.29	22.22	1.53		
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53		
4.283	2.04	10.283	5.85	16.283	2.29	22.28	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.317	2.04	10.317	5.85	16.317	2.29	22.32	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53		
4.383	2.04	10.383	5.85	16.383	2.29	22.38	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53		
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		

HRP7-PR-SWM_2-100 YEAR.OUT									
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53		
4.483	2.04	10.483	5.85	16.483	2.29	22.48	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.517	2.04	10.517	7.89	16.517	2.29	22.52	1.53		
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53		
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.617	2.04	10.617	7.89	16.617	2.29	22.62	1.53		
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.683	2.04	10.683	7.89	16.683	2.29	22.68	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.717	2.04	10.717	7.89	16.717	2.29	22.72	1.53		
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53		
4.783	2.04	10.783	7.89	16.783	2.29	22.78	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.817	2.04	10.817	7.89	16.817	2.29	22.82	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53		
4.883	2.04	10.883	7.89	16.883	2.29	22.88	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53		
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53		
4.983	2.04	10.983	7.89	16.983	2.29	22.98	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.017	2.04	11.017	12.21	17.017	2.29	23.02	1.53		
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53		
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.117	2.04	11.117	12.21	17.117	2.29	23.12	1.53		
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		
5.183	2.04	11.183	12.21	17.183	2.29	23.18	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.217	2.04	11.217	12.21	17.217	2.29	23.22	1.53		
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53		
5.283	2.04	11.283	12.21	17.283	2.29	23.28	1.53		
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53		
5.317	2.04	11.317	12.21	17.317	2.29	23.32	1.53		
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53		
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53		
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53		
5.383	2.04	11.383	12.21	17.383	2.29	23.38	1.53		
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53		
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53		
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53		
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53		
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53		
5.483	2.04	11.483	12.21	17.483	2.29	23.48	1.53		
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53		
5.517	2.04	11.517	52.92	17.517	2.29	23.52	1.53		
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53		
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53		
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53		
5.583	2.04	11.583	52.92	17.583	2.29	23.58	1.53		
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53		
5.617	2.04	11.617	52.92	17.617	2.29	23.62	1.53		
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53		
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53		
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53		
5.683	2.04	11.683	52.92	17.683	2.29	23.68	1.53		
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53		
5.717	2.04	11.717	52.92	17.717	2.29	23.72	1.53		
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53		
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53		
5.767	2.04	11.767	140.43	17.767	2.29	23.77	1.53		
5.783	2.04	11.783	140.43	17.783	2.29	23.78	1.53		
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53		
5.817	2.04	11.817	140.43	17.817	2.29	23.82	1.53		
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53		
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53		
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53		
5.883	2.04	11.883	140.43	17.883	2.29	23.88	1.53		
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53		

HRP7-PR-SWM_2-100 YEAR.OUT									
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53		
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53		
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53		
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53		
5.983	2.04	11.983	140.43	17.983	2.29	23.98	1.53		
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53		
Max.Eff.Inten.(mm/hr)= 140.43 92.74									
over (min) 5.00 8.00									
Storage Coeff. (min)= 1.52 (ii) 7.21 (ii)									
Unit Hyd. Tpeak (min)= 5.00 8.00									
Unit Hyd. peak (cms)= 0.42 0.15									
PEAK FLOW (cms)= 0.18 0.08									
TIME TO PEAK (hrs)= 12.00 12.03									
RUNOFF VOLUME (mm)= 125.69 70.38									
TOTAL RAINFALL (mm)= 127.20 127.20									
RUNOFF COEFFICIENT = 0.99 0.55									

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)									
1 + 2 = 3									
AREA QPEAK TPEAK R.V.									
(ha) (cms) (hrs) (mm)									
ID1= 1 (0143): 0.84 0.258 12.00 100.81									
+ ID2= 2 (0024): 64.94 6.009 12.35 85.33									
=====									
ID = 3 (0026): 65.78 6.015 8.23 57.45									

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB									
STANDHYD (0244)									
ID= 1 DT= 4.0 min									
Area (ha)= 6.58									
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00									
IMPERVIOUS PVIOUS (i)									
Surface Area (ha)= 2.96 3.62									
Dep. Storage (mm)= 1.50 1.50									
Average Slope (%)= 2.00 2.00									
Length (m)= 209.44 40.00									
Mannings n = 0.013 0.250									

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---				

HRP7-PR-SWM_2-100 YEAR.OUT

HRP7-PR-SWM_2-100 YEAR.OUT

2.067	1.65		8.067	3.43		14.067	3.82		20.07	1.53
2.133	1.65		8.133	3.43		14.133	3.82		20.13	1.53
2.200	1.65		8.200	3.43		14.200	3.82		20.20	1.53
2.267	1.65		8.267	3.43		14.267	3.82		20.27	1.53
2.333	1.65		8.333	3.43		14.333	3.82		20.33	1.53
2.400	1.65		8.400	3.43		14.400	3.82		20.40	1.53
2.467	1.65		8.467	3.43		14.467	3.82		20.47	1.53
2.533	1.65		8.533	3.43		14.533	3.82		20.53	1.53
2.600	1.65		8.600	3.43		14.600	3.82		20.60	1.53
2.667	1.65		8.667	3.43		14.667	3.82		20.67	1.53
2.733	1.65		8.733	3.43		14.733	3.82		20.73	1.53
2.800	1.65		8.800	3.43		14.800	3.82		20.80	1.53
2.867	1.65		8.867	3.43		14.867	3.82		20.87	1.53
2.933	1.65		8.933	3.43		14.933	3.82		20.93	1.53
3.000	1.65		9.000	3.43		15.000	3.82		21.00	1.53
3.067	1.65		9.067	4.07		15.067	3.82		21.07	1.53
3.133	1.65		9.133	4.07		15.133	3.82		21.13	1.53
3.200	1.65		9.200	4.07		15.200	3.82		21.20	1.53
3.267	1.65		9.267	4.07		15.267	3.82		21.27	1.53
3.333	1.65		9.333	4.07		15.333	3.82		21.33	1.53
3.400	1.65		9.400	4.07		15.400	3.82		21.40	1.53
3.467	1.65		9.467	4.07		15.467	3.82		21.47	1.53
3.533	1.65		9.533	4.32		15.533	3.82		21.53	1.53
3.600	1.65		9.600	4.58		15.600	3.82		21.60	1.53
3.667	1.65		9.667	4.58		15.667	3.82		21.67	1.53
3.733	1.65		9.733	4.58		15.733	3.82		21.73	1.53
3.800	1.65		9.800	4.58		15.800	3.82		21.80	1.53
3.867	1.65		9.867	4.58		15.867	3.82		21.87	1.53
3.933	1.65		9.933	4.58		15.933	3.82		21.93	1.53
4.000	1.65		10.000	4.58		16.000	3.82		22.00	1.53
4.067	2.04		10.067	5.85		16.067	2.29		22.07	1.53
4.133	2.04		10.133	5.85		16.133	2.29		22.13	1.53
4.200	2.04		10.200	5.85		16.200	2.29		22.20	1.53
4.267	2.04		10.267	5.85		16.267	2.29		22.27	1.53
4.333	2.04		10.333	5.85		16.333	2.29		22.33	1.53
4.400	2.04		10.400	5.85		16.400	2.29		22.40	1.53
4.467	2.04		10.467	5.85		16.467	2.29		22.47	1.53
4.533	2.04		10.533	6.87		16.533	2.29		22.53	1.53
4.600	2.04		10.600	7.89		16.600	2.29		22.60	1.53
4.667	2.04		10.667	7.89		16.667	2.29		22.67	1.53
4.733	2.04		10.733	7.89		16.733	2.29		22.73	1.53
4.800	2.04		10.800	7.89		16.800	2.29		22.80	1.53
4.867	2.04		10.867	7.89		16.867	2.29		22.87	1.53
4.933	2.04		10.933	7.89		16.933	2.29		22.93	1.53
5.000	2.04		11.000	7.89		17.000	2.29		23.00	1.53
5.067	2.04		11.067	12.21		17.067	2.29		23.07	1.53
5.133	2.04		11.133	12.21		17.133	2.29		23.13	1.53
5.200	2.04		11.200	12.21		17.200	2.29		23.20	1.53
5.267	2.04		11.267	12.21		17.267	2.29		23.27	1.53
5.333	2.04		11.333	12.21		17.333	2.29		23.33	1.53
5.400	2.04		11.400	12.21		17.400	2.29		23.40	1.53
5.467	2.04		11.467	12.21		17.467	2.29		23.47	1.53
5.533	2.04		11.533	32.56		17.533	2.29		23.53	1.53
5.600	2.04		11.600	52.92		17.600	2.29		23.60	1.53
5.667	2.04		11.667	52.92		17.667	2.29		23.67	1.53
5.733	2.04		11.733	52.92		17.733	2.29		23.73	1.53
5.800	2.04		11.800	118.54		17.800	2.29		23.80	1.53
5.867	2.04		11.867	140.43		17.867	2.29		23.87	1.53
5.933	2.04		11.933	140.43		17.933	2.29		23.93	1.53
6.000	2.04		12.000	140.43		18.000	2.29		24.00	1.52

Max.Eff.Inten.(mm/hr)=	140.43	91.29	
over (min)	5.00	12.00	
Storage Coeff. (min)=	2.82 (ii)	9.50 (ii)	
Unit Hyd. Tpeak (min)=	4.00	12.00	
Unit Hyd. peak (cms)=	0.32	0.11	
			TOTALS
PEAK FLOW (cms)=	1.15	0.68	1.794 (iii)
TIME TO PEAK (hrs)=	12.00	12.07	12.00
RUNOFF VOLUME (mm)=	125.70	70.39	95.28
TOTAL RAINFALL (mm)=	127.20	127.20	127.20
RUNOFF COEFFICIENT =	0.99	0.55	0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0028)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)

ID1= 1 (0244):	6.58	1.794	12.00	95.28
+ ID2= 2 (0026):	65.78	6.015	8.23	57.45
=====				
ID = 3 (0028):	72.36	6.050	8.23	60.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

HRP8-PR-SWM_2-100 YEAR.OUT

=====

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
V V I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voioin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\NH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ae1f0000-8029-470e-8eea-9ca85c3e3cf9\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\NH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\ae1f0000-8029-470e-8eea-9ca85c3e3cf9\scenar

DATE: 03/24/2023 TIME: 11:14:31

USER:

COMMENTS: _____

** SIMULATION : Run 01

MASS STORM	Filename: C:\Users\AbirA\AppData\Local\Temp\76b02a20-c3e0-40c5-9a3c-cd3cb026027b\571fbdef
Ptotal= 57.60 mm	Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.58	6.25	1.15	12.25	8.29	18.25	1.04	
0.50	0.58	6.50	1.15	12.50	8.29	18.50	1.04	
0.75	0.58	6.75	1.15	12.75	4.26	18.75	1.04	
1.00	0.58	7.00	1.15	13.00	4.26	19.00	1.04	
1.25	0.58	7.25	1.15	13.25	0.81	19.25	1.04	
1.50	0.58	7.50	1.15	13.50	0.81	19.50	1.04	
1.75	0.58	7.75	1.15	13.75	4.72	19.75	1.04	
2.00	1.04	8.00	1.15	14.00	4.72	20.00	1.04	
2.25	0.75	8.25	1.56	14.25	1.73	20.25	0.69	
2.50	0.75	8.50	1.56	14.50	1.73	20.50	0.69	
2.75	0.75	8.75	1.56	14.75	1.73	20.75	0.69	
3.00	0.75	9.00	1.56	15.00	1.73	21.00	0.69	
3.25	0.75	9.25	1.84	15.25	1.73	21.25	0.69	
3.50	0.75	9.50	1.84	15.50	1.73	21.50	0.69	
3.75	0.75	9.75	2.07	15.75	1.73	21.75	0.69	
4.00	0.75	10.00	2.07	16.00	1.73	22.00	0.69	
4.25	0.92	10.25	2.65	16.25	1.04	22.25	0.69	
4.50	0.92	10.50	2.65	16.50	1.04	22.50	0.69	
4.75	0.92	10.75	3.57	16.75	1.04	22.75	0.69	
5.00	0.92	11.00	3.57	17.00	1.04	23.00	0.69	
5.25	0.92	11.25	5.53	17.25	1.04	23.25	0.69	
5.50	0.92	11.50	5.53	17.50	1.04	23.50	0.69	
5.75	0.92	11.75	23.96	17.75	1.04	23.75	0.69	
6.00	0.92	12.00	63.59	18.00	1.04	24.00	0.69	

CALIB
NASHYD (1050) Area (ha)= 4.49 Curve Number (CN)= 77.0
ID= 1 DT= 2.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04	
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04	
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04	
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04	
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04	
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04	
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04	
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04	
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04	
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04	
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04	
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04	
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04	
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04	
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04	
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04	
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04	
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04	
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04	
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04	
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04	
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04	
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04	
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04	
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04	
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04	
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04	
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04	
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04	
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04	
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04	
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04	
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04	
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04	
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04	
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04	
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04	
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04	
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04	
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04	
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04	
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04	
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04	
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04	
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04	
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04	
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04	
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04	
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04	
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04	
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04	
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04	
1.767	0.81	7.767	1.15	13.767	4.72	19.77	1.04	
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04	
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04	
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04	
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04	
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04	
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04	
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04	
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69	
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69	
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69	
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69	
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69	
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69	
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69	
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69	
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69	
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69	
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69	
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69	
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69	
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69	
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69	
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69	
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69	
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69	
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69	
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69	
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69	
2.733	0.75	8.733	1.56	14.733	1.73	20.73	0.69	
2.767	0.75	8.767	1.56	14.767	1.73	20.77	0.69	
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69	
2.833	0.75	8.833	1.56	14.833	1.73	20.83	0.69	
2.867	0.75	8.867	1.56	14.867	1.73	20.87	0.69	

HRPB-PR-SWM_2-100 YEAR.OUT									
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69		
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69		
2.967	0.75	8.967	1.56	14.967	1.73	20.97	0.69		
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69		
3.033	0.75	9.033	1.84	15.033	1.73	21.03	0.69		
3.067	0.75	9.067	1.84	15.067	1.73	21.07	0.69		
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69		
3.133	0.75	9.133	1.84	15.133	1.73	21.13	0.69		
3.167	0.75	9.167	1.84	15.167	1.73	21.17	0.69		
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69		
3.233	0.75	9.233	1.84	15.233	1.73	21.23	0.69		
3.267	0.75	9.267	1.84	15.267	1.73	21.27	0.69		
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69		
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69		
3.367	0.75	9.367	1.84	15.367	1.73	21.37	0.69		
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69		
3.433	0.75	9.433	1.84	15.433	1.73	21.43	0.69		
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69		
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69		
3.533	0.75	9.533	2.07	15.533	1.73	21.53	0.69		
3.567	0.75	9.567	2.07	15.567	1.73	21.57	0.69		
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69		
3.633	0.75	9.633	2.07	15.633	1.73	21.63	0.69		
3.667	0.75	9.667	2.07	15.667	1.73	21.67	0.69		
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69		
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69		
3.767	0.75	9.767	2.07	15.767	1.73	21.77	0.69		
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69		
3.833	0.75	9.833	2.07	15.833	1.73	21.83	0.69		
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69		
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69		
3.933	0.75	9.933	2.07	15.933	1.73	21.93	0.69		
3.967	0.75	9.967	2.07	15.967	1.73	21.97	0.69		
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69		
4.033	0.92	10.033	2.65	16.033	1.04	22.03	0.69		
4.067	0.92	10.067	2.65	16.067	1.04	22.07	0.69		
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69		
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69		
4.167	0.92	10.167	2.65	16.167	1.04	22.17	0.69		
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69		
4.233	0.92	10.233	2.65	16.233	1.04	22.23	0.69		
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69		
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69		
4.333	0.92	10.333	2.65	16.333	1.04	22.33	0.69		
4.367	0.92	10.367	2.65	16.367	1.04	22.37	0.69		
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69		
4.433	0.92	10.433	2.65	16.433	1.04	22.43	0.69		
4.467	0.92	10.467	2.65	16.467	1.04	22.47	0.69		
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69		
4.533	0.92	10.533	3.57	16.533	1.04	22.53	0.69		
4.567	0.92	10.567	3.57	16.567	1.04	22.57	0.69		
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69		
4.633	0.92	10.633	3.57	16.633	1.04	22.63	0.69		
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69		
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69		
4.733	0.92	10.733	3.57	16.733	1.04	22.73	0.69		
4.767	0.92	10.767	3.57	16.767	1.04	22.77	0.69		
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69		
4.833	0.92	10.833	3.57	16.833	1.04	22.83	0.69		
4.867	0.92	10.867	3.57	16.867	1.04	22.87	0.69		
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69		
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69		
4.967	0.92	10.967	3.57	16.967	1.04	22.97	0.69		
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69		
5.033	0.92	11.033	5.53	17.033	1.04	23.03	0.69		
5.067	0.92	11.067	5.53	17.067	1.04	23.07	0.69		
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69		
5.133	0.92	11.133	5.53	17.133	1.04	23.13	0.69		
5.167	0.92	11.167	5.53	17.167	1.04	23.17	0.69		
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69		
5.233	0.92	11.233	5.53	17.233	1.04	23.23	0.69		
5.267	0.92	11.267	5.53	17.267	1.04	23.27	0.69		
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69		
5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69		
5.367	0.92	11.367	5.53	17.367	1.04	23.37	0.69		
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69		
5.433	0.92	11.433	5.53	17.433	1.04	23.43	0.69		
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69		
5.500	0.92	11.500	5.55	17.500	1.04	23.50	0.69		
5.533	0.92	11.533	23.96	17.533	1.04	23.53	0.69		
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69		
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69		
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69		
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69		
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69		
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69		
5.767	0.92	11.767	43.83	17.767	1.04	23.77	0.69		

HRPB-PR-SWM_2-100 YEAR.OUT									
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69		
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69		
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69		
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69		
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69		
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69		
6.000	0.92	12.000	63.51	18.000	1.04	24.00	0.69		

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.260 (i)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 21.534
TOTAL RAINFALL (mm)= 57.689
RUNOFF COEFFICIENT = 0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0250)
ID= 1 DT= 2.0 min

Area (ha)= 4.37
Total Imp(%)= 46.00 Dir. Conn.(%)= 46.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 2.01 2.36
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 178.68 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.58	6.833	1.15	12.033	8.29	18.03	1.04		
0.067	0.58	6.867	1.15	12.067	8.29	18.07	1.04		
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04		
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04		
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04		
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04		
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04		
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04		
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04		
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04		
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04		
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04		
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04		
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04		
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04		
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04		
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04		
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04		
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04		
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04		
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04		
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04		
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04		
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04		
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04		
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04		
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04		
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04		
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04		
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04		
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04		
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04		
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04		
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04		
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04		
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04		
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04		
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04		
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04		
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04		
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04		
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04		
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04		
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04		
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04		
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04		
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04		
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04		
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04		
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04		

HRP8-PR-SWM_2-100 YEAR.OUT

5.00	100.33	0.0300 / 0.0500
6.00	100.67	0.0500
7.00	101.00	0.0500

Main Channel

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.92
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (m)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0018)	8.86	0.60	12.00	30.42	0.34	1.01
OUTFLOW: ID= 1 (0037)	8.86	0.40	12.13	30.38	0.26	0.86

CALIB					
NASHYD (1051)	Area (ha)=	50.34	Curve Number (CN)=	82.0	
ID= 1 DT= 8.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.63			

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.133	0.58	6.133	1.15	12.133	0.30	18.13	1.04
0.267	0.58	6.267	1.15	12.267	0.29	18.27	1.04
0.400	0.58	6.400	1.15	12.400	0.29	18.40	1.04
0.533	0.58	6.533	1.15	12.533	7.29	18.53	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04
1.067	0.58	7.067	1.15	13.067	2.53	19.07	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04
1.600	0.58	7.600	1.15	13.600	3.74	19.60	1.04
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04
1.867	0.98	7.867	1.15	13.867	4.72	19.87	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69
2.667	0.75	8.667	1.56	14.667	1.73	20.67	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.933	0.75	8.933	1.56	14.933	1.73	20.93	0.69
3.067	0.75	9.067	1.70	15.067	1.73	21.07	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.333	0.75	9.333	1.84	15.333	1.73	21.33	0.69
3.467	0.75	9.467	1.84	15.467	1.73	21.47	0.69
3.600	0.75	9.600	2.02	15.600	1.73	21.60	0.69
3.733	0.75	9.733	2.07	15.733	1.73	21.73	0.69
3.867	0.75	9.867	2.07	15.867	1.73	21.87	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.133	0.92	10.133	2.65	16.133	1.04	22.13	0.69
4.267	0.92	10.267	2.65	16.267	1.04	22.27	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.533	0.92	10.533	2.88	16.533	1.04	22.53	0.69
4.667	0.92	10.667	3.57	16.667	1.04	22.67	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.933	0.92	10.933	3.57	16.933	1.04	22.93	0.69
5.067	0.92	11.067	4.55	17.067	1.04	23.07	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69

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5.333	0.92	11.333	5.53	17.333	1.04	23.33	0.69
5.467	0.92	11.467	5.53	17.467	1.04	23.47	0.69
5.600	0.92	11.600	19.35	17.600	1.04	23.60	0.69
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69
5.867	0.92	11.867	58.64	17.867	1.04	23.87	0.69
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)=	1.451 (i)
TIME TO PEAK (hrs)=	12.533
RUNOFF VOLUME (mm)=	25.530
TOTAL RAINFALL (mm)=	57.600
RUNOFF COEFFICIENT	= 0.443

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (1051):	50.34	1.451	12.53	25.53	
+ ID2= 2 (0037):	8.86	0.398	12.13	30.38	
ID = 3 (0029):	59.20	1.741	12.40	26.26	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (0251)	Area (ha)=	10.65			
ID= 1 DT= 3.0 min	Total Imp(%)=	37.00	Dir. Conn.(%)=	37.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.94	6.71
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	266.46	220.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04

HRP8-PR-SWM_2-100 YEAR.OUT

2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.650	0.75	8.650	1.56	14.650	1.73	20.65	0.69
2.700	0.75	8.700	1.56	14.700	1.73	20.70	0.69
2.750	0.75	8.750	1.56	14.750	1.73	20.75	0.69
2.800	0.75	8.800	1.56	14.800	1.73	20.80	0.69
2.850	0.75	8.850	1.56	14.850	1.73	20.85	0.69
2.900	0.75	8.900	1.56	14.900	1.73	20.90	0.69
2.950	0.75	8.950	1.56	14.950	1.73	20.95	0.69
3.000	0.75	9.000	1.56	15.000	1.73	21.00	0.69
3.050	0.75	9.050	1.84	15.050	1.73	21.05	0.69
3.100	0.75	9.100	1.84	15.100	1.73	21.10	0.69
3.150	0.75	9.150	1.84	15.150	1.73	21.15	0.69
3.200	0.75	9.200	1.84	15.200	1.73	21.20	0.69
3.250	0.75	9.250	1.84	15.250	1.73	21.25	0.69
3.300	0.75	9.300	1.84	15.300	1.73	21.30	0.69
3.350	0.75	9.350	1.84	15.350	1.73	21.35	0.69
3.400	0.75	9.400	1.84	15.400	1.73	21.40	0.69
3.450	0.75	9.450	1.84	15.450	1.73	21.45	0.69
3.500	0.75	9.500	1.84	15.500	1.73	21.50	0.69
3.550	0.75	9.550	2.07	15.550	1.73	21.55	0.69
3.600	0.75	9.600	2.07	15.600	1.73	21.60	0.69
3.650	0.75	9.650	2.07	15.650	1.73	21.65	0.69
3.700	0.75	9.700	2.07	15.700	1.73	21.70	0.69
3.750	0.75	9.750	2.07	15.750	1.73	21.75	0.69
3.800	0.75	9.800	2.07	15.800	1.73	21.80	0.69
3.850	0.75	9.850	2.07	15.850	1.73	21.85	0.69
3.900	0.75	9.900	2.07	15.900	1.73	21.90	0.69
3.950	0.75	9.950	2.07	15.950	1.73	21.95	0.69
4.000	0.75	10.000	2.07	16.000	1.73	22.00	0.69
4.050	0.92	10.050	2.65	16.050	1.04	22.05	0.69
4.100	0.92	10.100	2.65	16.100	1.04	22.10	0.69
4.150	0.92	10.150	2.65	16.150	1.04	22.15	0.69
4.200	0.92	10.200	2.65	16.200	1.04	22.20	0.69
4.250	0.92	10.250	2.65	16.250	1.04	22.25	0.69
4.300	0.92	10.300	2.65	16.300	1.04	22.30	0.69
4.350	0.92	10.350	2.65	16.350	1.04	22.35	0.69
4.400	0.92	10.400	2.65	16.400	1.04	22.40	0.69
4.450	0.92	10.450	2.65	16.450	1.04	22.45	0.69
4.500	0.92	10.500	2.65	16.500	1.04	22.50	0.69
4.550	0.92	10.550	3.57	16.550	1.04	22.55	0.69
4.600	0.92	10.600	3.57	16.600	1.04	22.60	0.69
4.650	0.92	10.650	3.57	16.650	1.04	22.65	0.69
4.700	0.92	10.700	3.57	16.700	1.04	22.70	0.69
4.750	0.92	10.750	3.57	16.750	1.04	22.75	0.69
4.800	0.92	10.800	3.57	16.800	1.04	22.80	0.69
4.850	0.92	10.850	3.57	16.850	1.04	22.85	0.69
4.900	0.92	10.900	3.57	16.900	1.04	22.90	0.69
4.950	0.92	10.950	3.57	16.950	1.04	22.95	0.69
5.000	0.92	11.000	3.57	17.000	1.04	23.00	0.69
5.050	0.92	11.050	5.53	17.050	1.04	23.05	0.69
5.100	0.92	11.100	5.53	17.100	1.04	23.10	0.69
5.150	0.92	11.150	5.53	17.150	1.04	23.15	0.69
5.200	0.92	11.200	5.53	17.200	1.04	23.20	0.69
5.250	0.92	11.250	5.53	17.250	1.04	23.25	0.69
5.300	0.92	11.300	5.53	17.300	1.04	23.30	0.69
5.350	0.92	11.350	5.53	17.350	1.04	23.35	0.69
5.400	0.92	11.400	5.53	17.400	1.04	23.40	0.69
5.450	0.92	11.450	5.53	17.450	1.04	23.45	0.69
5.500	0.92	11.500	5.54	17.500	1.04	23.50	0.69
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69
5.750	0.92	11.750	23.98	17.750	1.04	23.75	0.69
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69
6.000	0.92	12.000	63.56	18.000	1.04	24.00	0.69

Max.Eff.Inten.(mm/hr)= 63.59 11.50
over (min) 6.00 54.00
Storage Coeff. (min)= 4.48 (ii) 51.11 (ii)
Unit Hyd. Tpeak (min)= 6.00 54.00
Unit Hyd. peak (cms)= 0.22 0.02

HRP8-PR-SWM_2-100 YEAR.OUT

TOTALS

PEAK FLOW (cms)=	0.67	0.13	0.709 (iii)
TIME TO PEAK (hrs)=	12.00	12.80	12.00
RUNOFF VOLUME (mm)=	56.10	20.32	33.56
TOTAL RAINFALL (mm)=	57.60		57.60
RUNOFF COEFFICIENT =	0.97	0.35	0.58

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0251):	10.65	0.709	12.00	33.56
+ ID2= 2 (0029):	59.20	1.741	12.40	26.26
=====				
ID = 3 (0031):	69.85	1.927	12.40	27.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0039)	Routing time step (min)'= 2.00			
IN= 2 ---> OUT= 1				
<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.509E+02	0.0	0.27	30.87
0.14	100.14	.908E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

<---- hydrograph ---->					<-pipe / channel->	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)	
INFLOW : ID= 2 (0031)	69.85	1.93	12.40	27.37	0.70 0.89	
OUTFLOW: ID= 1 (0039)	69.85	1.88	12.53	27.36	0.69 0.88	

CALIB	Area (ha)= 15.48			
STANDHYD (0252)	Total Imp(%)= 45.00	Dir. Conn.(%)= 45.00		
ID= 1 DT= 5.0 min				

Surface Area (ha)=	6.97	PERVIOUS (i)	8.51	
Dep. Storage (mm)=	1.50		1.50	
Average Slope (%)=	2.00		2.00	
Length (m)=	321.25		100.00	
Mannings n =	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

HRP8-PR-SWM_2-100 YEAR.OUT

57.60
0.61

ADD HYD (0033)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0252):	15.48	1.282	12.00	35.41
+ ID2= 2 (0039):	69.85	1.877	12.53	27.36
ID = 3 (0033):	85.33	2.511	12.00	28.83

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| ROUTE CHN( 0040)|
| IN= 2---> OUT= 1 | Routing time step (min)'= 2.00
```

TRAVEL TIME TABLE					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV. TIME (min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.589E+02	0.1	0.33	14.31
0.19	100.19	.859E+02	0.1	0.39	12.22
0.24	100.24	1.165E+03	0.2	0.43	10.63
0.28	100.28	1.51E+03	0.3	0.49	9.80
0.33	100.33	1.89E+03	0.4	0.53	9.01
0.39	100.39	2.40E+03	0.5	0.61	7.82
0.44	100.44	2.96E+03	0.7	0.68	7.06
0.50	100.50	3.57E+03	0.9	0.73	6.52
0.55	100.55	4.24E+03	1.2	0.78	6.11
0.61	100.61	4.96E+03	1.4	0.83	5.79
0.66	100.66	5.73E+03	1.7	0.86	5.53
0.72	100.72	6.65E+03	2.1	0.92	5.32
0.78	100.78	7.43E+03	2.4	0.93	5.14
0.83	100.83	8.35E+03	2.8	0.96	4.98
0.89	100.89	9.34E+03	3.2	0.99	4.84
0.94	100.94	1.04E+04	3.7	1.01	4.72
1.00	101.00	1.15E+04	4.1	1.04	4.61

RESERVOIR(0036)	OVERFLOW IS OFF			
IN= 2--> OUT= 1	OUTFLOW	STORAGE	OUTFLOW	STORAGE
DT= 4.0 min	(cms)	(b3 m)	(cms)	(b3 m)

PEAK FLOW REDUCTION $[Q_{out}/Q_{in}](\%) = 77.82$

UNIT	HYD. PEAK (cms)=	0.21	0.03	*TOTALS*
PEAK FLOW	(cms)=	1.19	0.20	1.282 (iii)
TIME TO PEAK	(hrs)=	12.00	12.42	12.00
RUNOFF VOLUME	(mm)=	56.10	18.49	35.41

UNIT	HYD. PEAK (cms)=	0.21	0.03	*TOTALS*
PEAK FLOW	(cms)=	1.19	0.20	1.282 (iii)
TIME TO PEAK	(hrs)=	12.00	12.42	12.00
RUNOFF VOLUME	(mm)=	56.10	18.49	35.41

HRP8-PR-SWM_2-100 YEAR.OUT

TIME SHIFT OF PEAK FLOW (min)= 62.00
MAXIMUM STORAGE USED (ha.m.)= 0.8248

CALIB			
NASHYD (0253)			
ID= 1 DT= 1.0 min			

Area (ha)=	1.51	Curve Number (CN)=	75.0
Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.11		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	0.58	6.017	1.15	12.017	8.33	18.02	1.04
0.033	0.58	6.033	1.15	12.033	8.29	18.03	1.04
0.050	0.58	6.050	1.15	12.050	8.29	18.05	1.04
0.067	0.58	6.067	1.15	12.067	8.29	18.07	1.04
0.083	0.58	6.083	1.15	12.083	8.29	18.08	1.04
0.100	0.58	6.100	1.15	12.100	8.29	18.10	1.04
0.117	0.58	6.117	1.15	12.117	8.29	18.12	1.04
0.133	0.58	6.133	1.15	12.133	8.29	18.13	1.04
0.150	0.58	6.150	1.15	12.150	8.29	18.15	1.04
0.167	0.58	6.167	1.15	12.167	8.29	18.17	1.04
0.183	0.58	6.183	1.15	12.183	8.29	18.18	1.04
0.200	0.58	6.200	1.15	12.200	8.29	18.20	1.04
0.217	0.58	6.217	1.15	12.217	8.29	18.22	1.04
0.233	0.58	6.233	1.15	12.233	8.29	18.23	1.04
0.250	0.58	6.250	1.15	12.250	8.29	18.25	1.04
0.267	0.58	6.267	1.15	12.267	8.29	18.27	1.04
0.283	0.58	6.283	1.15	12.283	8.29	18.28	1.04
0.300	0.58	6.300	1.15	12.300	8.29	18.30	1.04
0.317	0.58	6.317	1.15	12.317	8.29	18.32	1.04
0.333	0.58	6.333	1.15	12.333	8.29	18.33	1.04
0.350	0.58	6.350	1.15	12.350	8.29	18.35	1.04
0.367	0.58	6.367	1.15	12.367	8.29	18.37	1.04
0.383	0.58	6.383	1.15	12.383	8.29	18.38	1.04
0.400	0.58	6.400	1.15	12.400	8.29	18.40	1.04
0.417	0.58	6.417	1.15	12.417	8.29	18.42	1.04
0.433	0.58	6.433	1.15	12.433	8.29	18.43	1.04
0.450	0.58	6.450	1.15	12.450	8.29	18.45	1.04
0.467	0.58	6.467	1.15	12.467	8.29	18.47	1.04
0.483	0.58	6.483	1.15	12.483	8.29	18.48	1.04
0.500	0.58	6.500	1.15	12.500	8.29	18.50	1.04
0.517	0.58	6.517	1.15	12.517	4.27	18.52	1.04
0.533	0.58	6.533	1.15	12.533	4.26	18.53	1.04
0.550	0.58	6.550	1.15	12.550	4.26	18.55	1.04
0.567	0.58	6.567	1.15	12.567	4.26	18.57	1.04
0.583	0.58	6.583	1.15	12.583	4.26	18.58	1.04
0.600	0.58	6.600	1.15	12.600	4.26	18.60	1.04
0.617	0.58	6.617	1.15	12.617	4.26	18.62	1.04
0.633	0.58	6.633	1.15	12.633	4.26	18.63	1.04
0.650	0.58	6.650	1.15	12.650	4.26	18.65	1.04
0.667	0.58	6.667	1.15	12.667	4.26	18.67	1.04
0.683	0.58	6.683	1.15	12.683	4.26	18.68	1.04
0.700	0.58	6.700	1.15	12.700	4.26	18.70	1.04
0.717	0.58	6.717	1.15	12.717	4.26	18.72	1.04
0.733	0.58	6.733	1.15	12.733	4.26	18.73	1.04
0.750	0.58	6.750	1.15	12.750	4.26	18.75	1.04
0.767	0.58	6.767	1.15	12.767	4.26	18.77	1.04
0.783	0.58	6.783	1.15	12.783	4.26	18.78	1.04
0.800	0.58	6.800	1.15	12.800	4.26	18.80	1.04
0.817	0.58	6.817	1.15	12.817	4.26	18.82	1.04
0.833	0.58	6.833	1.15	12.833	4.26	18.83	1.04
0.850	0.58	6.850	1.15	12.850	4.26	18.85	1.04
0.867	0.58	6.867	1.15	12.867	4.26	18.87	1.04
0.883	0.58	6.883	1.15	12.883	4.26	18.88	1.04
0.900	0.58	6.900	1.15	12.900	4.26	18.90	1.04
0.917	0.58	6.917	1.15	12.917	4.26	18.92	1.04
0.933	0.58	6.933	1.15	12.933	4.26	18.93	1.04
0.950	0.58	6.950	1.15	12.950	4.26	18.95	1.04
0.967	0.58	6.967	1.15	12.967	4.26	18.97	1.04
0.983	0.58	6.983	1.15	12.983	4.26	18.98	1.04
1.000	0.58	7.000	1.15	13.000	4.26	19.00	1.04
1.017	0.58	7.017	1.15	13.017	0.81	19.02	1.04
1.033	0.58	7.033	1.15	13.033	0.81	19.03	1.04
1.050	0.58	7.050	1.15	13.050	0.81	19.05	1.04
1.067	0.58	7.067	1.15	13.067	0.81	19.07	1.04
1.083	0.58	7.083	1.15	13.083	0.81	19.08	1.04
1.100	0.58	7.100	1.15	13.100	0.81	19.10	1.04
1.117	0.58	7.117	1.15	13.117	0.81	19.12	1.04
1.133	0.58	7.133	1.15	13.133	0.81	19.13	1.04
1.150	0.58	7.150	1.15	13.150	0.81	19.15	1.04
1.167	0.58	7.167	1.15	13.167	0.81	19.17	1.04
1.183	0.58	7.183	1.15	13.183	0.81	19.18	1.04

HRP8-PR-SWM_2-100 YEAR.OUT

1.200	0.58	7.200	1.15	13.200	0.81	19.20	1.04
1.217	0.58	7.217	1.15	13.217	0.81	19.22	1.04
1.233	0.58	7.233	1.15	13.233	0.81	19.23	1.04
1.250	0.58	7.250	1.15	13.250	0.81	19.25	1.04
1.267	0.58	7.267	1.15	13.267	0.81	19.27	1.04
1.283	0.58	7.283	1.15	13.283	0.81	19.28	1.04
1.300	0.58	7.300	1.15	13.300	0.81	19.30	1.04
1.317	0.58	7.317	1.15	13.317	0.81	19.32	1.04
1.333	0.58	7.333	1.15	13.333	0.81	19.33	1.04
1.350	0.58	7.350	1.15	13.350	0.81	19.35	1.04
1.367	0.58	7.367	1.15	13.367	0.81	19.37	1.04
1.383	0.58	7.383	1.15	13.383	0.81	19.38	1.04
1.400	0.58	7.400	1.15	13.400	0.81	19.40	1.04
1.417	0.58	7.417	1.15	13.417	0.81	19.42	1.04
1.433	0.58	7.433	1.15	13.433	0.81	19.43	1.04
1.450	0.58	7.450	1.15	13.450	0.81	19.45	1.04
1.467	0.58	7.467	1.15	13.467	0.81	19.47	1.04
1.483	0.58	7.483	1.15	13.483	0.81	19.48	1.04
1.500	0.58	7.500	1.15	13.500	0.81	19.50	1.04
1.517	0.58	7.517	1.15	13.517	4.72	19.52	1.04
1.533	0.58	7.533	1.15	13.533	4.72	19.53	1.04
1.550	0.58	7.550	1.15	13.550	4.72	19.55	1.04
1.567	0.58	7.567	1.15	13.567	4.72	19.57	1.04
1.583	0.58	7.583	1.15	13.583	4.72	19.58	1.04
1.600	0.58	7.600	1.15	13.600	4.72	19.60	1.04
1.617	0.58	7.617	1.15	13.617	4.72	19.62	1.04
1.633	0.58	7.633	1.15	13.633	4.72	19.63	1.04
1.650	0.58	7.650	1.15	13.650	4.72	19.65	1.04
1.667	0.58	7.667	1.15	13.667	4.72	19.67	1.04
1.683	0.58	7.683	1.15	13.683	4.72	19.68	1.04
1.700	0.58	7.700	1.15	13.700	4.72	19.70	1.04
1.717	0.58	7.717	1.15	13.717	4.72	19.72	1.04
1.733	0.58	7.733	1.15	13.733	4.72	19.73	1.04
1.750	0.58	7.750	1.15	13.750	4.72	19.75	1.04
1.767	1.04	7.767	1.15	13.767	4.72	19.77	1.04
1.783	1.04	7.783	1.15	13.783	4.72	19.78	1.04
1.800	1.04	7.800	1.15	13.800	4.72	19.80	1.04
1.817	1.04	7.817	1.15	13.817	4.72	19.82	1.04
1.833	1.04	7.833	1.15	13.833	4.72	19.83	1.04
1.850	1.04	7.850	1.15	13.850	4.72	19.85	1.04
1.867	1.04	7.867	1.15	13.867	4.72	19.87	1.04
1.883	1.04	7.883	1.15	13.883	4.72	19.88	1.04
1.900	1.04	7.900	1.15	13.900	4.72	19.90	1.04
1.917	1.04	7.917	1.15	13.917	4.72	19.92	1.04
1.933	1.04	7.933	1.15	13.933	4.72	19.93	1.04
1.950	1.04	7.950	1.15	13.950	4.72	19.95	1.04
1.967	1.04	7.967	1.15	13.967	4.72	19.97	1.04
1.983	1.04	7.983	1.15	13.983	4.72	19.98	1.04
2.000	1.04	8.000	1.15	14.000	4.72	20.00	1.04
2.017	0.75	8.017	1.56	14.017	1.74	20.02	0.69
2.033	0.75	8.033	1.56	14.033	1.73	20.03	0.69
2.050	0.75	8.050	1.56	14.050	1.73	20.05	0.69
2.067	0.75	8.067	1.56	14.067	1.73	20.07	0.69
2.083	0.75	8.083	1.56	14.083	1.73	20.08	0.69
2.100	0.75	8.100	1.56	14.100	1.73	20.10	0.69
2.117	0.75	8.117	1.56	14.117	1.73	20.12	0.69
2.133	0.75	8.133	1.56	14.133	1.73	20.13	0.69
2.150	0.75	8.150	1.56	14.150	1.73	20.15	0.69
2.167	0.75	8.167	1.56	14.167	1.73	20.17	0.69
2.183	0.75	8.183	1.56	14.183	1.73	20.18	0.69
2.200	0.75	8.200	1.56	14.200	1.73	20.20	0.69
2.217	0.75	8.217	1.56	14.217	1.73	20.22	0.69
2.233	0.75	8.233	1.56	14.233	1.73	20.23	0.69
2.250	0.75	8.250	1.56	14.250	1.73	20.25	0.69
2.267	0.75	8.267	1.56	14.267	1.73	20.27	0.69
2.283	0.75	8.283	1.56	14.283	1.73	20.28	0.69
2.300	0.75	8.300	1.56	14.300	1.73	20.30	0.69
2.317	0.75	8.317	1.56	14.317	1.73	20.32	0.69
2.333	0.75	8.333	1.56	14.333	1.73	20.33	0.69
2.350	0.75	8.350	1.56	14.350	1.73	20.35	0.69
2.367	0.75	8.367	1.56	14.367	1.73	20.37	0.69
2.383	0.75	8.383	1.56	14.383	1.73	20.38	0.69
2.400	0.75	8.400	1.56	14.400	1.73	20.40	0.69
2.417	0.75	8.417	1.56	14.417	1.73	20.42	0.69
2.433	0.75	8.433	1.56	14.433	1.73	20.43	0.69
2.450	0.75	8.450	1.56	14.450	1.73	20.45	0.69
2.467	0.75	8.467	1.56	14.467	1.73	20.47	0.69
2.483	0.75	8.483	1.56	14.483	1.73	20.48	0.69
2.500	0.75	8.500	1.56	14.500	1.73	20.50	0.69
2.517	0.75	8.517	1.56	14.517	1.73	20.52	0.69
2.533	0.75	8.533	1.56	14.533	1.73	20.53	0.69
2.550	0.75	8.550	1.56	14.550	1.73	20.55	0.69
2.567	0.75	8.567	1.56	14.567	1.73	20.57	0.69
2.583	0.75	8.583	1.56	14.583	1.73	20.58	0.69
2.600	0.75	8.600	1.56	14.600	1.73	20.60	0.69
2.617	0.75	8.617	1.56	14.617	1.73	20.62	0.69
2.633	0.75	8.633	1.56	14.633	1.73	20.63	0.69

HRPB-PR-SWM_2-100 YEAR.OUT									
2.650	0.75		8.650	1.56		14.650	1.73		20.65
2.667	0.75		8.667	1.56		14.667	1.73		20.67
2.683	0.75		8.683	1.56		14.683	1.73		20.68
2.700	0.75		8.700	1.56		14.700	1.73		20.70
2.717	0.75		8.717	1.56		14.717	1.73		20.72
2.733	0.75		8.733	1.56		14.733	1.73		20.73
2.750	0.75		8.750	1.56		14.750	1.73		20.75
2.767	0.75		8.767	1.56		14.767	1.73		20.77
2.783	0.75		8.783	1.56		14.783	1.73		20.78
2.800	0.75		8.800	1.56		14.800	1.73		20.80
2.817	0.75		8.817	1.56		14.817	1.73		20.82
2.833	0.75		8.833	1.56		14.833	1.73		20.83
2.850	0.75		8.850	1.56		14.850	1.73		20.85
2.867	0.75		8.867	1.56		14.867	1.73		20.87
2.883	0.75		8.883	1.56		14.883	1.73		20.88
2.900	0.75		8.900	1.56		14.900	1.73		20.90
2.917	0.75		8.917	1.56		14.917	1.73		20.92
2.933	0.75		8.933	1.56		14.933	1.73		20.93
2.950	0.75		8.950	1.56		14.950	1.73		20.95
2.967	0.75		8.967	1.56		14.967	1.73		20.97
2.983	0.75		8.983	1.56		14.983	1.73		20.98
3.000	0.75		9.000	1.56		15.000	1.73		21.00
3.017	0.75		9.017	1.84		15.017	1.73		21.02
3.033	0.75		9.033	1.84		15.033	1.73		21.03
3.050	0.75		9.050	1.84		15.050	1.73		21.05
3.067	0.75		9.067	1.84		15.067	1.73		21.07
3.083	0.75		9.083	1.84		15.083	1.73		21.08
3.100	0.75		9.100	1.84		15.100	1.73		21.10
3.117	0.75		9.117	1.84		15.117	1.73		21.12
3.133	0.75		9.133	1.84		15.133	1.73		21.13
3.150	0.75		9.150	1.84		15.150	1.73		21.15
3.167	0.75		9.167	1.84		15.167	1.73		21.17
3.183	0.75		9.183	1.84		15.183	1.73		21.18
3.200	0.75		9.200	1.84		15.200	1.73		21.20
3.217	0.75		9.217	1.84		15.217	1.73		21.22
3.233	0.75		9.233	1.84		15.233	1.73		21.23
3.250	0.75		9.250	1.84		15.250	1.73		21.25
3.267	0.75		9.267	1.84		15.267	1.73		21.27
3.283	0.75		9.283	1.84		15.283	1.73		21.28
3.300	0.75		9.300	1.84		15.300	1.73		21.30
3.317	0.75		9.317	1.84		15.317	1.73		21.32
3.333	0.75		9.333	1.84		15.333	1.73		21.33
3.350	0.75		9.350	1.84		15.350	1.73		21.35
3.367	0.75		9.367	1.84		15.367	1.73		21.37
3.383	0.75		9.383	1.84		15.383	1.73		21.38
3.400	0.75		9.400	1.84		15.400	1.73		21.40
3.417	0.75		9.417	1.84		15.417	1.73		21.42
3.433	0.75		9.433	1.84		15.433	1.73		21.43
3.450	0.75		9.450	1.84		15.450	1.73		21.45
3.467	0.75		9.467	1.84		15.467	1.73		21.47
3.483	0.75		9.483	1.84		15.483	1.73		21.48
3.500	0.75		9.500	1.84		15.500	1.73		21.50
3.517	0.75		9.517	2.07		15.517	1.73		21.52
3.533	0.75		9.533	2.07		15.533	1.73		21.53
3.550	0.75		9.550	2.07		15.550	1.73		21.55
3.567	0.75		9.567	2.07		15.567	1.73		21.57
3.583	0.75		9.583	2.07		15.583	1.73		21.58
3.600	0.75		9.600	2.07		15.600	1.73		21.60
3.617	0.75		9.617	2.07		15.617	1.73		21.62
3.633	0.75		9.633	2.07		15.633	1.73		21.63
3.650	0.75		9.650	2.07		15.650	1.73		21.65
3.667	0.75		9.667	2.07		15.667	1.73		21.67
3.683	0.75		9.683	2.07		15.683	1.73		21.68
3.700	0.75		9.700	2.07		15.700	1.73		21.70
3.717	0.75		9.717	2.07		15.717	1.73		21.72
3.733	0.75		9.733	2.07		15.733	1.73		21.73
3.750	0.75		9.750	2.07		15.750	1.73		21.75
3.767	0.75		9.767	2.07		15.767	1.73		21.77
3.783	0.75		9.783	2.07		15.783	1.73		21.78
3.800	0.75		9.800	2.07		15.800	1.73		21.80
3.817	0.75		9.817	2.07		15.817	1.73		21.82
3.833	0.75		9.833	2.07		15.833	1.73		21.83
3.850	0.75		9.850	2.07		15.850	1.73		21.85
3.867	0.75		9.867	2.07		15.867	1.73		21.87
3.883	0.75		9.883	2.07		15.883	1.73		21.88
3.900	0.75		9.900	2.07		15.900	1.73		21.90
3.917	0.75		9.917	2.07		15.917	1.73		21.92
3.933	0.75		9.933	2.07		15.933	1.73		21.93
3.950	0.75		9.950	2.07		15.950	1.73		21.95
3.967	0.75		9.967	2.07		15.967	1.73		21.97
3.983	0.75		9.983	2.07		15.983	1.73		21.98
4.000	0.75		10.000	2.07		16.000	1.73		22.00
4.017	0.92		10.017	2.65		16.017	1.04		22.02
4.033	0.92		10.033	2.65		16.033	1.04		22.03
4.050	0.92		10.050	2.65		16.050	1.04		22.05
4.067	0.92		10.067	2.65		16.067	1.04		22.07
4.083	0.92		10.083	2.65		16.083	1.04		22.08

HRPB-PR-SWM_2-100 YEAR.OUT									
4.100	0.92		10.100	2.65		16.100	1.04		22.10
4.117	0.92		10.117	2.65		16.117	1.04		22.12
4.133	0.92		10.133	2.65		16.133	1.04		22.13
4.150	0.92		10.150	2.65		16.150	1.04		22.15
4.167	0.92		10.167	2.65		16.167	1.04		22.17
4.183	0.92		10.183	2.65		16.183	1.04		22.18
4.200	0.92		10.200	2.65		16.200	1.04		22.20
4.217	0.92		10.217	2.65		16.217	1.04		22.22
4.233	0.92		10.233	2.65		16.233	1.04		22.23
4.250	0.92		10.250	2.65		16.250	1.04		22.25
4.267	0.92		10.267	2.65		16.267	1.04		22.27
4.283	0.92		10.283	2.65		16.283	1.04		22.28
4.300	0.92		10.300	2.65		16.300	1.04		22.30
4.317	0.92		10.317	2.65		16.317	1.04		22.32
4.333	0.92		10.333	2.65		16.333	1.04		22.33
4.350	0.92		10.350	2.65		16.350	1.04		22.35
4.367	0.92		10.367	2.65		16.367	1.04		22.37
4.383	0.92		10.383	2.65		16.383	1.04		22.38
4.400	0.92		10.400	2.65		16.400	1.04		22.40
4.417	0.92		10.417	2.65		16.417	1.04		22.42
4.433	0.92		10.433	2.65		16.433	1.04		22.43
4.450	0.92		10.450	2.65		16.450	1.04		22.45
4.467	0.92		10.467	2.65		16.467	1.04		22.47
4.483	0.92		10.483	2.65		16.483	1.04		22.48
4.500	0.92		10.500	2.65		16.500	1.04		22.50
4.517	0.92		10.517	3.57		16.517	1.04		22.52
4.533	0.92		10.533	3.57		16.533	1.04		22.53
4.550	0.92		10.550	3.57		16.550	1.04		22.55
4.567	0.92		10.567	3.57		16.567	1.04		22.57
4.583	0.92		10.583	3.57		16.583	1.04		22.58
4.600	0.92		10.600	3.57		16.600	1.04		22.60
4.617	0.92		10.617	3.57		16.617	1.04		22.62
4.633	0.92		10.633	3.57		16.633	1.04		22.63
4.650	0.92		10.650	3.57		16.650	1.04		22.65
4.667	0.92		10.667	3.57		16.667	1.04		22.67
4.683	0.92		10.683	3.57		16.683	1.04		22.68
4.700	0.92		10.700	3.57		16.700	1.04		22.70
4.717	0.92		10.717	3.57		16.717	1.04		22.72
4.733	0.92		10.733	3.57		16.733	1.04		22.73
4.750	0.92		10.750	3.57		16.750	1.04		22.75
4.767	0.92		10.767	3.57		16.767	1.04		22.77
4.783	0.92		10.783	3.57		16.783	1.04		22.78
4.800	0.92		10.800	3.57		16.800	1.04		22.80
4.817	0.92		10.817	3.57		16.817	1.04		22.82
4.833	0.92		10.833	3.57		16.833	1.04		22.83
4.850	0.92		10.850	3.57		16.850	1.04		22.85
4.867	0.92		10.867	3.57		16.867	1.04		22.87
4.883	0.92		10.883	3.57		16.883	1.04		22.88
4.900	0.92		10.900	3.57		16.900	1.04		22.90
4.917	0.92		10.917	3.57		16.917	1.04		22.92
4.933	0.92		10.933	3.57		16.933	1.04		22.93
4.950	0.92		10.950	3.57					

HRP8-PR-SWM_2-100 YEAR.OUT												
5.550	0.92	11.550	23.96	17.550	1.04	23.55	0.69					
5.567	0.92	11.567	23.96	17.567	1.04	23.57	0.69					
5.583	0.92	11.583	23.96	17.583	1.04	23.58	0.69					
5.600	0.92	11.600	23.96	17.600	1.04	23.60	0.69					
5.617	0.92	11.617	23.96	17.617	1.04	23.62	0.69					
5.633	0.92	11.633	23.96	17.633	1.04	23.63	0.69					
5.650	0.92	11.650	23.96	17.650	1.04	23.65	0.69					
5.667	0.92	11.667	23.96	17.667	1.04	23.67	0.69					
5.683	0.92	11.683	23.96	17.683	1.04	23.68	0.69					
5.700	0.92	11.700	23.96	17.700	1.04	23.70	0.69					
5.717	0.92	11.717	23.96	17.717	1.04	23.72	0.69					
5.733	0.92	11.733	23.96	17.733	1.04	23.73	0.69					
5.750	0.92	11.750	23.96	17.750	1.04	23.75	0.69					
5.767	0.92	11.767	63.57	17.767	1.04	23.77	0.69					
5.783	0.92	11.783	63.59	17.783	1.04	23.78	0.69					
5.800	0.92	11.800	63.59	17.800	1.04	23.80	0.69					
5.817	0.92	11.817	63.59	17.817	1.04	23.82	0.69					
5.833	0.92	11.833	63.59	17.833	1.04	23.83	0.69					
5.850	0.92	11.850	63.59	17.850	1.04	23.85	0.69					
5.867	0.92	11.867	63.59	17.867	1.04	23.87	0.69					
5.883	0.92	11.883	63.59	17.883	1.04	23.88	0.69					
5.900	0.92	11.900	63.59	17.900	1.04	23.90	0.69					
5.917	0.92	11.917	63.59	17.917	1.04	23.92	0.69					
5.933	0.92	11.933	63.59	17.933	1.04	23.93	0.69					
5.950	0.92	11.950	63.59	17.950	1.04	23.95	0.69					
5.967	0.92	11.967	63.59	17.967	1.04	23.97	0.69					
5.983	0.92	11.983	63.59	17.983	1.04	23.98	0.69					
6.000	0.92	12.000	63.59	18.000	1.04	24.00	0.69					

Unit Hyd Qpeak (cms)= 0.515

PEAK FLOW (cms)= 0.098 (i)
TIME TO PEAK (hrs)= 12.033
RUNOFF VOLUME (mm)= 16.303
TOTAL RAINFALL (mm)= 57.601
RUNOFF COEFFICIENT = 0.283

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)					
1	2	3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)
ID1= 1 (0253):			1.51	0.098	12.03
+ ID2= 2 (0036):			85.33	1.729	13.07
=====					
ID = 3 (0035):			86.84	1.737	13.07
=====					
R.V. (mm)					
=====					
26.64					
=====					
26.16					

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 000
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\9f78a62b-1880-43a7-ace4-addda4f49932\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\9f78a62b-1880-43a7-ace4-addda4f49932\scenar

DATE: 03/24/2023 TIME: 11:14:32

USER:

COMMENTS: _____

HRP8-PR-SWM_2-100 YEAR.OUT

** SIMULATION : Run 02

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\
| | ata\Local\Temp\
| | 76b02a28-c3e0-40c5-9a3c-cd3cb026027b\7f88e60ca
| Ptotal= 76.80 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	0.77	6.25	1.54	12.25	11.06	18.25	1.38
0.50	0.77	6.50	1.54	12.50	11.06	18.50	1.38
0.75	0.77	6.75	1.54	12.75	5.68	18.75	1.38
1.00	0.77	7.00	1.54	13.00	5.68	19.00	1.38
1.25	0.77	7.25	1.54	13.25	1.08	19.25	1.38
1.50	0.77	7.50	1.54	13.50	1.08	19.50	1.38
1.75	0.77	7.75	1.54	13.75	6.30	19.75	1.38
2.00	1.38	8.00	1.54	14.00	6.30	20.00	1.38
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92
3.00	1.00	9.00	2.07	15.00	2.30	21.00	0.92
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92
3.50	1.00	9.50	2.46	15.50	2.30	21.50	0.92
3.75	1.00	9.75	2.76	15.75	2.30	21.75	0.92
4.00	1.00	10.00	2.76	16.00	2.30	22.00	0.92
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92
4.50	1.23	10.50	3.53	16.50	1.38	22.50	0.92
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92
5.00	1.23	11.00	4.76	17.00	1.38	23.00	0.92
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92
5.50	1.23	11.50	7.37	17.50	1.38	23.50	0.92
5.75	1.23	11.75	31.95	17.75	1.38	23.75	0.92
6.00	1.23	12.00	84.79	18.00	1.38	24.00	0.92

CALIB					
NASHYD (1050)	Area	(ha)=	4.49	Curve Number	(CN)= 77.0
ID= 1 DT= 2.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
		U.H. Tp(hrs)=	0.17		

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38
0.500	0.77	6.500	1.54	12.500	11.05	18.50	1.38
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38
1.000	0.77	7.000	1.54	13.000	5.67	19.00	1.38
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38

HRP8-PR-SWM_2-100 YEAR.OUT									
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38		
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38		
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38		
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38		
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38		
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38		
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38		
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38		
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38		
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38		
1.500	0.77	7.500	1.54	13.500	1.09	19.50	1.38		
1.533	0.77	7.533	1.54	13.533	6.38	19.53	1.38		
1.567	0.77	7.567	1.54	13.567	6.38	19.57	1.38		
1.600	0.77	7.600	1.54	13.600	6.38	19.60	1.38		
1.633	0.77	7.633	1.54	13.633	6.38	19.63	1.38		
1.667	0.77	7.667	1.54	13.667	6.38	19.67	1.38		
1.700	0.77	7.700	1.54	13.700	6.38	19.70	1.38		
1.733	0.77	7.733	1.54	13.733	6.38	19.73	1.38		
1.767	1.08	7.767	1.54	13.767	6.38	19.77	1.38		
1.800	1.38	7.800	1.54	13.800	6.38	19.80	1.38		
1.833	1.38	7.833	1.54	13.833	6.38	19.83	1.38		
1.867	1.38	7.867	1.54	13.867	6.38	19.87	1.38		
1.900	1.38	7.900	1.54	13.900	6.38	19.90	1.38		
1.933	1.38	7.933	1.54	13.933	6.38	19.93	1.38		
1.967	1.38	7.967	1.54	13.967	6.38	19.97	1.38		
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38		
2.033	1.00	8.033	2.07	14.033	2.38	20.03	0.92		
2.067	1.00	8.067	2.07	14.067	2.38	20.07	0.92		
2.100	1.00	8.100	2.07	14.100	2.38	20.10	0.92		
2.133	1.00	8.133	2.07	14.133	2.38	20.13	0.92		
2.167	1.00	8.167	2.07	14.167	2.38	20.17	0.92		
2.200	1.00	8.200	2.07	14.200	2.38	20.20	0.92		
2.233	1.00	8.233	2.07	14.233	2.38	20.23	0.92		
2.267	1.00	8.267	2.07	14.267	2.38	20.27	0.92		
2.300	1.00	8.300	2.07	14.300	2.38	20.30	0.92		
2.333	1.00	8.333	2.07	14.333	2.38	20.33	0.92		
2.367	1.00	8.367	2.07	14.367	2.38	20.37	0.92		
2.400	1.00	8.400	2.07	14.400	2.38	20.40	0.92		
2.433	1.00	8.433	2.07	14.433	2.38	20.43	0.92		
2.467	1.00	8.467	2.07	14.467	2.38	20.47	0.92		
2.500	1.00	8.500	2.07	14.500	2.38	20.50	0.92		
2.533	1.00	8.533	2.07	14.533	2.38	20.53	0.92		
2.567	1.00	8.567	2.07	14.567	2.38	20.57	0.92		
2.600	1.00	8.600	2.07	14.600	2.38	20.60	0.92		
2.633	1.00	8.633	2.07	14.633	2.38	20.63	0.92		
2.667	1.00	8.667	2.07	14.667	2.38	20.67	0.92		
2.700	1.00	8.700	2.07	14.700	2.38	20.70	0.92		
2.733	1.00	8.733	2.07	14.733	2.38	20.73	0.92		
2.767	1.00	8.767	2.07	14.767	2.38	20.77	0.92		
2.800	1.00	8.800	2.07	14.800	2.38	20.80	0.92		
2.833	1.00	8.833	2.07	14.833	2.38	20.83	0.92		
2.867	1.00	8.867	2.07	14.867	2.38	20.87	0.92		
2.900	1.00	8.900	2.07	14.900	2.38	20.90	0.92		
2.933	1.00	8.933	2.07	14.933	2.38	20.93	0.92		
2.967	1.00	8.967	2.07	14.967	2.38	20.97	0.92		
3.000	1.00	9.000	2.07	15.000	2.38	21.00	0.92		
3.033	1.00	9.033	2.46	15.033	2.38	21.03	0.92		
3.067	1.00	9.067	2.46	15.067	2.38	21.07	0.92		
3.100	1.00	9.100	2.46	15.100	2.38	21.10	0.92		
3.133	1.00	9.133	2.46	15.133	2.38	21.13	0.92		
3.167	1.00	9.167	2.46	15.167	2.38	21.17	0.92		
3.200	1.00	9.200	2.46	15.200	2.38	21.20	0.92		
3.233	1.00	9.233	2.46	15.233	2.38	21.23	0.92		
3.267	1.00	9.267	2.46	15.267	2.38	21.27	0.92		
3.300	1.00	9.300	2.46	15.300	2.38	21.30	0.92		
3.333	1.00	9.333	2.46	15.333	2.38	21.33	0.92		
3.367	1.00	9.367	2.46	15.367	2.38	21.37	0.92		
3.400	1.00	9.400	2.46	15.400	2.38	21.40	0.92		
3.433	1.00	9.433	2.46	15.433	2.38	21.43	0.92		
3.467	1.00	9.467	2.46	15.467	2.38	21.47	0.92		
3.500	1.00	9.500	2.46	15.500	2.38	21.50	0.92		
3.533	1.00	9.533	2.76	15.533	2.38	21.53	0.92		
3.567	1.00	9.567	2.76	15.567	2.38	21.57	0.92		
3.600	1.00	9.600	2.76	15.600	2.38	21.60	0.92		
3.633	1.00	9.633	2.76	15.633	2.38	21.63	0.92		
3.667	1.00	9.667	2.76	15.667	2.38	21.67	0.92		
3.700	1.00	9.700	2.76	15.700	2.38	21.70	0.92		
3.733	1.00	9.733	2.76	15.733	2.38	21.73	0.92		
3.767	1.00	9.767	2.76	15.767	2.38	21.77	0.92		
3.800	1.00	9.800	2.76	15.800	2.38	21.80	0.92		
3.833	1.00	9.833	2.76	15.833	2.38	21.83	0.92		
3.867	1.00	9.867	2.76	15.867	2.38	21.87	0.92		
3.900	1.00	9.900	2.76	15.900	2.38	21.90	0.92		
3.933	1.00	9.933	2.76	15.933	2.38	21.93	0.92		
3.967	1.00	9.967	2.76	15.967	2.38	21.97	0.92		
4.000	1.00	10.000	2.77	16.000	2.38	22.00	0.92		
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92		

HRP8-PR-SWM_2-100 YEAR.OUT							
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.500	1.23	11.500	7.40	17.500	1.38	23.50	0.92
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.767	1.23	11.767	58.44	17.767	1.38	23.77	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92
6.000	1.23	12.000	84.68	18.000	1.38	24.00	0.92

HRP8-PR-SWM_2-100 YEAR.OUT							HRP8-PR-SWM_2-100 YEAR.OUT						
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38						
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38						
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38						
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38						
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38						
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38						
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38						
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38						
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38						
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38						
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38						
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38						
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38						
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38						
0.500	0.77	6.500	1.54	12.500	11.05	18.50	1.38						
0.533	0.77	6.533	1.54	12.533	5.68	18.53	1.38						
0.567	0.77	6.567	1.54	12.567	5.68	18.57	1.38						
0.600	0.77	6.600	1.54	12.600	5.68	18.60	1.38						
0.633	0.77	6.633	1.54	12.633	5.68	18.63	1.38						
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38						
0.700	0.77	6.700	1.54	12.700	5.68	18.70	1.38						
0.733	0.77	6.733	1.54	12.733	5.68	18.73	1.38						
0.767	0.77	6.767	1.54	12.767	5.68	18.77	1.38						
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38						
0.833	0.77	6.833	1.54	12.833	5.68	18.83	1.38						
0.867	0.77	6.867	1.54	12.867	5.68	18.87	1.38						
0.900	0.77	6.900	1.54	12.900	5.68	18.90	1.38						
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38						
0.967	0.77	6.967	1.54	12.967	5.68	18.97	1.38						
1.000	0.77	7.000	1.54	13.000	5.67	19.00	1.38						
1.033	0.77	7.033	1.54	13.033	1.08	19.03	1.38						
1.067	0.77	7.067	1.54	13.067	1.08	19.07	1.38						
1.100	0.77	7.100	1.54	13.100	1.08	19.10	1.38						
1.133	0.77	7.133	1.54	13.133	1.08	19.13	1.38						
1.167	0.77	7.167	1.54	13.167	1.08	19.17	1.38						
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38						
1.233	0.77	7.233	1.54	13.233	1.08	19.23	1.38						
1.267	0.77	7.267	1.54	13.267	1.08	19.27	1.38						
1.300	0.77	7.300	1.54	13.300	1.08	19.30	1.38						
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38						
1.367	0.77	7.367	1.54	13.367	1.08	19.37	1.38						
1.400	0.77	7.400	1.54	13.400	1.08	19.40	1.38						
1.433	0.77	7.433	1.54	13.433	1.08	19.43	1.38						
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38						
1.500	0.77	7.500	1.54	13.500	1.09	19.50	1.38						
1.533	0.77	7.533	1.54	13.533	6.30	19.53	1.38						
1.567	0.77	7.567	1.54	13.567	6.30	19.57	1.38						
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38						
1.633	0.77	7.633	1.54	13.633	6.30	19.63	1.38						
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38						
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38						
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38						
1.767	1.08	7.767	1.54	13.767	6.30	19.77	1.38						
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38						
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38						
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38						
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38						
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38						
1.967	1.38	7.967	1.54	13.967	6.30	19.97	1.38						
2.000	1.38	8.000	1.54	14.000	6.29	20.00	1.38						
2.033	1.08	8.033	2.07	14.033	2.30	20.03	0.92						
2.067	1.08	8.067	2.07	14.067	2.30	20.07	0.92						
2.100	1.08	8.100	2.07	14.100	2.30	20.10	0.92						
2.133	1.08	8.133	2.07	14.133	2.30	20.13	0.92						
2.167	1.08	8.167	2.07	14.167	2.30	20.17	0.92						
2.200	1.08	8.200	2.07	14.200	2.30	20.20	0.92						
2.233	1.08	8.233	2.07	14.233	2.30	20.23	0.92						
2.267	1.08	8.267	2.07	14.267	2.30	20.27	0.92						
2.300	1.08	8.300	2.07	14.300	2.30	20.30	0.92						
2.333	1.08	8.333	2.07	14.333	2.30	20.33	0.92						
2.367	1.08	8.367	2.07	14.367	2.30	20.37	0.92						
2.400	1.08	8.400	2.07	14.400	2.30	20.40	0.92						
2.433	1.08	8.433	2.07	14.433	2.30	20.43	0.92						
2.467	1.08	8.467	2.07	14.467	2.30	20.47	0.92						
2.500	1.08	8.500	2.07	14.500	2.30	20.50	0.92						
2.533	1.08	8.533	2.07	14.533	2.30	20.53	0.92						
2.567	1.08	8.567	2.07	14.567	2.30	20.57	0.92						
2.600	1.08	8.600	2.07	14.600	2.30	20.60	0.92						
2.633	1.08	8.633	2.07	14.633	2.30	20.63	0.92						
2.667	1.08	8.667	2.07	14.667	2.30	20.67	0.92						
2.700	1.08	8.700	2.07	14.700	2.30	20.70	0.92						
2.733	1.08	8.733	2.07	14.733	2.30	20.73	0.92						
2.767	1.08	8.767	2.07	14.767	2.30	20.77	0.92						
2.800	1.08	8.800	2.07	14.800	2.30	20.80	0.92						
2.833	1.08	8.833	2.07	14.833	2.30	20.83	0.92						

HRP8-PR-SWM_2-100 YEAR.OUT											
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
2.867	1.08	8.867	2.07	14.867	2.30	20.87	0.92				
2.900	1.08	8.900	2.07	14.900	2.30	20.90	0.92				
2.933	1.08	8.933	2.07	14.933	2.30	20.93	0.92				
2.967	1.08	8.967	2.07	14.967	2.30	20.97	0.92				
3.000	1.08	9.000	2.07	15.000	2.30	21.00	0.92				
3.033	1.08	9.033	2.46	15.033	2.30	21.03	0.92				
3.067	1.08	9.067	2.46	15.067	2.30	21.07	0.92				
3.100	1.08	9.100	2.46	15.100	2.30	21.10	0.92				
3.133	1.08	9.133	2.46	15.133	2.30	21.13	0.92				
3.167	1.08	9.167	2.46	15.167	2.30	21.17	0.92				
3.200	1.08	9.200	2.46	15.200	2.30	21.20	0.92				
3.233	1.08	9.233	2.46	15.233	2.30	21.23	0.92				
3.267	1.08	9.267	2.46	15.267	2.30	21.27	0.92				
3.300	1.08	9.300	2.46	15.300	2.30	21.30	0.92				
3.333	1.08	9.333	2.46	15.333	2.30	21.33	0.92				
3.367	1.08	9.367	2.46	15.367	2.30	21.37	0.92				
3.400	1.08	9.400	2.46	15.400	2.30	21.40	0.92				
3.433	1.08	9.433	2.46	15.433	2.30	21.43	0.92				
3.467	1.08	9.467	2.46	15.467	2.30	21.47	0.92				
3.500	1.08	9.500	2.46	15.500	2.30	21.50	0.92				
3.533	1.08	9.533	2.76	15.533	2.30	21.53	0.92				
3.567	1.08	9.567	2.76	15.567	2.30	21.57	0.92				
3.600	1.08	9.600	2.76	15.600	2.30	21.60	0.92				
3.633	1.08	9.633	2.76	15.633	2.30	21.63	0.92				
3.667	1.08	9.667	2.76	15.667	2.30	21.67	0.92				
3.700	1.08	9.700	2.76	15.700	2.30	21.70	0.92				
3.733	1.08	9.733	2.76	15.733	2.30	21.73	0.92				
3.767	1.08	9.767	2.76	15.767	2.30	21.77	0.92				
3.800	1.08	9.800	2.76	15.800	2.30	21.80	0.92				
3.833	1.08	9.833	2.76	15.833	2.30	21.83	0.92				
3.867	1.08	9.867	2.76	15.867	2.30	21.87	0.92				
3.900	1.08	9.900	2.76	15.900	2.30	21.90	0.92				
3.933	1.08	9.933	2.76	15.933	2.30	21.93	0.92				
3.967	1.08	9.967	2.76	15.967	2.30	21.97	0.92				
4.000	1.08	10.000	2.77	16.000	2.30	22.00	0.92				
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92				
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92				
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92				
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92				
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92				
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92				
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92				
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92				
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92				
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92				
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92				
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92				
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92				
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92				
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92				
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92				
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92				
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92				
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92				
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92				
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92				
4.733	1.23	10.733	4.76	16.733	1.38	22.73	0.92				
4.767	1.23	10.767	4.76	16.767	1.38	22.77	0.92				
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92				
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92				
4.867	1.23	10.867	4.76	16.867	1.38	22.87	0.92				
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92				
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92				
4.967	1.23	10.967	4.76	16.967	1.38	22.97	0.92				
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92				
5.033	1.23	11.033	7.37	17.033	1.38	23.03	0.92				
5.067	1.23	11.067	7.37	17.067	1.38	23.07	0.92				
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92				
5.133	1.23	11.133	7.37	17.133	1.38	23.13	0.92				
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92				
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92				
5.233	1.23	11.233	7.37	17.233	1.38	23.23	0.92				
5.267	1.23	11.267	7.37	17.267	1.38	23.27	0.92				
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92				
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92				
5.367	1.23	11.367	7.37	17.367	1.38	23.37	0.92				
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92				
5.433	1.23	11.433	7.37	17.433	1.38	23.43	0.92				
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92				
5.500	1.23	11.500	7.40	17.500	1.38	23.50	0.92				
5.533	1.23	11.533	31.95	17.533	1.38	23.53	0.92				
5.567	1.23	11.567	31.95	17.567	1.38	23.57	0.92				
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92				
5.633	1.23	11.633	31.95	17.633	1.38	23.63	0.92				
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92				
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92				
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92				

HRP8-PR-SWM_2-100 YEAR.OUT									
5.767	1.23	11.767	58.44	17.767	1.38	23.77	0.92		
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92		
5.833	1.23	11.833	84.79	17.833	1.38	23.83	0.92		
5.867	1.23	11.867	84.79	17.867	1.38	23.87	0.92		
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92		
5.933	1.23	11.933	84.79	17.933	1.38	23.93	0.92		
5.967	1.23	11.967	84.79	17.967	1.38	23.97	0.92		
6.000	1.23	12.000	84.68	18.000	1.38	24.00	0.92		

Max.Eff.Inten.(mm/hr)= 84.79 52.62
over (min) 5.00 14.00
Storage Coeff. (min)= 3.05 (ii) 12.18 (iii)
Unit Hyd. Tpeak (min)= 4.00 14.00
Unit Hyd. peak (cms)= 0.33 0.09

TOTALS
PEAK FLOW (cms)= 0.47 0.22 0.656 (iii)
TIME TO PEAK (hrs)= 12.00 12.10 12.00
RUNOFF VOLUME (mm)= 75.30 39.70 56.07
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.52 0.73

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1	2	3		

ID1= 1 (1050):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (0250):	4.49	0.424	12.07	34.91
	4.37	0.656	12.00	56.07
=====				
ID = 3 (0018):	8.86	1.044	12.00	45.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)
IN= 2----> OUT= 1

Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.359E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

<---- hydrograph ---->					<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0018)	8.86	1.04	12.00	45.35	0.40	1.17
OUTFLOW: ID= 1 (0037)	8.86	0.64	12.10	45.31	0.33	0.99

HRP8-PR-SWM_2-100 YEAR.OUT

CALIB
NASHYD (1051) | Area (ha)= 50.34 Curve Number (CN)= 82.0
ID= 1 DT= 0.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.63

NOTE: RAINFALL WAS TRANSFORMED TO 0.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.533	0.77	6.533	1.54	12.533	9.72	18.53	1.38
0.667	0.77	6.667	1.54	12.667	5.68	18.67	1.38
0.800	0.77	6.800	1.54	12.800	5.68	18.80	1.38
0.933	0.77	6.933	1.54	12.933	5.68	18.93	1.38
1.067	0.77	7.067	1.54	13.067	3.38	19.07	1.38
1.200	0.77	7.200	1.54	13.200	1.08	19.20	1.38
1.333	0.77	7.333	1.54	13.333	1.08	19.33	1.38
1.467	0.77	7.467	1.54	13.467	1.08	19.47	1.38
1.600	0.77	7.600	1.54	13.600	4.99	19.60	1.38
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38
1.867	1.31	7.867	1.54	13.867	6.30	19.87	1.38
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92
3.067	1.00	9.067	2.27	15.067	2.30	21.07	0.92
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92
3.600	1.00	9.600	2.69	15.600	2.30	21.60	0.92
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.533	1.23	10.533	3.84	16.533	1.38	22.53	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.933	1.23	10.933	4.76	16.933	1.38	22.93	0.92
5.067	1.23	11.067	6.07	17.067	1.38	23.07	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.467	1.23	11.467	7.37	17.467	1.38	23.47	0.92
5.600	1.23	11.600	25.80	17.600	1.38	23.60	0.92
5.733	1.23	11.733	31.95	17.733	1.38	23.73	0.92
5.867	1.23	11.867	78.18	17.867	1.38	23.87	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 2.325 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 40.410
TOTAL RAINFALL (mm)= 76.800
RUNOFF COEFFICIENT = 0.526

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1	2	3		

ID1= 1 (1051):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (0037):	50.34	2.325	12.53	40.41
	8.86	0.643	12.10	45.31
=====				
ID = 3 (0029):	59.20	2.778	12.40	41.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0251) | Area (ha)= 10.65
ID= 1 DT= 3.0 min | Total Imp(%)= 37.00 Dir. Conn.(%)= 37.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.94	6.71
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	266.46	220.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
4.000	1.00	10.000	2.76	16.000	2.30	22.00	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92
4.700	1.23	10.700	4.76	16.700	1.38	22.70	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.800	1.23	10.800	4.76	16.800	1.38	22.80	0.92
4.850	1.23	10.850	4.76	16.850	1.38	22.85	0.92
4.900	1.23	10.900	4.76	16.900	1.38	22.90	0.92
4.950	1.23	10.950	4.76	16.950	1.38	22.95	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.050	1.23	11.050	7.37	17.050	1.38	23.05	0.92
5.100	1.23	11.100	7.37	17.100	1.38	23.10	0.92
5.150	1.23	11.150	7.37	17.150	1.38	23.15	0.92
5.200	1.23	11.200	7.37	17.200	1.38	23.20	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.300	1.23	11.300	7.37	17.300	1.38	23.30	0.92
5.350	1.23	11.350	7.37	17.350	1.38	23.35	0.92
5.400	1.23	11.400	7.37	17.400	1.38	23.40	0.92
5.450	1.23	11.450	7.37	17.450	1.38	23.45	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.550	1.23	11.550	7.37	17.550	1.38	23.55	0.92
5.600	1.23	11.600	31.95	17.600	1.38	23.60	0.92
5.650	1.23	11.650	31.95	17.650	1.38	23.65	0.92
5.700	1.23	11.700	31.95	17.700	1.38	23.70	0.92
5.750	1.23	11.750	31.98	17.750	1.38	23.75	0.92
5.800	1.23	11.800	84.79	17.800	1.38	23.80	0.92
5.850	1.23	11.850	84.79	17.850	1.38	23.85	0.92
5.900	1.23	11.900	84.79	17.900	1.38	23.90	0.92
5.950	1.23	11.950	84.79	17.950	1.38	23.95	0.92
6.000	1.23	12.000	84.75	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)=	84.79	22.76
over (min)	6.00	42.00
Storage Coeff. (min)=	3.99 (ii)	39.47 (ii)
Unit Hyd. Tpeak (min)=	6.00	42.00
Unit Hyd. peak (cms)=	0.24	0.03

TOTALS

0.997 (iii)
12.00
48.38
76.80
0.63

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0251):	10.65	0.997	12.00	48.38	
+ ID2= 2 (0029):	59.20	2.778	12.40	41.14	
ID = 3 (0031):	69.85	3.123	12.40	42.24	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ROUTE CHN( 0039)|
| IN= 2---> OUT= 1 | Routing time step (min)'= 2.00
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<----- DATA FOR SECTION ( 1.1 ) ----->
Distance      Elevation      Manning
    0.00         101.00         0.0500
    1.00         100.67         0.0500

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HRP8-PR-SWM_2-100 YEAR.OUT

2.00 100.33 0.0500 /0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel
5.00 100.33 0.0300 /0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

HRP8-PR-SWM_2-100 YEAR.OUT

2.583 1.00 | 8.583 2.07 |14.583 2.30 | 20.58 0.92
2.667 1.00 | 8.667 2.07 |14.667 2.30 | 20.67 0.92
2.750 1.00 | 8.750 2.07 |14.750 2.30 | 20.75 0.92
2.833 1.00 | 8.833 2.07 |14.833 2.30 | 20.83 0.92
2.917 1.00 | 8.917 2.07 |14.917 2.30 | 20.92 0.92
3.000 1.00 | 9.000 2.07 |15.000 2.30 | 21.00 0.92
3.083 1.00 | 9.083 2.46 |15.083 2.30 | 21.08 0.92
3.167 1.00 | 9.167 2.46 |15.167 2.30 | 21.17 0.92
3.250 1.00 | 9.250 2.46 |15.250 2.30 | 21.25 0.92
3.333 1.00 | 9.333 2.46 |15.333 2.30 | 21.33 0.92
3.417 1.00 | 9.417 2.46 |15.417 2.30 | 21.42 0.92
3.500 1.00 | 9.500 2.46 |15.500 2.30 | 21.50 0.92
3.583 1.00 | 9.583 2.76 |15.583 2.30 | 21.58 0.92
3.667 1.00 | 9.667 2.76 |15.667 2.30 | 21.67 0.92
3.750 1.00 | 9.750 2.76 |15.750 2.30 | 21.75 0.92
3.833 1.00 | 9.833 2.76 |15.833 2.30 | 21.83 0.92
3.917 1.00 | 9.917 2.76 |15.917 2.30 | 21.92 0.92
4.000 1.00 |10.000 2.76 |16.000 2.30 | 22.00 0.92
4.083 1.23 |10.083 3.53 |16.083 1.38 | 22.08 0.92
4.167 1.23 |10.167 3.53 |16.167 1.38 | 22.17 0.92
4.250 1.23 |10.250 3.53 |16.250 1.38 | 22.25 0.92
4.333 1.23 |10.333 3.53 |16.333 1.38 | 22.33 0.92
4.417 1.23 |10.417 3.53 |16.417 1.38 | 22.42 0.92
4.500 1.23 |10.500 3.53 |16.500 1.38 | 22.50 0.92
4.583 1.23 |10.583 4.76 |16.583 1.38 | 22.58 0.92
4.667 1.23 |10.667 4.76 |16.667 1.38 | 22.67 0.92
4.750 1.23 |10.750 4.76 |16.750 1.38 | 22.75 0.92
4.833 1.23 |10.833 4.76 |16.833 1.38 | 22.83 0.92
4.917 1.23 |10.917 4.76 |16.917 1.38 | 22.92 0.92
5.000 1.23 |11.000 4.76 |17.000 1.38 | 23.00 0.92
5.083 1.23 |11.083 7.37 |17.083 1.38 | 23.08 0.92
5.167 1.23 |11.167 7.37 |17.167 1.38 | 23.17 0.92
5.250 1.23 |11.250 7.37 |17.250 1.38 | 23.25 0.92
5.333 1.23 |11.333 7.37 |17.333 1.38 | 23.33 0.92
5.417 1.23 |11.417 7.37 |17.417 1.38 | 23.42 0.92
5.500 1.23 |11.500 7.37 |17.500 1.38 | 23.50 0.92
5.583 1.23 |11.583 31.95 |17.583 1.38 | 23.58 0.92
5.667 1.23 |11.667 31.95 |17.667 1.38 | 23.67 0.92
5.750 1.23 |11.750 31.95 |17.750 1.38 | 23.75 0.92
5.833 1.23 |11.833 84.78 |17.833 1.38 | 23.83 0.92
5.917 1.23 |11.917 84.79 |17.917 1.38 | 23.92 0.92
6.000 1.23 |12.000 84.79 |18.000 1.38 | 24.00 0.92

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .266E+02 0.0 0.18 46.14
0.09 100.09 .599E+02 0.0 0.27 30.87
0.14 100.14 .998E+02 0.1 0.33 24.63
0.19 100.19 .146E+03 0.1 0.39 21.04
0.24 100.24 .200E+03 0.2 0.44 18.63
0.28 100.28 .259E+03 0.3 0.49 16.87
0.33 100.33 .326E+03 0.4 0.53 15.51
0.39 100.39 .413E+03 0.5 0.61 13.47
0.44 100.44 .510E+03 0.7 0.68 12.15
0.50 100.50 .615E+03 0.9 0.73 11.22
0.55 100.55 .729E+03 1.2 0.78 10.52
0.61 100.61 .853E+03 1.4 0.83 9.97
0.66 100.66 .985E+03 1.7 0.86 9.53
0.72 100.72 .113E+04 2.1 0.90 9.16
0.78 100.78 .128E+04 2.4 0.93 8.84
0.83 100.83 .144E+04 2.8 0.96 8.57
0.89 100.89 .161E+04 3.2 0.99 8.34
0.94 100.94 .179E+04 3.7 1.01 8.13
1.00 101.00 .198E+04 4.1 1.04 7.94

<--- hydrograph ---> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0031) 69.85 3.12 12.40 42.24 0.88 0.98
OUTFLOW: ID= 1 (0039) 69.85 3.04 12.53 42.24 0.86 0.98

| CALIB |
| STANDHYD (0252) |
ID= 1 DT= 5.0 min
Area (ha)= 15.48
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.97 8.51
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 321.25 100.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN |' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr |' hrs mm/hr | hrs mm/hr
0.083 0.77 | 6.083 1.54 |12.083 11.07 | 18.08 1.38
0.167 0.77 | 6.167 1.54 |12.167 11.06 | 18.17 1.38
0.250 0.77 | 6.250 1.54 |12.250 11.06 | 18.25 1.38
0.333 0.77 | 6.333 1.54 |12.333 11.06 | 18.33 1.38
0.417 0.77 | 6.417 1.54 |12.417 11.06 | 18.42 1.38
0.500 0.77 | 6.500 1.54 |12.500 11.06 | 18.50 1.38
0.583 0.77 | 6.583 1.54 |12.583 5.68 | 18.58 1.38
0.667 0.77 | 6.667 1.54 |12.667 5.68 | 18.67 1.38
0.750 0.77 | 6.750 1.54 |12.750 5.68 | 18.75 1.38
0.833 0.77 | 6.833 1.54 |12.833 5.68 | 18.83 1.38
0.917 0.77 | 6.917 1.54 |12.917 5.68 | 18.92 1.38
1.000 0.77 | 7.000 1.54 |13.000 5.68 | 19.00 1.38
1.083 0.77 | 7.083 1.54 |13.083 1.08 | 19.08 1.38
1.167 0.77 | 7.167 1.54 |13.167 1.08 | 19.17 1.38
1.250 0.77 | 7.250 1.54 |13.250 1.08 | 19.25 1.38
1.333 0.77 | 7.333 1.54 |13.333 1.08 | 19.33 1.38
1.417 0.77 | 7.417 1.54 |13.417 1.08 | 19.42 1.38
1.500 0.77 | 7.500 1.54 |13.500 1.08 | 19.50 1.38
1.583 0.77 | 7.583 1.54 |13.583 6.30 | 19.58 1.38
1.667 0.77 | 7.667 1.54 |13.667 6.30 | 19.67 1.38
1.750 0.77 | 7.750 1.54 |13.750 6.30 | 19.75 1.38
1.833 1.38 | 7.833 1.54 |13.833 6.30 | 19.83 1.38
1.917 1.38 | 7.917 1.54 |13.917 6.30 | 19.92 1.38
2.000 1.38 | 8.000 1.54 |14.000 6.30 | 20.00 1.38
2.083 1.00 | 8.083 2.07 |14.083 2.30 | 20.08 0.92
2.167 1.00 | 8.167 2.07 |14.167 2.30 | 20.17 0.92
2.250 1.00 | 8.250 2.07 |14.250 2.30 | 20.25 0.92
2.333 1.00 | 8.333 2.07 |14.333 2.30 | 20.33 0.92
2.417 1.00 | 8.417 2.07 |14.417 2.30 | 20.42 0.92
2.500 1.00 | 8.500 2.07 |14.500 2.30 | 20.50 0.92

Max.Eff.Inten.(mm/hr)= 84.79 30.77
over (min) 5.00 25.00
Storage Coeff. (min)= 4.46 (ii) 24.06 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.23 0.95
PEAK FLOW (cms)= 1.60 0.40 1.848 (iii)
TIME TO PEAK (hrs)= 12.00 12.25 12.00
RUNOFF VOLUME (mm)= 75.30 29.93 50.35
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.98 0.39 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0033) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0252): 15.48 1.848 12.00 50.35
+ ID2= 2 (0039): 69.85 3.040 12.53 42.24
===== ID = 3 (0033): 85.33 3.820 12.00 43.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0040) |
| IN= 2---> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0500
1.00 100.67 0.0500
2.00 100.33 0.0500 /0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel

HRP8-PR-SWM_2-100 YEAR.OUT

5.00 100.33 0.0300 /0.0500
6.00 100.67 0.0500
7.00 101.00 0.0500

Main Channel

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.296E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53
0.72	100.72	.655E+03	2.1	0.90	5.32
0.78	100.78	.743E+03	2.4	0.93	5.14
0.83	100.83	.836E+03	2.8	0.96	4.98
0.89	100.89	.934E+03	3.2	0.99	4.84
0.94	100.94	.104E+04	3.7	1.01	4.72
1.00	101.00	.115E+04	4.1	1.04	4.61

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0033)	85.33	3.82	12.00	43.72	0.96	1.02
OUTFLOW: ID= 1 (0040)	85.33	3.54	12.50	43.72	0.93	1.00

OVERFLOW IS OFF					
DT= 4.0 min					
OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)		
0.0000	0.0000	4.2410	0.9915		
0.0760	0.3470	5.4070	1.0310		
0.3892	0.6910	6.4930	1.0400		
1.7310	0.8250	7.4900	1.0800		
3.2400	0.9340	8.0000	0.0000		

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0040)	85.330	3.538	12.50	43.72
OUTFLOW: ID= 1 (0036)	85.330	3.233	12.77	43.52

PEAK FLOW REDUCTION [Qout/Qin](%)= 91.39
TIME SHIFT OF PEAK FLOW (min)= 16.00
MAXIMUM STORAGE USED (ha.m.)= 0.9336

CALIB			
NASHYD (0253)	Area (ha)=	1.51	Curve Number (CN)= 75.0
D= 1 DT= 1.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.11	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs		
0.017	0.77	6.017	1.54	12.017	11.11	18.02	1.38		
0.033	0.77	6.033	1.54	12.033	11.06	18.03	1.38		
0.050	0.77	6.050	1.54	12.050	11.06	18.05	1.38		
0.067	0.77	6.067	1.54	12.067	11.06	18.07	1.38		
0.083	0.77	6.083	1.54	12.083	11.06	18.08	1.38		
0.100	0.77	6.100	1.54	12.100	11.06	18.10	1.38		
0.117	0.77	6.117	1.54	12.117	11.06	18.12	1.38		
0.133	0.77	6.133	1.54	12.133	11.06	18.13	1.38		
0.150	0.77	6.150	1.54	12.150	11.06	18.15	1.38		
0.167	0.77	6.167	1.54	12.167	11.06	18.17	1.38		
0.183	0.77	6.183	1.54	12.183	11.06	18.18	1.38		
0.200	0.77	6.200	1.54	12.200	11.06	18.20	1.38		
0.217	0.77	6.217	1.54	12.217	11.06	18.22	1.38		
0.233	0.77	6.233	1.54	12.233	11.06	18.23	1.38		
0.250	0.77	6.250	1.54	12.250	11.06	18.25	1.38		
0.267	0.77	6.267	1.54	12.267	11.06	18.27	1.38		
0.283	0.77	6.283	1.54	12.283	11.06	18.28	1.38		
0.300	0.77	6.300	1.54	12.300	11.06	18.30	1.38		

HRP8-PR-SWM_2-100 YEAR.OUT

0.317	0.77	6.317	1.54	12.317	11.06	18.32	1.38
0.333	0.77	6.333	1.54	12.333	11.06	18.33	1.38
0.350	0.77	6.350	1.54	12.350	11.06	18.35	1.38
0.367	0.77	6.367	1.54	12.367	11.06	18.37	1.38
0.383	0.77	6.383	1.54	12.383	11.06	18.38	1.38
0.400	0.77	6.400	1.54	12.400	11.06	18.40	1.38
0.417	0.77	6.417	1.54	12.417	11.06	18.42	1.38
0.433	0.77	6.433	1.54	12.433	11.06	18.43	1.38
0.450	0.77	6.450	1.54	12.450	11.06	18.45	1.38
0.467	0.77	6.467	1.54	12.467	11.06	18.47	1.38
0.483	0.77	6.483	1.54	12.483	11.06	18.48	1.38
0.500	0.77	6.500	1.54	12.500	11.06	18.50	1.38
0.517	0.77	6.517	1.54	12.517	5.69	18.52	1.38
0.533	0.77	6.533	1.54	12.533	5.69	18.53	1.38
0.550	0.77	6.550	1.54	12.550	5.69	18.55	1.38
0.567	0.77	6.567	1.54	12.567	5.69	18.57	1.38
0.583	0.77	6.583	1.54	12.583	5.69	18.58	1.38
0.600	0.77	6.600	1.54	12.600	5.69	18.60	1.38
0.617	0.77	6.617	1.54	12.617	5.69	18.62	1.38
0.633	0.77	6.633	1.54	12.633	5.69	18.63	1.38
0.650	0.77	6.650	1.54	12.650	5.69	18.65	1.38
0.667	0.77	6.667	1.54	12.667	5.69	18.67	1.38
0.683	0.77	6.683	1.54	12.683	5.69	18.68	1.38
0.700	0.77	6.700	1.54	12.700	5.69	18.70	1.38
0.717	0.77	6.717	1.54	12.717	5.69	18.72	1.38
0.733	0.77	6.733	1.54	12.733	5.69	18.73	1.38
0.750	0.77	6.750	1.54	12.750	5.69	18.75	1.38
0.767	0.77	6.767	1.54	12.767	5.69	18.77	1.38
0.783	0.77	6.783	1.54	12.783	5.69	18.78	1.38
0.800	0.77	6.800	1.54	12.800	5.69	18.80	1.38
0.817	0.77	6.817	1.54	12.817	5.69	18.82	1.38
0.833	0.77	6.833	1.54	12.833	5.69	18.83	1.38
0.850	0.77	6.850	1.54	12.850	5.69	18.85	1.38
0.867	0.77	6.867	1.54	12.867	5.69	18.87	1.38
0.883	0.77	6.883	1.54	12.883	5.69	18.88	1.38
0.900	0.77	6.900	1.54	12.900	5.69	18.90	1.38
0.917	0.77	6.917	1.54	12.917	5.69	18.92	1.38
0.933	0.77	6.933	1.54	12.933	5.69	18.93	1.38
0.950	0.77	6.950	1.54	12.950	5.69	18.95	1.38
0.967	0.77	6.967	1.54	12.967	5.69	18.97	1.38
0.983	0.77	6.983	1.54	12.983	5.69	18.98	1.38
1.000	0.77	7.000	1.54	13.000	5.69	19.00	1.38
1.017	0.77	7.017	1.54	13.017	1.00	19.02	1.38
1.033	0.77	7.033	1.54	13.033	1.00	19.03	1.38
1.050	0.77	7.050	1.54	13.050	1.00	19.05	1.38
1.067	0.77	7.067	1.54	13.067	1.00	19.07	1.38
1.083	0.77	7.083	1.54	13.083	1.00	19.08	1.38
1.100	0.77	7.100	1.54	13.100	1.00	19.10	1.38
1.117	0.77	7.117	1.54	13.117	1.00	19.12	1.38
1.133	0.77	7.133	1.54	13.133	1.00	19.13	1.38
1.150	0.77	7.150	1.54	13.150	1.00	19.15	1.38
1.167	0.77	7.167	1.54	13.167	1.00	19.17	1.38
1.183	0.77	7.183	1.54	13.183	1.00	19.18	1.38
1.200	0.77	7.200	1.54	13.200	1.00	19.20	1.38
1.217	0.77	7.217	1.54	13.217	1.00	19.22	1.38
1.233	0.77	7.233	1.54	13.233	1.00	19.23	1.38
1.250	0.77	7.250	1.54	13.250	1.00	19.25	1.38
1.267	0.77	7.267	1.54	13.267	1.00	19.27	1.38
1.283	0.77	7.283	1.54	13.283	1.00	19.28	1.38
1.300	0.77	7.300	1.54	13.300	1.00	19.30	1.38
1.317	0.77	7.317	1.54	13.317	1.00	19.32	1.38
1.333	0.77	7.333	1.54	13.333	1.00	19.33	1.38
1.350	0.77	7.350	1.54	13.350	1.00	19.35	1.38
1.367	0.77	7.367	1.54	13.367	1.00	19.37	1.38
1.383	0.77	7.383	1.54	13.383	1.00	19.38	1.38
1.400	0.77	7.400	1.54	13.400	1.00	19.40	1.38
1.417	0.77	7.417	1.54	13.417	1.00	19.42	1.38
1.433	0.77	7.433	1.54	13.433	1.00	19.43	1.38
1.450	0.77	7.450	1.54	13.450	1.00	19.45	1.38
1.467	0.77	7.467	1.54	13.467	1.00	19.47	1.38
1.483	0.77	7.483	1.54	13.483	1.00	19.48	1.38
1.500	0.77	7.500	1.54	13.500	1.00	19.50	1.38
1.517	0.77	7.517	1.54	13.517	6.29	19.52	1.38
1.533	0.77	7.533	1.54	13.533	6.30	19.53	1.38
1.550	0.77	7.550	1.54	13.550	6.30	19.55	1.38
1.567	0.77	7.567	1.54	13.567	6.30	19.57	1.38
1.583	0.77	7.583	1.54	13.583	6.30	19.58	1.38
1.600	0.77	7.600	1.54	13.600	6.30	19.60	1.38
1.617	0.77	7.617	1.54	13.617	6.30	19.62	1.38
1.633	0.77	7.633	1.54	13.633	6.30	19.63	1.38
1.650	0.77	7.650	1.54	13.650	6.30	19.65	1.38
1.667	0.77	7.667	1.54	13.667	6.30	19.67	1.38
1.683	0.77	7.683	1.54	13.683	6.30	19.68	1.38
1.700	0.77	7.700	1.54	13.700	6.30	19.70	1.38
1.717	0.77	7.717	1.54	13.717	6.30	19.72	1.38
1.733	0.77	7.733	1.54	13.733	6.30	19.73	1.38
1.750	0.77	7.750	1.54	13.750	6.30	19.75	1.38

HRPB-PR-SWM_2-100 YEAR.OUT									
1.767	1.38	7.767	1.54	13.767	6.30	19.77	1.38		
1.783	1.38	7.783	1.54	13.783	6.30	19.78	1.38		
1.800	1.38	7.800	1.54	13.800	6.30	19.80	1.38		
1.817	1.38	7.817	1.54	13.817	6.30	19.82	1.38		
1.833	1.38	7.833	1.54	13.833	6.30	19.83	1.38		
1.850	1.38	7.850	1.54	13.850	6.30	19.85	1.38		
1.867	1.38	7.867	1.54	13.867	6.30	19.87	1.38		
1.883	1.38	7.883	1.54	13.883	6.30	19.88	1.38		
1.900	1.38	7.900	1.54	13.900	6.30	19.90	1.38		
1.917	1.38	7.917	1.54	13.917	6.30	19.92	1.38		
1.933	1.38	7.933	1.54	13.933	6.30	19.93	1.38		
1.950	1.38	7.950	1.54	13.950	6.30	19.95	1.38		
1.967	1.38	7.967	1.54	13.967	6.30	19.97	1.38		
1.983	1.38	7.983	1.54	13.983	6.30	19.98	1.38		
2.000	1.38	8.000	1.54	14.000	6.30	20.00	1.38		
2.017	1.00	8.017	2.07	14.017	2.31	20.02	0.93		
2.033	1.00	8.033	2.07	14.033	2.30	20.03	0.92		
2.050	1.00	8.050	2.07	14.050	2.30	20.05	0.92		
2.067	1.00	8.067	2.07	14.067	2.30	20.07	0.92		
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92		
2.100	1.00	8.100	2.07	14.100	2.30	20.10	0.92		
2.117	1.00	8.117	2.07	14.117	2.30	20.12	0.92		
2.133	1.00	8.133	2.07	14.133	2.30	20.13	0.92		
2.150	1.00	8.150	2.07	14.150	2.30	20.15	0.92		
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92		
2.183	1.00	8.183	2.07	14.183	2.30	20.18	0.92		
2.200	1.00	8.200	2.07	14.200	2.30	20.20	0.92		
2.217	1.00	8.217	2.07	14.217	2.30	20.22	0.92		
2.233	1.00	8.233	2.07	14.233	2.30	20.23	0.92		
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92		
2.267	1.00	8.267	2.07	14.267	2.30	20.27	0.92		
2.283	1.00	8.283	2.07	14.283	2.30	20.28	0.92		
2.300	1.00	8.300	2.07	14.300	2.30	20.30	0.92		
2.317	1.00	8.317	2.07	14.317	2.30	20.32	0.92		
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92		
2.350	1.00	8.350	2.07	14.350	2.30	20.35	0.92		
2.367	1.00	8.367	2.07	14.367	2.30	20.37	0.92		
2.383	1.00	8.383	2.07	14.383	2.30	20.38	0.92		
2.400	1.00	8.400	2.07	14.400	2.30	20.40	0.92		
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92		
2.433	1.00	8.433	2.07	14.433	2.30	20.43	0.92		
2.450	1.00	8.450	2.07	14.450	2.30	20.45	0.92		
2.467	1.00	8.467	2.07	14.467	2.30	20.47	0.92		
2.483	1.00	8.483	2.07	14.483	2.30	20.48	0.92		
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92		
2.517	1.00	8.517	2.07	14.517	2.30	20.52	0.92		
2.533	1.00	8.533	2.07	14.533	2.30	20.53	0.92		
2.550	1.00	8.550	2.07	14.550	2.30	20.55	0.92		
2.567	1.00	8.567	2.07	14.567	2.30	20.57	0.92		
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92		
2.600	1.00	8.600	2.07	14.600	2.30	20.60	0.92		
2.617	1.00	8.617	2.07	14.617	2.30	20.62	0.92		
2.633	1.00	8.633	2.07	14.633	2.30	20.63	0.92		
2.650	1.00	8.650	2.07	14.650	2.30	20.65	0.92		
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92		
2.683	1.00	8.683	2.07	14.683	2.30	20.68	0.92		
2.700	1.00	8.700	2.07	14.700	2.30	20.70	0.92		
2.717	1.00	8.717	2.07	14.717	2.30	20.72	0.92		
2.733	1.00	8.733	2.07	14.733	2.30	20.73	0.92		
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92		
2.767	1.00	8.767	2.07	14.767	2.30	20.77	0.92		
2.783	1.00	8.783	2.07	14.783	2.30	20.78	0.92		
2.800	1.00	8.800	2.07	14.800	2.30	20.80	0.92		
2.817	1.00	8.817	2.07	14.817	2.30	20.82	0.92		
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92		
2.850	1.00	8.850	2.07	14.850	2.30	20.85	0.92		
2.867	1.00	8.867	2.07	14.867	2.30	20.87	0.92		
2.883	1.00	8.883	2.07	14.883	2.30	20.88	0.92		
2.900	1.00	8.900	2.07	14.900	2.30	20.90	0.92		
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92		
2.933	1.00	8.933	2.07	14.933	2.30	20.93	0.92		
2.950	1.00	8.950	2.07	14.950	2.30	20.95	0.92		
2.967	1.00	8.967	2.07	14.967	2.30	20.97	0.92		
2.983	1.00	8.983	2.07	14.983	2.30	20.98	0.92		
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92		
3.017	1.00	9.017	2.46	15.017	2.30	21.02	0.92		
3.033	1.00	9.033	2.46	15.033	2.30	21.03	0.92		
3.050	1.00	9.050	2.46	15.050	2.30	21.05	0.92		
3.067	1.00	9.067	2.46	15.067	2.30	21.07	0.92		
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92		
3.100	1.00	9.100	2.46	15.100	2.30	21.10	0.92		
3.117	1.00	9.117	2.46	15.117	2.30	21.12	0.92		
3.133	1.00	9.133	2.46	15.133	2.30	21.13	0.92		
3.150	1.00	9.150	2.46	15.150	2.30	21.15	0.92		
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92		
3.183	1.00	9.183	2.46	15.183	2.30	21.18	0.92		
3.200	1.00	9.200	2.46	15.200	2.30	21.20	0.92		

HRPB-PR-SWM_2-100 YEAR.OUT							
3.217	1.00	9.217	2.46	15.217	2.30	21.22	0.92
3.233	1.00	9.233	2.46	15.233	2.30	21.23	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.267	1.00	9.267	2.46	15.267	2.30	21.27	0.92
3.283	1.00	9.283	2.46	15.283	2.30	21.28	0.92
3.300	1.00	9.300	2.46	15.300	2.30	21.30	0.92
3.317	1.00	9.317	2.46	15.317	2.30	21.32	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.350	1.00	9.350	2.46	15.350	2.30	21.35	0.92
3.367	1.00	9.367	2.46	15.367	2.30	21.37	0.92
3.383	1.00	9.383	2.46	15.383	2.30	21.38	0.92
3.400	1.00	9.400	2.46	15.400	2.30	21.40	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.433	1.00	9.433	2.46	15.433	2.30	21.43	0.92
3.450	1.00	9.450	2.46	15.450	2.30	21.45	0.92
3.467	1.00	9.467	2.46	15.467	2.30	21.47	0.92
3.483	1.00	9.483	2.46	15.483	2.30	21.48	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.517	1.00	9.517	2.76	15.517	2.30	21.52	0.92
3.533	1.00	9.533	2.76	15.533	2.30	21.53	0.92
3.550	1.00	9.550	2.76	15.550	2.30	21.55	0.92
3.567	1.00	9.567	2.76	15.567	2.30	21.57	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.600	1.00	9.600	2.76	15.600	2.30	21.60	0.92
3.617	1.00	9.617	2.76	15.617	2.30	21.62	0.92
3.633	1.00	9.633	2.76	15.633	2.30	21.63	0.92
3.650	1.00	9.650	2.76	15.650	2.30	21.65	0.92
3.667	1.00	9.667	2.76	15.667	2.30	21.67	0.92
3.683	1.00	9.683	2.76	15.683	2.30	21.68	0.92
3.700	1.00	9.700	2.76	15.700	2.30	21.70	0.92
3.717	1.00	9.717	2.76	15.717	2.30	21.72	0.92
3.733	1.00	9.733	2.76	15.733	2.30	21.73	0.92
3.750	1.00	9.750	2.76	15.750	2.30	21.75	0.92
3.767	1.00	9.767	2.76	15.767	2.30	21.77	0.92
3.783	1.00	9.783	2.76	15.783	2.30	21.78	0.92
3.800	1.00	9.800	2.76	15.800	2.30	21.80	0.92
3.817	1.00	9.817	2.76	15.817	2.30	21.82	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.850	1.00	9.850	2.76	15.850	2.30	21.85	0.92
3.867	1.00	9.867	2.76	15.867	2.30	21.87	0.92
3.883	1.00	9.883	2.76	15.883	2.30	21.88	0.92
3.900	1.00	9.900	2.76	15.900	2.30	21.90	0.92
3.917	1.00	9.917	2.76	15.917	2.30	21.92	0.92
3.933	1.00	9.933	2.76	15.933	2.30	21.93	0.92
3.950	1.00	9.950	2.76	15.950	2.30	21.95	0.92
3.967	1.00	9.967	2.76	15.967	2.30	21.97	0.92
3.983	1.00	9.983	2.76	15.983	2.30	21.98	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.017	1.23	10.017	3.53	16.017	1.39	22.02	0.92
4.033	1.23	10.033	3.53	16.033	1.38	22.03	0.92
4.050	1.23	10.050	3.53	16.050	1.38	22.05	0.92
4.067	1.23	10.067	3.53	16.067	1.38	22.07	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.100	1.23	10.100	3.53	16.100	1.38	22.10	0.92
4.117	1.23	10.117	3.53	16.117	1.38	22.12	0.92
4.133	1.23	10.133	3.53	16.133	1.38	22.13	0.92
4.150	1.23	10.150	3.53	16.150	1.38	22.15	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.183	1.23	10.183	3.53	16.183	1.38	22.18	0.92
4.200	1.23	10.200	3.53	16.200	1.38	22.20	0.92
4.217	1.23	10.217	3.53	16.217	1.38	22.22	0.92
4.233	1.23	10.233	3.53	16.233	1.38	22.23	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.267	1.23	10.267	3.53	16.267	1.38	22.27	0.92
4.283	1.23	10.283	3.53	16.283	1.38	22.28	0.92
4.300	1.23	10.300	3.53	16.300	1.38	22.30	0.92
4.317	1.23	10.317	3.53	16.317	1.38	22.32	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.350	1.23	10.350	3.53	16.350	1.38	22.35	0.92
4.367	1.23	10.367	3.53	16.367	1.38	22.37	0.92
4.383	1.23	10.383	3.53	16.383	1.38	22.38	0.92
4.400	1.23	10.400	3.53	16.400	1.38	22.40	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.433	1.23	10.433	3.53	16.433	1.38	22.43	0.92
4.450	1.23	10.450	3.53	16.450	1.38	22.45	0.92
4.467	1.23	10.467	3.53	16.467	1.38	22.47	0.92
4.483	1.23	10.483	3.53	16.483	1.38	22.48	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.517	1.23	10.517	4.76	16.517	1.38	22.52	0.92
4.533	1.23	10.533	4.76	16.533	1.38	22.53	0.92
4.550	1.23	10.550	4.76	16.550	1.38	22.55	0.92
4.567	1.23	10.567	4.76	16.567	1.38	22.57	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.600	1.23	10.600	4.76	16.600	1.38	22.60	0.92
4.617	1.23	10.617	4.76	16.617	1.38	22.62	0.92
4.633	1.23	10.633	4.76	16.633	1.38	22.63	0.92
4.650	1.23	10.650	4.76	16.650	1.38	22.65	0.92

HRP8-PR-SWM_2-100 YEAR.OUT									
4.667	1.23	[10.667	4.76	[16.667	1.38		22.67	0.92	
4.683	1.23	[10.683	4.76	[16.683	1.38		22.68	0.92	
4.700	1.23	[10.700	4.76	[16.700	1.38		22.70	0.92	
4.717	1.23	[10.717	4.76	[16.717	1.38		22.72	0.92	
4.733	1.23	[10.733	4.76	[16.733	1.38		22.73	0.92	
4.750	1.23	[10.750	4.76	[16.750	1.38		22.75	0.92	
4.767	1.23	[10.767	4.76	[16.767	1.38		22.77	0.92	
4.783	1.23	[10.783	4.76	[16.783	1.38		22.78	0.92	
4.800	1.23	[10.800	4.76	[16.800	1.38		22.80	0.92	
4.817	1.23	[10.817	4.76	[16.817	1.38		22.82	0.92	
4.833	1.23	[10.833	4.76	[16.833	1.38		22.83	0.92	
4.850	1.23	[10.850	4.76	[16.850	1.38		22.85	0.92	
4.867	1.23	[10.867	4.76	[16.867	1.38		22.87	0.92	
4.883	1.23	[10.883	4.76	[16.883	1.38		22.88	0.92	
4.900	1.23	[10.900	4.76	[16.900	1.38		22.90	0.92	
4.917	1.23	[10.917	4.76	[16.917	1.38		22.92	0.92	
4.933	1.23	[10.933	4.76	[16.933	1.38		22.93	0.92	
4.950	1.23	[10.950	4.76	[16.950	1.38		22.95	0.92	
4.967	1.23	[10.967	4.76	[16.967	1.38		22.97	0.92	
4.983	1.23	[10.983	4.76	[16.983	1.38		22.98	0.92	
5.000	1.23	[11.000	4.76	[17.000	1.38		23.00	0.92	
5.017	1.23	[11.017	7.37	[17.017	1.38		23.02	0.92	
5.033	1.23	[11.033	7.37	[17.033	1.38		23.03	0.92	
5.050	1.23	[11.050	7.37	[17.050	1.38		23.05	0.92	
5.067	1.23	[11.067	7.37	[17.067	1.38		23.07	0.92	
5.083	1.23	[11.083	7.37	[17.083	1.38		23.08	0.92	
5.100	1.23	[11.100	7.37	[17.100	1.38		23.10	0.92	
5.117	1.23	[11.117	7.37	[17.117	1.38		23.12	0.92	
5.133	1.23	[11.133	7.37	[17.133	1.38		23.13	0.92	
5.150	1.23	[11.150	7.37	[17.150	1.38		23.15	0.92	
5.167	1.23	[11.167	7.37	[17.167	1.38		23.17	0.92	
5.183	1.23	[11.183	7.37	[17.183	1.38		23.18	0.92	
5.200	1.23	[11.200	7.37	[17.200	1.38		23.20	0.92	
5.217	1.23	[11.217	7.37	[17.217	1.38		23.22	0.92	
5.233	1.23	[11.233	7.37	[17.233	1.38		23.23	0.92	
5.250	1.23	[11.250	7.37	[17.250	1.38		23.25	0.92	
5.267	1.23	[11.267	7.37	[17.267	1.38		23.27	0.92	
5.283	1.23	[11.283	7.37	[17.283	1.38		23.28	0.92	
5.300	1.23	[11.300	7.37	[17.300	1.38		23.30	0.92	
5.317	1.23	[11.317	7.37	[17.317	1.38		23.32	0.92	
5.333	1.23	[11.333	7.37	[17.333	1.38		23.33	0.92	
5.350	1.23	[11.350	7.37	[17.350	1.38		23.35	0.92	
5.367	1.23	[11.367	7.37	[17.367	1.38		23.37	0.92	
5.383	1.23	[11.383	7.37	[17.383	1.38		23.38	0.92	
5.400	1.23	[11.400	7.37	[17.400	1.38		23.40	0.92	
5.417	1.23	[11.417	7.37	[17.417	1.38		23.42	0.92	
5.433	1.23	[11.433	7.37	[17.433	1.38		23.43	0.92	
5.450	1.23	[11.450	7.37	[17.450	1.38		23.45	0.92	
5.467	1.23	[11.467	7.37	[17.467	1.38		23.47	0.92	
5.483	1.23	[11.483	7.37	[17.483	1.38		23.48	0.92	
5.500	1.23	[11.500	7.37	[17.500	1.38		23.50	0.92	
5.517	1.23	[11.517	31.94	[17.517	1.38		23.52	0.92	
5.533	1.23	[11.533	31.95	[17.533	1.38		23.53	0.92	
5.550	1.23	[11.550	31.95	[17.550	1.38		23.55	0.92	
5.567	1.23	[11.567	31.95	[17.567	1.38		23.57	0.92	
5.583	1.23	[11.583	31.95	[17.583	1.38		23.58	0.92	
5.600	1.23	[11.600	31.95	[17.600	1.38		23.60	0.92	
5.617	1.23	[11.617	31.95	[17.617	1.38		23.62	0.92	
5.633	1.23	[11.633	31.95	[17.633	1.38		23.63	0.92	
5.650	1.23	[11.650	31.95	[17.650	1.38		23.65	0.92	
5.667	1.23	[11.667	31.95	[17.667	1.38		23.67	0.92	
5.683	1.23	[11.683	31.95	[17.683	1.38		23.68	0.92	
5.700	1.23	[11.700	31.95	[17.700	1.38		23.70	0.92	
5.717	1.23	[11.717	31.95	[17.717	1.38		23.72	0.92	
5.733	1.23	[11.733	31.95	[17.733	1.38		23.73	0.92	
5.750	1.23	[11.750	31.95	[17.750	1.38		23.75	0.92	
5.767	1.23	[11.767	84.76	[17.767	1.38		23.77	0.92	
5.783	1.23	[11.783	84.79	[17.783	1.38		23.78	0.92	
5.800	1.23	[11.800	84.79	[17.800	1.38		23.80	0.92	
5.817	1.23	[11.817	84.79	[17.817	1.38		23.82	0.92	
5.833	1.23	[11.833	84.79	[17.833	1.38		23.83	0.92	
5.850	1.23	[11.850	84.79	[17.850	1.38		23.85	0.92	
5.867	1.23	[11.867	84.79	[17.867	1.38		23.87	0.92	
5.883	1.23	[11.883	84.79	[17.883	1.38		23.88	0.92	
5.900	1.23	[11.900	84.79	[17.900	1.38		23.90	0.92	
5.917	1.23	[11.917	84.79	[17.917	1.38		23.92	0.92	
5.933	1.23	[11.933	84.79	[17.933	1.38		23.93	0.92	
5.950	1.23	[11.950	84.79	[17.950	1.38		23.95	0.92	
5.967	1.23	[11.967	84.79	[17.967	1.38		23.97	0.92	
5.983	1.23	[11.983	84.79	[17.983	1.38		23.98	0.92	
6.000	1.23	[12.000	84.79	[18.000	1.38		24.00	0.92	

Unit Hyd Qpeak (cms)= 0.515
PEAK FLOW (cms)= 0.161 (l)
TIME TO PEAK (hrs)= 12.033
RUNOFF VOLUME (mm)= 27.046

HRP8-PR-SWM_2-100 YEAR.OUT
TOTAL RAINFALL (mm)= 76.881
RUNOFF COEFFICIENT = 0.352

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0035)|
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0253): 1.51 0.161 12.03 27.05
+ ID2= 2 (0036): 85.33 3.233 12.77 43.52

ID = 3 (0035): 86.84 3.250 12.77 40.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

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V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\Abir\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\6c9820f0-7eb4-4611-9d30-e45e8e11275e\scenar
Summary filename: C:\Users\Abir\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\6c9820f0-7eb4-4611-9d30-e45e8e11275e\scenar

DATE: 03/24/2023 TIME: 11:14:32

USER:

COMMENTS: _____

** SIMULATION : Run 03 **

| MASS STORM | | Filename: C:\Users\Abir\AppData
| | | ata\Local\Temp\
| | | 76b02a28-c3e0-40c5-9a3c-cd3cb026027b\1913d010
| Ptotal= 88.80 mm | | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	0.89	6.25	1.78	12.25	12.79	18.25	1.60
0.50	0.89	6.50	1.78	12.50	12.79	18.50	1.60
0.75	0.89	6.75	1.78	12.75	6.57	18.75	1.60
1.00	0.89	7.00	1.78	13.00	6.57	19.00	1.60
1.25	0.89	7.25	1.78	13.25	1.24	19.25	1.60
1.50	0.89	7.50	1.78	13.50	1.24	19.50	1.60
1.75	0.89	7.75	1.78	13.75	7.28	19.75	1.60
2.00	1.60	8.00	1.78	14.00	7.28	20.00	1.60
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07
3.00	1.15	9.00	2.40	15.00	2.66	21.00	1.07
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07
3.50	1.15	9.50	2.84	15.50	2.66	21.50	1.07
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07

HRP8-PR-SWM_2-100 YEAR.OUT									
4.00	1.15	10.00	3.20	16.00	2.66	22.00	1.07		
4.25	1.42	10.25	4.08	16.25	1.60	22.25	1.07		
4.50	1.42	10.50	4.08	16.50	1.60	22.50	1.07		
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07		
5.00	1.42	11.00	5.51	17.00	1.60	23.00	1.07		
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07		
5.50	1.42	11.50	8.52	17.50	1.60	23.50	1.07		
5.75	1.42	11.75	36.94	17.75	1.60	23.75	1.07		
6.00	1.42	12.00	98.04	18.00	1.60	24.00	1.07		

CALIB
NASHYD (1050) | Area (ha)= 4.49 Curve Number (CN)= 77.0
ID= 1 DT= 2.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60		
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60		
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60		
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60		
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60		
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60		
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60		
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60		
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60		
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60		
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60		
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60		
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60		
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60		
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60		
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60		
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60		
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60		
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60		
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60		
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60		
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60		
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60		
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60		
1.000	0.89	7.000	1.78	13.000	6.56	19.00	1.60		
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.500	0.89	7.500	1.78	13.500	1.26	19.50	1.60		
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60		
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.767	1.24	7.767	1.78	13.767	7.28	19.77	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60		
2.000	1.60	8.000	1.78	14.000	7.27	20.00	1.60		
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		

HRP8-PR-SWM_2-100 YEAR.OUT									
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07		
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07		
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07		
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07		
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07		
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07		
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07		
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07		
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07		
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07		
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07		
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07		
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07		
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07		
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07		
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07		
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07		
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07		
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07		
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07		
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07		
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07		
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07		
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07		
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07		
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07		
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07		
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07		
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07		
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07		
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07		
3.267	1.15	9.267	2.84	15.267	2.66	21.27	1.07		
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07		
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07		
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07		
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07		
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07		
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07		
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07		
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07		
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07		
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07		
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07		
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07		
3.700	1.15	9.700	3.20	15.700	2.66	21.70	1.07		
3.733	1.15	9.733	3.20	15.733	2.66	21.73	1.07		
3.767	1.15	9.767	3.20	15.767	2.66	21.77	1.07		
3.800	1.15	9.800	3.20	15.800	2.66	21.80	1.07		
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07		
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07		
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07		
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07		
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07		
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07		
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07		
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07		
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07		
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07		
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07		
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07		
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07		
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07		
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07		
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07		
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07		
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07		
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07		
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07		
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07		
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07		
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07		
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07		
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07		
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07		
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07		
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07		
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07		
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07		
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07		
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07		
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07		
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07		
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07		
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07		
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07		

--- TRANSFORMED HYETOGRAPH ---							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.89	6.933	1.78	12.033	12.79	18.03	1.60
0.067	0.89	6.967	1.78	12.067	12.79	18.07	1.60
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60

				HSPB-PR-SUM-2-1009 Year. OUT.	
0.967	0.89	6.967	1.78	12.967	6.57 18.97 1.60
1.000	0.89	7.000	1.78	13.000	6.56 19.00 1.60
1.033	0.89	7.033	1.78	13.033	1.24 19.03 1.60
1.067	0.89	7.067	1.78	13.067	1.24 19.07 1.60
1.100	0.89	7.100	1.78	13.100	1.24 19.10 1.60
1.133	0.89	7.133	1.78	13.133	1.24 19.15 1.60
1.167	0.89	7.167	1.78	13.167	1.24 19.17 1.60
1.200	0.89	7.200	1.78	13.200	1.24 19.20 1.60
1.233	0.89	7.233	1.78	13.233	1.24 19.23 1.60
1.267	0.89	7.267	1.78	13.267	1.24 19.27 1.60
1.300	0.89	7.300	1.78	13.300	1.24 19.30 1.60
1.333	0.89	7.333	1.78	13.333	1.24 19.33 1.60
1.367	0.89	7.367	1.78	13.367	1.24 19.37 1.60
1.400	0.89	7.400	1.78	13.400	1.24 19.40 1.60
1.433	0.89	7.433	1.78	13.433	1.24 19.43 1.60
1.467	0.89	7.467	1.78	13.467	1.24 19.47 1.60
1.500	0.89	7.500	1.78	13.500	1.26 19.50 1.60
1.533	0.89	7.533	1.78	13.533	7.28 19.53 1.60
1.567	0.89	7.567	1.78	13.567	7.28 19.57 1.60
1.600	0.89	7.600	1.78	13.600	7.28 19.60 1.60
1.633	0.89	7.633	1.78	13.633	7.28 19.63 1.60
1.667	0.89	7.667	1.78	13.667	7.28 19.67 1.60
1.700	0.89	7.700	1.78	13.700	7.28 19.70 1.60
1.733	0.89	7.733	1.78	13.733	7.28 19.73 1.60
1.767	1.24	7.767	1.78	13.767	7.28 19.77 1.60
1.800	1.60	7.800	1.78	13.800	7.28 19.80 1.60
1.833	1.60	7.833	1.78	13.833	7.28 19.83 1.60
1.867	1.60	7.867	1.78	13.867	7.28 19.87 1.60
1.900	1.60	7.900	1.78	13.900	7.28 19.90 1.60
1.933	1.60	7.933	1.78	13.933	7.28 19.93 1.60
1.967	1.60	7.967	1.78	13.967	7.28 19.97 1.60
2.000	1.60	8.000	1.78	14.000	7.27 20.00 1.60
2.033	1.15	8.033	2.40	14.033	2.66 20.03 1.60
2.067	1.15	8.067	2.40	14.067	2.66 20.07 1.60
2.100	1.15	8.100	2.40	14.100	2.66 20.10 1.60
2.133	1.15	8.133	2.40	14.133	2.66 20.13 1.60
2.167	1.15	8.167	2.40	14.167	2.66 20.17 1.60
2.200	1.15	8.200	2.40	14.200	2.66 20.20 1.60
2.233	1.15	8.233	2.40	14.233	2.66 20.23 1.60
2.267	1.15	8.267	2.40	14.267	2.66 20.27 1.60
2.300	1.15	8.300	2.40	14.300	2.66 20.30 1.60
2.333	1.15	8.333	2.40	14.333	2.66 20.33 1.60
2.367	1.15	8.367	2.40	14.367	2.66 20.37 1.60
2.400	1.15	8.400	2.40	14.400	2.66 20.40 1.60
2.433	1.15	8.433	2.40	14.433	2.66 20.43 1.60
2.467	1.15	8.467	2.40	14.467	2.66 20.47 1.60
2.500	1.15	8.500	2.40	14.500	2.66 20.50 1.60
2.533	1.15	8.533	2.40	14.533	2.66 20.53 1.60
2.567	1.15	8.567	2.40	14.567	2.66 20.57 1.60
2.600	1.15	8.600	2.40	14.600	2.66 20.60 1.60
2.633	1.15	8.633	2.40	14.633	2.66 20.63 1.60
2.667	1.15	8.667	2.40	14.667	2.66 20.67 1.60
2.700	1.15	8.700	2.40	14.700	2.66 20.70 1.60
2.733	1.15	8.733	2.40	14.733	2.66 20.73 1.60
2.767	1.15	8.767	2.40	14.767	2.66 20.77 1.60
2.800	1.15	8.800	2.40	14.800	2.66 20.80 1.60
2.833	1.15	8.833	2.40	14.833	2.66 20.83 1.60
2.867	1.15	8.867	2.40	14.867	2.66 20.87 1.60
2.900	1.15	8.900	2.40	14.900	2.66 20.90 1.60
2.933	1.15	8.933	2.40	14.933	2.66 20.93 1.60
2.967	1.15	8.967	2.40	14.967	2.66 20.97 1.60
3.000	1.15	9.000	2.40	15.000	2.66 21.00 1.60
3.033	1.15	9.033	2.84	15.033	2.66 21.03 1.60
3.067	1.15	9.067	2.84	15.067	2.66 21.07 1.60
3.100	1.15	9.100	2.84	15.100	2.66 21.10 1.60
3.133	1.15	9.133	2.84	15.133	2.66 21.13 1.60
3.167	1.15	9.167	2.84	15.167	2.66 21.17 1.60
3.200	1.15	9.200	2.84	15.200	2.66 21.20 1.60
3.233	1.15	9.233	2.84	15.233	2.66 21.23 1.60
3.267	1.15	9.267	2.84	15.267	2.66 21.27 1.60
3.300	1.15	9.300	2.84	15.300	2.66 21.30 1.60
3.333	1.15	9.333	2.84	15.333	2.66 21.33 1.60
3.367	1.15	9.367	2.84	15.367	2.66 21.37 1.60
3.400	1.15	9.400	2.84	15.400	2.66 21.40 1.60
3.433	1.15	9.433	2.84	15.433	2.66 21.43 1.60
3.467	1.15	9.467	2.84	15.467	2.66 21.47 1.60
3.500	1.15	9.500	2.84	15.500	2.66 21.50 1.60
3.533	1.15	9.533	3.20	15.533	2.66 21.53 1.60
3.567	1.15	9.567	3.20	15.567	2.66 21.57 1.60
3.600	1.15	9.600	3.20	15.600	2.66 21.60 1.60
3.633	1.15	9.633	3.20	15.633	2.66 21.63 1.60
3.667	1.15	9.667	3.20	15.667	2.66 21.67 1.60
3.700	1.15	9.700	3.20	15.700	2.66 21.70 1.60
3.733	1.15	9.733	3.20	15.733	2.66 21.73 1.60
3.767	1.15	9.767	3.20	15.767	2.66 21.77 1.60
3.800	1.15	9.800	3.20	15.800	2.66 21.80 1.60
3.833	1.15	9.833	3.20	15.833	2.66 21.83 1.60

HRP8-PR-SWM_2-100 YEAR.OUT													
3.867	1.15	9.867	3.20	15.867	2.66	21.87	1.07						
3.900	1.15	9.900	3.20	15.900	2.66	21.90	1.07						
3.933	1.15	9.933	3.20	15.933	2.66	21.93	1.07						
3.967	1.15	9.967	3.20	15.967	2.66	21.97	1.07						
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07						
4.033	1.42	10.033	4.08	16.033	1.60	22.03	1.07						
4.067	1.42	10.067	4.08	16.067	1.60	22.07	1.07						
4.100	1.42	10.100	4.08	16.100	1.60	22.10	1.07						
4.133	1.42	10.133	4.08	16.133	1.60	22.13	1.07						
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07						
4.200	1.42	10.200	4.08	16.200	1.60	22.20	1.07						
4.233	1.42	10.233	4.08	16.233	1.60	22.23	1.07						
4.267	1.42	10.267	4.08	16.267	1.60	22.27	1.07						
4.300	1.42	10.300	4.08	16.300	1.60	22.30	1.07						
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07						
4.367	1.42	10.367	4.08	16.367	1.60	22.37	1.07						
4.400	1.42	10.400	4.08	16.400	1.60	22.40	1.07						
4.433	1.42	10.433	4.08	16.433	1.60	22.43	1.07						
4.467	1.42	10.467	4.08	16.467	1.60	22.47	1.07						
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07						
4.533	1.42	10.533	5.51	16.533	1.60	22.53	1.07						
4.567	1.42	10.567	5.51	16.567	1.60	22.57	1.07						
4.600	1.42	10.600	5.51	16.600	1.60	22.60	1.07						
4.633	1.42	10.633	5.51	16.633	1.60	22.63	1.07						
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07						
4.700	1.42	10.700	5.51	16.700	1.60	22.70	1.07						
4.733	1.42	10.733	5.51	16.733	1.60	22.73	1.07						
4.767	1.42	10.767	5.51	16.767	1.60	22.77	1.07						
4.800	1.42	10.800	5.51	16.800	1.60	22.80	1.07						
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07						
4.867	1.42	10.867	5.51	16.867	1.60	22.87	1.07						
4.900	1.42	10.900	5.51	16.900	1.60	22.90	1.07						
4.933	1.42	10.933	5.51	16.933	1.60	22.93	1.07						
4.967	1.42	10.967	5.51	16.967	1.60	22.97	1.07						
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07						
5.033	1.42	11.033	8.52	17.033	1.60	23.03	1.07						
5.067	1.42	11.067	8.52	17.067	1.60	23.07	1.07						
5.100	1.42	11.100	8.52	17.100	1.60	23.10	1.07						
5.133	1.42	11.133	8.52	17.133	1.60	23.13	1.07						
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07						
5.200	1.42	11.200	8.52	17.200	1.60	23.20	1.07						
5.233	1.42	11.233	8.52	17.233	1.60	23.23	1.07						
5.267	1.42	11.267	8.52	17.267	1.60	23.27	1.07						
5.300	1.42	11.300	8.52	17.300	1.60	23.30	1.07						
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07						
5.367	1.42	11.367	8.52	17.367	1.60	23.37	1.07						
5.400	1.42	11.400	8.52	17.400	1.60	23.40	1.07						
5.433	1.42	11.433	8.52	17.433	1.60	23.43	1.07						
5.467	1.42	11.467	8.52	17.467	1.60	23.47	1.07						
5.500	1.42	11.500	8.56	17.500	1.60	23.50	1.07						
5.533	1.42	11.533	36.94	17.533	1.60	23.53	1.07						
5.567	1.42	11.567	36.94	17.567	1.60	23.57	1.07						
5.600	1.42	11.600	36.94	17.600	1.60	23.60	1.07						
5.633	1.42	11.633	36.94	17.633	1.60	23.63	1.07						
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07						
5.700	1.42	11.700	36.94	17.700	1.60	23.70	1.07						
5.733	1.42	11.733	36.94	17.733	1.60	23.73	1.07						
5.767	1.42	11.767	67.57	17.767	1.60	23.77	1.07						
5.800	1.42	11.800	98.04	17.800	1.60	23.80	1.07						
5.833	1.42	11.833	98.04	17.833	1.60	23.83	1.07						
5.867	1.42	11.867	98.04	17.867	1.60	23.87	1.07						
5.900	1.42	11.900	98.04	17.900	1.60	23.90	1.07						
5.933	1.42	11.933	98.04	17.933	1.60	23.93	1.07						
5.967	1.42	11.967	98.04	17.967	1.60	23.97	1.07						
6.000	1.42	12.000	97.92	18.000	1.60	24.00	1.07						

Max.Eff.Inten.(mm/hr)= 98.04 65.06
over (min) 5.00 12.00
Storage Coeff. (min)= 2.88 (ii) 10.47 (ii)
Unit Hyd. Tpeak (min)= 4.00 12.00
Unit Hyd. peak (cms)= 0.34 0.18

PEAK FLOW (cms)= 0.54 0.30 0.813 (iii)
TIME TO PEAK (hrs)= 12.00 12.07 12.00
RUNOFF VOLUME (mm)= 87.30 49.22 66.74
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.55 0.75

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP8-PR-SWM_2-100 YEAR.OUT

| ADD HYD (0018) |
| 1 + 2 = 3 -----
ID1= 1 (1050): AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
+ ID2= 2 (0250): 4.49 0.536 12.07 43.98
4.37 0.813 12.00 66.74
ID = 3 (0018): 8.86 1.305 12.00 55.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0037) |
| IN= 2---> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0500
1.00 100.67 0.0500
2.00 100.33 0.0500 /0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel
5.00 100.33 0.0300 /0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .636E+02 0.0 0.33 58.96
0.09 100.09 .143E+03 0.1 0.50 39.44
0.14 100.14 .239E+03 0.1 0.63 31.47
0.19 100.19 .350E+03 0.2 0.73 26.89
0.24 100.24 .477E+03 0.3 0.83 23.81
0.28 100.28 .620E+03 0.5 0.91 21.56
0.33 100.33 .779E+03 0.7 0.99 19.82
0.39 100.39 .988E+03 1.0 1.14 17.21
0.44 100.44 .122E+04 1.3 1.27 15.53
0.50 100.50 .147E+04 1.7 1.37 14.34
0.55 100.55 .174E+04 2.2 1.46 13.44
0.61 100.61 .204E+04 2.7 1.54 12.74
0.66 100.66 .236E+04 3.2 1.62 12.17
0.72 100.72 .269E+04 3.8 1.68 11.70
0.78 100.78 .306E+04 4.5 1.74 11.30
0.83 100.83 .344E+04 5.2 1.80 10.96
0.89 100.89 .385E+04 6.0 1.85 10.65
0.94 100.94 .427E+04 6.9 1.90 10.38
1.00 101.00 .472E+04 7.8 1.94 10.14

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0018) 8.86 1.31 12.00 55.20 0.44 1.27
OUTFLOW: ID= 1 (0037) 8.86 0.84 12.10 55.16 0.36 1.08

| CALIB |
| NASHYD (1051) | Area (ha)= 50.34 Curve Number (CN)= 82.0
| ID= 1 DT= 8.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| U.H. Tp(hrs)= 0.63

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.133 0.89 | 6.133 1.78 | 12.133 12.79 | 18.13 1.60
0.267 0.89 | 6.267 1.78 | 12.267 12.79 | 18.27 1.60
0.400 0.89 | 6.400 1.78 | 12.400 12.79 | 18.40 1.60
0.533 0.89 | 6.533 1.78 | 12.533 11.23 | 18.53 1.60
0.667 0.89 | 6.667 1.78 | 12.667 6.57 | 18.67 1.60
0.800 0.89 | 6.800 1.78 | 12.800 6.57 | 18.80 1.60
0.933 0.89 | 6.933 1.78 | 12.933 6.57 | 18.93 1.60
1.067 0.89 | 7.067 1.78 | 13.067 3.91 | 19.07 1.60
1.200 0.89 | 7.200 1.78 | 13.200 1.24 | 19.20 1.60
1.333 0.89 | 7.333 1.78 | 13.333 1.24 | 19.33 1.60
1.467 0.89 | 7.467 1.78 | 13.467 1.24 | 19.47 1.60
1.600 0.89 | 7.600 1.78 | 13.600 5.77 | 19.60 1.60
1.733 0.89 | 7.733 1.78 | 13.733 7.28 | 19.73 1.60
1.867 1.51 | 7.867 1.78 | 13.867 7.28 | 19.87 1.60
2.000 1.60 | 8.000 1.78 | 14.000 7.28 | 20.00 1.60
2.133 1.15 | 8.133 2.40 | 14.133 2.66 | 20.13 1.07
2.267 1.15 | 8.267 2.40 | 14.267 2.66 | 20.27 1.07

HRPB-PR-SWM_2-100 YEAR.OUT											
2.400	1.15		8.400	2.40		14.400	2.66		20.40	1.07	
2.533	1.15		8.533	2.40		14.533	2.66		20.53	1.07	
2.667	1.15		8.667	2.40		14.667	2.66		20.67	1.07	
2.800	1.15		8.800	2.40		14.800	2.66		20.80	1.07	
2.933	1.15		8.933	2.40		14.933	2.66		20.93	1.07	
3.067	1.15		9.067	2.62		15.067	2.66		21.07	1.07	
3.200	1.15		9.200	2.84		15.200	2.66		21.20	1.07	
3.333	1.15		9.333	2.84		15.333	2.66		21.33	1.07	
3.467	1.15		9.467	2.84		15.467	2.66		21.47	1.07	
3.600	1.15		9.600	3.11		15.600	2.66		21.60	1.07	
3.733	1.15		9.733	3.20		15.733	2.66		21.73	1.07	
3.867	1.15		9.867	3.20		15.867	2.66		21.87	1.07	
4.000	1.15		10.000	3.20		16.000	2.66		22.00	1.07	
4.133	1.42		10.133	4.08		16.133	1.60		22.13	1.07	
4.267	1.42		10.267	4.08		16.267	1.60		22.27	1.07	
4.400	1.42		10.400	4.08		16.400	1.60		22.40	1.07	
4.533	1.42		10.533	4.44		16.533	1.60		22.53	1.07	
4.667	1.42		10.667	5.51		16.667	1.60		22.67	1.07	
4.800	1.42		10.800	5.51		16.800	1.60		22.80	1.07	
4.933	1.42		10.933	5.51		16.933	1.60		22.93	1.07	
5.067	1.42		11.067	7.02		17.067	1.60		23.07	1.07	
5.200	1.42		11.200	8.52		17.200	1.60		23.20	1.07	
5.333	1.42		11.333	8.52		17.333	1.60		23.33	1.07	
5.467	1.42		11.467	8.52		17.467	1.60		23.47	1.07	
5.600	1.42		11.600	29.84		17.600	1.60		23.60	1.07	
5.733	1.42		11.733	36.94		17.733	1.60		23.73	1.07	
5.867	1.42		11.867	90.40		17.867	1.60		23.87	1.07	
6.000	1.42		12.000	98.04		18.000	1.60		24.00	1.07	

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 2.906 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 50.313
TOTAL RAINFALL (mm)= 88.800
RUNOFF COEFFICIENT = 0.567

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1	(1051):	50.34	2.906	12.53	50.31
+ ID2= 2	(0037):	8.86	0.839	12.10	55.16
=====					
ID = 3	(0029):	59.20	3.458	12.40	51.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0251)			
ID= 1 DT= 3.0 min	Area (ha)= 10.65		
	Total Imp(%)= 37.00	Dir. Conn.(%)= 37.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	3.94	6.71	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	266.46	220.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---											
TIME	RAIN		TIME	RAIN		TIME	RAIN		TIME	RAIN	
hrs	mm/hr		hrs	mm/hr		hrs	mm/hr		hrs	mm/hr	
0.050	0.89		6.950	1.78		12.050	12.79		18.05	1.60	
0.100	0.89		6.100	1.78		12.100	12.79		18.10	1.60	
0.150	0.89		6.150	1.78		12.150	12.79		18.15	1.60	
0.200	0.89		6.200	1.78		12.200	12.79		18.20	1.60	
0.250	0.89		6.250	1.78		12.250	12.79		18.25	1.60	
0.300	0.89		6.300	1.78		12.300	12.79		18.30	1.60	
0.350	0.89		6.350	1.78		12.350	12.79		18.35	1.60	
0.400	0.89		6.400	1.78		12.400	12.79		18.40	1.60	
0.450	0.89		6.450	1.78		12.450	12.79		18.45	1.60	
0.500	0.89		6.500	1.78		12.500	12.78		18.50	1.60	
0.550	0.89		6.550	1.78		12.550	6.57		18.55	1.60	
0.600	0.89		6.600	1.78		12.600	6.57		18.60	1.60	
0.650	0.89		6.650	1.78		12.650	6.57		18.65	1.60	
0.700	0.89		6.700	1.78		12.700	6.57		18.70	1.60	
0.750	0.89		6.750	1.78		12.750	6.57		18.75	1.60	
0.800	0.89		6.800	1.78		12.800	6.57		18.80	1.60	
0.850	0.89		6.850	1.78		12.850	6.57		18.85	1.60	

HRPB-PR-SWM_2-100 YEAR.OUT											
0.900	0.89		6.900	1.78		12.900	6.57		18.90	1.60	
0.950	0.89		6.950	1.78		12.950	6.57		18.95	1.60	
1.000	0.89		7.000	1.78		13.000	6.57		19.00	1.60	
1.050	0.89		7.050	1.78		13.050	1.24		19.05	1.60	
1.100	0.89		7.100	1.78		13.100	1.24		19.10	1.60	
1.150	0.89		7.150	1.78		13.150	1.24		19.15	1.60	
1.200	0.89		7.200	1.78		13.200	1.24		19.20	1.60	
1.250	0.89		7.250	1.78		13.250	1.24		19.25	1.60	
1.300	0.89		7.300	1.78		13.300	1.24		19.30	1.60	
1.350	0.89		7.350	1.78		13.350	1.24		19.35	1.60	
1.400	0.89		7.400	1.78		13.400	1.24		19.40	1.60	
1.450	0.89		7.450	1.78		13.450	1.24		19.45	1.60	
1.500	0.89		7.500	1.78		13.500	1.25		19.50	1.60	
1.550	0.89		7.550	1.78		13.550	7.28		19.55	1.60	
1.600	0.89		7.600	1.78		13.600	7.28		19.60	1.60	
1.650	0.89		7.650	1.78		13.650	7.28		19.65	1.60	
1.700	0.89		7.700	1.78		13.700	7.28		19.70	1.60	
1.750	0.89		7.750	1.78		13.750	7.28		19.75	1.60	
1.800	1.60		7.800	1.78		13.800	7.28		19.80	1.60	
1.850	1.60		7.850	1.78		13.850	7.28		19.85	1.60	
1.900	1.60		7.900	1.78		13.900	7.28		19.90	1.60	
1.950	1.60		7.950	1.78		13.950	7.28		19.95	1.60	
2.000	1.60		8.000	1.78		14.000	7.28		20.00	1.60	
2.050	1.15		8.050	2.40		14.050	2.66		20.05	1.07	
2.100	1.15		8.100	2.40		14.100	2.66		20.10	1.07	
2.150	1.15		8.150	2.40		14.150	2.66		20.15	1.07	
2.200	1.15		8.200	2.40		14.200	2.66		20.20	1.07	
2.250	1.15		8.250	2.40		14.250	2.66		20.25	1.07	
2.300	1.15		8.300	2.40		14.300	2.66		20.30	1.07	
2.350	1.15		8.350	2.40		14.350	2.66		20.35	1.07	
2.400	1.15		8.400	2.40		14.400	2.66		20.40	1.07	
2.450	1.15		8.450	2.40		14.450	2.66		20.45	1.07	
2.500	1.15		8.500	2.40		14.500	2.66		20.50	1.07	
2.550	1.15		8.550	2.40		14.550	2.66		20.55	1.07	
2.600	1.15		8.600	2.40		14.600	2.66		20.60	1.07	
2.650	1.15		8.650	2.40		14.650	2.66		20.65	1.07	
2.700	1.15		8.700	2.40		14.700	2.66		20.70	1.07	
2.750	1.15		8.750	2.40		14.750	2.66		20.75	1.07	
2.800	1.15		8.800	2.40		14.800	2.66		20.80	1.07	
2.850	1.15		8.850	2.40		14.850	2.66		20.85	1.07	
2.900	1.15		8.900	2.40		14.900	2.66		20.90	1.07	
2.950	1.15		8.950	2.40		14.950	2.66		20.95	1.07	
3.000	1.15		9.000	2.40		15.000	2.66		21.00	1.07	
3.050	1.15		9.050	2.84		15.050	2.66		21.05	1.07	
3.100	1.15		9.100	2.84		15.100	2.66		21.10	1.07	
3.150	1.15		9.150	2.84		15.150	2.66		21.15	1.07	
3.200	1.15		9.200	2.84		15.200	2.66		21.20	1.07	
3.250	1.15		9.250	2.84		15.250	2.66		21.25	1.07	
3.300	1.15		9.300	2.84		15.300	2.66		21.30	1.07	
3.350	1.15		9.350	2.84		15.350	2.66		21.35	1.07	
3.400	1.15		9.400	2.84		15.400	2.66		21.40	1.07	
3.450	1.15		9.450	2.84		15.450	2.66		21.45	1.07	
3.500	1.15		9.500	2.84		15.500	2.66		21.50	1.07	
3.550	1.15		9.550	3.20		15.550	2.66		21.55	1.07	
3.600	1.15		9.600	3.20		15.600	2.66		21.60	1.07	
3.650	1.15		9.650	3.20		15.650	2.66		21.65	1.07	
3.700	1.15		9.700	3.20		15.700	2.66		21.70	1.07	
3.750	1.15		9.750	3.20		15.750	2.66		21.75	1.07	

HRP8-PR-SWM_2-100 YEAR.OUT

5.250	1.42	[11.250	8.52	[17.250	1.60		23.25	1.07
5.300	1.42	[11.300	8.52	[17.300	1.60		23.30	1.07
5.350	1.42	[11.350	8.52	[17.350	1.60		23.35	1.07
5.400	1.42	[11.400	8.52	[17.400	1.60		23.40	1.07
5.450	1.42	[11.450	8.52	[17.450	1.60		23.45	1.07
5.500	1.42	[11.500	8.54	[17.500	1.60		23.50	1.07
5.550	1.42	[11.550	36.94	[17.550	1.60		23.55	1.07
5.600	1.42	[11.600	36.94	[17.600	1.60		23.60	1.07
5.650	1.42	[11.650	36.94	[17.650	1.60		23.65	1.07
5.700	1.42	[11.700	36.94	[17.700	1.60		23.70	1.07
5.750	1.42	[11.750	36.97	[17.750	1.60		23.75	1.07
5.800	1.42	[11.800	98.04	[17.800	1.60		23.80	1.07
5.850	1.42	[11.850	98.04	[17.850	1.60		23.85	1.07
5.900	1.42	[11.900	98.04	[17.900	1.60		23.90	1.07
5.950	1.42	[11.950	98.04	[17.950	1.60		23.95	1.07
6.000	1.42	[12.000	97.99	[18.000	1.60		24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 30.73
over (min) 6.00 36.00
Storage Coeff. (min)= 3.77 (ii) 35.23 (iii)
Unit Hyd. Tpeak (min)= 6.00 36.00
Unit Hyd. peak (cms)= 0.24 0.03

TOTALS
PEAK FLOW (cms)= 1.05 0.34 1.196 (iii)
TIME TO PEAK (hrs)= 12.00 12.45 12.00
RUNOFF VOLUME (mm)= 87.30 40.95 58.10
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.46 0.65

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0251):	10.65	1.196	12.00	58.10
+ ID2= 2 (0029):	59.20	3.458	12.40	51.04
=====				
ID = 3 (0031):	69.85	3.933	12.40	52.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0039)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.998E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.250E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

HRP8-PR-SWM_2-100 YEAR.OUT

<---- hydrograph ---->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0031)	69.85	3.93	12.40	52.11	0.97
OUTFLOW: ID= 1 (0039)	69.85	3.82	12.53	52.11	0.96

CALIB
STANDHYD (0252)|
ID= 1 DT= 5.0 min | Area (ha)= 15.48
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.97 8.51
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 321.25 100.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	0.89	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.08	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.08	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.08	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.08	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07

HRP6-PR-SWM_2-100 YEAR.OUT											
5.083	1.42	[11.083	8.52	[17.083	1.60	[23.08	1.07				
5.167	1.42	[11.167	8.52	[17.167	1.60	[23.17	1.07				
5.250	1.42	[11.250	8.52	[17.250	1.60	[23.25	1.07				
5.333	1.42	[11.333	8.52	[17.333	1.60	[23.33	1.07				
5.417	1.42	[11.417	8.52	[17.417	1.60	[23.42	1.07				
5.500	1.42	[11.500	8.52	[17.500	1.60	[23.50	1.07				
5.583	1.42	[11.583	36.94	[17.583	1.60	[23.58	1.07				
5.667	1.42	[11.667	36.94	[17.667	1.60	[23.67	1.07				
5.750	1.42	[11.750	36.94	[17.750	1.60	[23.75	1.07				
5.833	1.42	[11.833	98.03	[17.833	1.60	[23.83	1.07				
5.917	1.42	[11.917	98.04	[17.917	1.60	[23.92	1.07				
6.000	1.42	[12.000	98.04	[18.000	1.60	[24.00	1.07				

Max.Eff.Inten.(mm/hr)= 98.04 39.09
over (min) 5.00 25.00
Storage Coeff. (min)= 4.21 (ii) 22.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.24 0.05

TOTALS
PEAK FLOW (cms)= 1.86 0.53 2.191 (iii)
TIME TO PEAK (hrs)= 12.00 12.25 12.00
RUNOFF VOLUME (mm)= 87.30 37.84 60.10
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.43 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CW= 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0252):	15.48	2.191	12.00	60.10	
+ ID2= 2 (0039):	69.85	3.820	12.53	52.11	
=====					
ID = 3 (0033):	85.33	4.686	12.00	53.57	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)
IN= 2--> OUT= 1

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.296E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53
0.72	100.72	.655E+03	2.1	0.90	5.32
0.78	100.78	.743E+03	2.4	0.93	5.14
0.83	100.83	.830E+03	2.8	0.96	4.98
0.89	100.89	.934E+03	3.2	0.99	4.84
0.94	100.94	.104E+04	3.7	1.01	4.72
1.00	101.00	.115E+04	4.1	1.04	4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED
<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL

HRP6-PR-SWM_2-100 YEAR.OUT							
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0033)	85.33	4.69	12.00	53.57	1.00	1.04	
OUTFLOW: ID= 1 (0040)	85.33	4.45	12.50	53.57	1.00	1.04	

RESERVOIR(0030)				OVERFLOW IS OFF			
IN= 2--> OUT= 1							
DT= 4.0 min							
OUTFLOW	STORAGE	OUTFLOW	STORAGE	OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)	(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	4.2410	0.9915				
0.0760	0.3470	5.4870	1.0310				
0.3892	0.6910	6.4930	1.0400				
1.7310	0.8250	7.4900	1.0000				
3.2400	0.9340	0.0000	0.0000				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	85.330	4.454	12.50	53.57
OUTFLOW: ID= 1 (0036)	85.330	4.241	12.67	53.36
PEAK FLOW REDUCTION [Qout/Qin](%)= 95.22				
TIME SHIFT OF PEAK FLOW (min)= 10.00				
MAXIMUM STORAGE USED (ha.m.)= 0.9917				

CALIB			
NASHYD (0253)	Area	(ha)=	1.51
ID= 1 DT= 1.0 min	Ia	(mm)=	5.00
	U.H. Tp(hrs)=		0.11
Curve Number (CN)= 75.0			
# of Linear Res.(N)= 3.00			

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	0.89	6.017	1.78	12.017	12.85	18.02	1.60				
0.033	0.89	6.033	1.78	12.033	12.79	18.03	1.60				
0.050	0.89	6.050	1.78	12.050	12.79	18.05	1.60				
0.067	0.89	6.067	1.78	12.067	12.79	18.07	1.60				
0.083	0.89	6.083	1.78	12.083	12.79	18.08	1.60				
0.100	0.89	6.100	1.78	12.100	12.79	18.10	1.60				
0.117	0.89	6.117	1.78	12.117	12.79	18.12	1.60				
0.133	0.89	6.133	1.78	12.133	12.79	18.13	1.60				
0.150	0.89	6.150	1.78	12.150	12.79	18.15	1.60				
0.167	0.89	6.167	1.78	12.167	12.79	18.17	1.60				
0.183	0.89	6.183	1.78	12.183	12.79	18.18	1.60				
0.200	0.89	6.200	1.78	12.200	12.79	18.20	1.60				
0.217	0.89	6.217	1.78	12.217	12.79	18.22	1.60				
0.233	0.89	6.233	1.78	12.233	12.79	18.23	1.60				
0.250	0.89	6.250	1.78	12.250	12.79	18.25	1.60				
0.267	0.89	6.267	1.78	12.267	12.79	18.27	1.60				
0.283	0.89	6.283	1.78	12.283	12.79	18.28	1.60				
0.300	0.89	6.300	1.78	12.300	12.79	18.30	1.60				
0.317	0.89	6.317	1.78	12.317	12.79	18.32	1.60				
0.333	0.89	6.333	1.78	12.333	12.79	18.33	1.60				
0.350	0.89	6.350	1.78	12.350	12.79	18.35	1.60				
0.367	0.89	6.367	1.78	12.367	12.79	18.37	1.60				
0.383	0.89	6.383	1.78	12.383	12.79	18.38	1.60				
0.400	0.89	6.400	1.78	12.400	12.79	18.40	1.60				
0.417	0.89	6.417	1.78	12.417	12.79	18.42	1.60				
0.433	0.89	6.433	1.78	12.433	12.79	18.43	1.60				
0.450	0.89	6.450	1.78	12.450	12.79	18.45	1.60				
0.467	0.89	6.467	1.78	12.467	12.79	18.47	1.60				
0.483	0.89	6.483	1.78	12.483	12.79	18.48	1.60				
0.500	0.89	6.500	1.78	12.500	12.79	18.50	1.60				
0.517	0.89	6.517	1.78	12.517	6.57	18.52	1.60				
0.533	0.89	6.533	1.78	12.533	6.57	18.53	1.60				
0.550	0.89	6.550	1.78	12.550	6.57	18.55	1.60				
0.567	0.89	6.567	1.78	12.567	6.57	18.57	1.60				
0.583	0.89	6.583	1.78	12.583	6.57	18.58	1.60				
0.600	0.89	6.600	1.78	12.600	6.57	18.60	1.60				
0.617	0.89	6.617	1.78	12.617	6.57	18.62	1.60				
0.633	0.89	6.633	1.78	12.633	6.57	18.63	1.60				
0.650	0.89	6.650	1.78	12.650	6.57	18.65	1.60				
0.667	0.89	6.667	1.78	12.667	6.57	18.67	1.60				
0.683	0.89	6.683	1.78	12.683	6.57	18.68	1.60				
0.700	0.89	6.700	1.78	12.700	6.57	18.70	1.60				
0.717	0.89	6.717	1.78	12.717	6.57	18.72	1.60				
0.733	0.89	6.733	1.78	12.733	6.57	18.73	1.60				
0.750	0.89	6.750	1.78	12.750	6.57	18.75	1.60				
0.767	0.89	6.767	1.78	12.767	6.57	18.77	1.60				
0.783	0.89	6.783	1.78	12.783	6.57	18.78	1.60				

HRPB-PR-SWM_2-100 YEAR.OUT									
0.800	0.89	6.800	1.78	12.800	6.57	18.80	1.60		
0.817	0.89	6.817	1.78	12.817	6.57	18.82	1.60		
0.833	0.89	6.833	1.78	12.833	6.57	18.83	1.60		
0.850	0.89	6.850	1.78	12.850	6.57	18.85	1.60		
0.867	0.89	6.867	1.78	12.867	6.57	18.87	1.60		
0.883	0.89	6.883	1.78	12.883	6.57	18.88	1.60		
0.900	0.89	6.900	1.78	12.900	6.57	18.90	1.60		
0.917	0.89	6.917	1.78	12.917	6.57	18.92	1.60		
0.933	0.89	6.933	1.78	12.933	6.57	18.93	1.60		
0.950	0.89	6.950	1.78	12.950	6.57	18.95	1.60		
0.967	0.89	6.967	1.78	12.967	6.57	18.97	1.60		
0.983	0.89	6.983	1.78	12.983	6.57	18.98	1.60		
1.000	0.89	7.000	1.78	13.000	6.57	19.00	1.60		
1.017	0.89	7.017	1.78	13.017	1.25	19.02	1.60		
1.033	0.89	7.033	1.78	13.033	1.24	19.03	1.60		
1.050	0.89	7.050	1.78	13.050	1.24	19.05	1.60		
1.067	0.89	7.067	1.78	13.067	1.24	19.07	1.60		
1.083	0.89	7.083	1.78	13.083	1.24	19.08	1.60		
1.100	0.89	7.100	1.78	13.100	1.24	19.10	1.60		
1.117	0.89	7.117	1.78	13.117	1.24	19.12	1.60		
1.133	0.89	7.133	1.78	13.133	1.24	19.13	1.60		
1.150	0.89	7.150	1.78	13.150	1.24	19.15	1.60		
1.167	0.89	7.167	1.78	13.167	1.24	19.17	1.60		
1.183	0.89	7.183	1.78	13.183	1.24	19.18	1.60		
1.200	0.89	7.200	1.78	13.200	1.24	19.20	1.60		
1.217	0.89	7.217	1.78	13.217	1.24	19.22	1.60		
1.233	0.89	7.233	1.78	13.233	1.24	19.23	1.60		
1.250	0.89	7.250	1.78	13.250	1.24	19.25	1.60		
1.267	0.89	7.267	1.78	13.267	1.24	19.27	1.60		
1.283	0.89	7.283	1.78	13.283	1.24	19.28	1.60		
1.300	0.89	7.300	1.78	13.300	1.24	19.30	1.60		
1.317	0.89	7.317	1.78	13.317	1.24	19.32	1.60		
1.333	0.89	7.333	1.78	13.333	1.24	19.33	1.60		
1.350	0.89	7.350	1.78	13.350	1.24	19.35	1.60		
1.367	0.89	7.367	1.78	13.367	1.24	19.37	1.60		
1.383	0.89	7.383	1.78	13.383	1.24	19.38	1.60		
1.400	0.89	7.400	1.78	13.400	1.24	19.40	1.60		
1.417	0.89	7.417	1.78	13.417	1.24	19.42	1.60		
1.433	0.89	7.433	1.78	13.433	1.24	19.43	1.60		
1.450	0.89	7.450	1.78	13.450	1.24	19.45	1.60		
1.467	0.89	7.467	1.78	13.467	1.24	19.47	1.60		
1.483	0.89	7.483	1.78	13.483	1.24	19.48	1.60		
1.500	0.89	7.500	1.78	13.500	1.24	19.50	1.60		
1.517	0.89	7.517	1.78	13.517	7.27	19.52	1.60		
1.533	0.89	7.533	1.78	13.533	7.28	19.53	1.60		
1.550	0.89	7.550	1.78	13.550	7.28	19.55	1.60		
1.567	0.89	7.567	1.78	13.567	7.28	19.57	1.60		
1.583	0.89	7.583	1.78	13.583	7.28	19.58	1.60		
1.600	0.89	7.600	1.78	13.600	7.28	19.60	1.60		
1.617	0.89	7.617	1.78	13.617	7.28	19.62	1.60		
1.633	0.89	7.633	1.78	13.633	7.28	19.63	1.60		
1.650	0.89	7.650	1.78	13.650	7.28	19.65	1.60		
1.667	0.89	7.667	1.78	13.667	7.28	19.67	1.60		
1.683	0.89	7.683	1.78	13.683	7.28	19.68	1.60		
1.700	0.89	7.700	1.78	13.700	7.28	19.70	1.60		
1.717	0.89	7.717	1.78	13.717	7.28	19.72	1.60		
1.733	0.89	7.733	1.78	13.733	7.28	19.73	1.60		
1.750	0.89	7.750	1.78	13.750	7.28	19.75	1.60		
1.767	1.60	7.767	1.78	13.767	7.28	19.77	1.60		
1.783	1.60	7.783	1.78	13.783	7.28	19.78	1.60		
1.800	1.60	7.800	1.78	13.800	7.28	19.80	1.60		
1.817	1.60	7.817	1.78	13.817	7.28	19.82	1.60		
1.833	1.60	7.833	1.78	13.833	7.28	19.83	1.60		
1.850	1.60	7.850	1.78	13.850	7.28	19.85	1.60		
1.867	1.60	7.867	1.78	13.867	7.28	19.87	1.60		
1.883	1.60	7.883	1.78	13.883	7.28	19.88	1.60		
1.900	1.60	7.900	1.78	13.900	7.28	19.90	1.60		
1.917	1.60	7.917	1.78	13.917	7.28	19.92	1.60		
1.933	1.60	7.933	1.78	13.933	7.28	19.93	1.60		
1.950	1.60	7.950	1.78	13.950	7.28	19.95	1.60		
1.967	1.60	7.967	1.78	13.967	7.28	19.97	1.60		
1.983	1.60	7.983	1.78	13.983	7.28	19.98	1.60		
2.000	1.60	8.000	1.78	14.000	7.28	20.00	1.60		
2.017	1.15	8.017	2.40	14.017	2.68	20.02	1.07		
2.033	1.15	8.033	2.40	14.033	2.66	20.03	1.07		
2.050	1.15	8.050	2.40	14.050	2.66	20.05	1.07		
2.067	1.15	8.067	2.40	14.067	2.66	20.07	1.07		
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07		
2.100	1.15	8.100	2.40	14.100	2.66	20.10	1.07		
2.117	1.15	8.117	2.40	14.117	2.66	20.12	1.07		
2.133	1.15	8.133	2.40	14.133	2.66	20.13	1.07		
2.150	1.15	8.150	2.40	14.150	2.66	20.15	1.07		
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07		
2.183	1.15	8.183	2.40	14.183	2.66	20.18	1.07		
2.200	1.15	8.200	2.40	14.200	2.66	20.20	1.07		
2.217	1.15	8.217	2.40	14.217	2.66	20.22	1.07		
2.233	1.15	8.233	2.40	14.233	2.66	20.23	1.07		

HRPB-PR-SWM_2-100 YEAR.OUT							
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.267	1.15	8.267	2.40	14.267	2.66	20.27	1.07
2.283	1.15	8.283	2.40	14.283	2.66	20.28	1.07
2.300	1.15	8.300	2.40	14.300	2.66	20.30	1.07
2.317	1.15	8.317	2.40	14.317	2.66	20.32	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.350	1.15	8.350	2.40	14.350	2.66	20.35	1.07
2.367	1.15	8.367	2.40	14.367	2.66	20.37	1.07
2.383	1.15	8.383	2.40	14.383	2.66	20.38	1.07
2.400	1.15	8.400	2.40	14.400	2.66	20.40	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.433	1.15	8.433	2.40	14.433	2.66	20.43	1.07
2.450	1.15	8.450	2.40	14.450	2.66	20.45	1.07
2.467	1.15	8.467	2.40	14.467	2.66	20.47	1.07
2.483	1.15	8.483	2.40	14.483	2.66	20.48	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.517	1.15	8.517	2.40	14.517	2.66	20.52	1.07
2.533	1.15	8.533	2.40	14.533	2.66	20.53	1.07
2.550	1.15	8.550	2.40	14.550	2.66	20.55	1.07
2.567	1.15	8.567	2.40	14.567	2.66	20.57	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.600	1.15	8.600	2.40	14.600	2.66	20.60	1.07
2.617	1.15	8.617	2.40	14.617	2.66	20.62	1.07
2.633	1.15	8.633	2.40	14.633	2.66	20.63	1.07
2.650	1.15	8.650	2.40	14.650	2.66	20.65	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.683	1.15	8.683	2.40	14.683	2.66	20.68	1.07
2.700	1.15	8.700	2.40	14.700	2.66	20.70	1.07
2.717	1.15	8.717	2.40	14.717	2.66	20.72	1.07
2.733	1.15	8.733	2.40	14.733	2.66	20.73	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.767	1.15	8.767	2.40	14.767	2.66	20.77	1.07
2.783	1.15	8.783	2.40	14.783	2.66	20.78	1.07
2.800	1.15	8.800	2.40	14.800	2.66	20.80	1.07
2.817	1.15	8.817	2.40	14.817	2.66	20.82	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.850	1.15	8.850	2.40	14.850	2.66	20.85	1.07
2.867	1.15	8.867	2.40	14.867	2.66	20.87	1.07
2.883	1.15	8.883	2.40	14.883	2.66	20.88	1.07
2.900	1.15	8.900	2.40	14.900	2.66	20.90	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
2.933	1.15	8.933	2.40	14.933	2.66	20.93	1.07
2.950	1.15	8.950	2.40	14.950	2.66	20.95	1.07
2.967	1.15	8.967	2.40	14.967	2.66	20.97	1.07
2.983	1.15	8.983	2.40	14.983	2.66	20.98	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.017	1.15	9.017	2.84	15.017	2.66	21.02	1.07
3.033	1.15	9.033	2.84	15.033	2.66	21.03	1.07
3.050	1.15	9.050	2.84	15.050	2.66	21.05	1.07
3.067	1.15	9.067	2.84	15.067	2.66	21.07	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.100	1.15	9.100	2.84	15.100	2.66	21.10	1.07
3.117	1.15	9.117	2.84	15.117	2.66	21.12	1.07
3.133	1.15	9.133	2.84	15.133	2.66	21.13	1.07
3.150	1.15	9.150	2.84	15.150	2.66	21.15	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.183	1.15	9.183	2.84	15.183	2.66	21.18	1.07
3.200	1.15	9.200	2.84	15.200	2.66	21.20	1.07
3.217	1.15	9.217	2.84	15.217	2.66	21.22	1.07
3.233	1.15	9.233	2.84	15.233	2.66	21.23	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.267	1.15	9.267	2.84	15.267	2.66	21.26	1.07
3.283	1.15	9.283	2.84	15.283	2.66	21.28	1.07
3.300	1.15	9.300	2.84	15.300	2.66	21.30	1.07
3.317	1.15	9.317	2.84	15.317	2.66	21.32	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.350	1.15	9.350	2.84	15.350	2.66	21.35	1.07
3.367	1.15	9.367	2.84	15.367	2.66	21.37	1.07
3.383	1.15	9.383	2.84	15.383	2.66	21.38	1.07
3.400	1.15	9.400	2.84	15.400	2.66	21.40	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.433	1.15	9.433	2.84	15.433	2.66	21.43	1.07
3.450	1.15	9.450	2.84	15.450	2.66	21.45	1.07
3.467	1.15	9.467	2.84	15.467	2.66	21.47	1.07
3.483	1.15	9.483	2.84	15.483	2.66	21.48	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.517	1.15	9.517	3.20	15.517	2.66	21.52	1.07
3.533	1.15	9.533	3.20	15.533	2.66	21.53	1.07
3.550	1.15	9.550	3.20	15.550	2.66	21.55	1.07
3.567	1.15	9.567	3.20	15.567	2.66	21.57	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.600	1.15	9.600	3.20	15.600	2.66	21.60	1.07
3.617	1.15	9.617	3.20	15.617	2.66	21.62	1.07
3.633	1.15	9.633	3.20	15.633	2.66	21.63	1.07
3.650	1.15	9.650	3.20	15.650	2.66	21.65	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.683	1.15	9.683	3.20	15.683	2.66	21.68	1.07

3.700 1.15 | 9.700 3.20 |15.700 2.66 | 21.70 1.07
3.717 1.15 | 9.717 3.20 |15.717 2.66 | 21.72 1.07
3.733 1.15 | 9.733 3.20 |15.733 2.66 | 21.73 1.07
3.750 1.15 | 9.750 3.20 |15.750 2.66 | 21.75 1.07
3.767 1.15 | 9.767 3.20 |15.767 2.66 | 21.77 1.07
3.783 1.15 | 9.783 3.20 |15.783 2.66 | 21.78 1.07
3.800 1.15 | 9.800 3.20 |15.800 2.66 | 21.80 1.07
3.817 1.15 | 9.817 3.20 |15.817 2.66 | 21.82 1.07
3.833 1.15 | 9.833 3.20 |15.833 2.66 | 21.83 1.07
3.850 1.15 | 9.850 3.20 |15.850 2.66 | 21.85 1.07
3.867 1.15 | 9.867 3.20 |15.867 2.66 | 21.87 1.07
3.883 1.15 | 9.883 3.20 |15.883 2.66 | 21.88 1.07
3.900 1.15 | 9.900 3.20 |15.900 2.66 | 21.90 1.07
3.917 1.15 | 9.917 3.20 |15.917 2.66 | 21.92 1.07
3.933 1.15 | 9.933 3.20 |15.933 2.66 | 21.93 1.07
3.950 1.15 | 9.950 3.20 |15.950 2.66 | 21.95 1.07
3.967 1.15 | 9.967 3.20 |15.967 2.66 | 21.97 1.07
3.983 1.15 | 9.983 3.20 |15.983 2.66 | 21.98 1.07
4.000 1.15 |10.000 3.20 |16.000 2.66 | 22.00 1.07
4.017 1.42 |10.017 4.08 |16.017 1.60 | 22.02 1.07
4.033 1.42 |10.033 4.08 |16.033 1.60 | 22.03 1.07
4.050 1.42 |10.050 4.08 |16.050 1.60 | 22.05 1.07
4.067 1.42 |10.067 4.08 |16.067 1.60 | 22.07 1.07
4.083 1.42 |10.083 4.08 |16.083 1.60 | 22.08 1.07
4.100 1.42 |10.100 4.08 |16.100 1.60 | 22.10 1.07
4.117 1.42 |10.117 4.08 |16.117 1.60 | 22.12 1.07
4.133 1.42 |10.133 4.08 |16.133 1.60 | 22.13 1.07
4.150 1.42 |10.150 4.08 |16.150 1.60 | 22.15 1.07
4.167 1.42 |10.167 4.08 |16.167 1.60 | 22.17 1.07
4.183 1.42 |10.183 4.08 |16.183 1.60 | 22.18 1.07
4.200 1.42 |10.200 4.08 |16.200 1.60 | 22.20 1.07
4.217 1.42 |10.217 4.08 |16.217 1.60 | 22.22 1.07
4.233 1.42 |10.233 4.08 |16.233 1.60 | 22.23 1.07
4.250 1.42 |10.250 4.08 |16.250 1.60 | 22.25 1.07
4.267 1.42 |10.267 4.08 |16.267 1.60 | 22.27 1.07
4.283 1.42 |10.283 4.08 |16.283 1.60 | 22.28 1.07
4.300 1.42 |10.300 4.08 |16.300 1.60 | 22.30 1.07
4.317 1.42 |10.317 4.08 |16.317 1.60 | 22.32 1.07
4.333 1.42 |10.333 4.08 |16.333 1.60 | 22.33 1.07
4.350 1.42 |10.350 4.08 |16.350 1.60 | 22.35 1.07
4.367 1.42 |10.367 4.08 |16.367 1.60 | 22.37 1.07
4.383 1.42 |10.383 4.08 |16.383 1.60 | 22.38 1.07
4.400 1.42 |10.400 4.08 |16.400 1.60 | 22.40 1.07
4.417 1.42 |10.417 4.08 |16.417 1.60 | 22.42 1.07
4.433 1.42 |10.433 4.08 |16.433 1.60 | 22.43 1.07
4.450 1.42 |10.450 4.08 |16.450 1.60 | 22.45 1.07
4.467 1.42 |10.467 4.08 |16.467 1.60 | 22.47 1.07
4.483 1.42 |10.483 4.08 |16.483 1.60 | 22.48 1.07
4.500 1.42 |10.500 4.09 |16.500 1.60 | 22.50 1.07
4.517 1.42 |10.517 5.51 |16.517 1.60 | 22.52 1.07
4.533 1.42 |10.533 5.51 |16.533 1.60 | 22.53 1.07
4.550 1.42 |10.550 5.51 |16.550 1.60 | 22.55 1.07
4.567 1.42 |10.567 5.51 |16.567 1.60 | 22.57 1.07
4.583 1.42 |10.583 5.51 |16.583 1.60 | 22.58 1.07
4.600 1.42 |10.600 5.51 |16.600 1.60 | 22.60 1.07
4.617 1.42 |10.617 5.51 |16.617 1.60 | 22.62 1.07
4.633 1.42 |10.633 5.51 |16.633 1.60 | 22.63 1.07
4.650 1.42 |10.650 5.51 |16.650 1.60 | 22.65 1.07
4.667 1.42 |10.667 5.51 |16.667 1.60 | 22.67 1.07
4.683 1.42 |10.683 5.51 |16.683 1.60 | 22.68 1.07
4.700 1.42 |10.700 5.51 |16.700 1.60 | 22.70 1.07
4.717 1.42 |10.717 5.51 |16.717 1.60 | 22.72 1.07
4.733 1.42 |10.733 5.51 |16.733 1.60 | 22.73 1.07
4.750 1.42 |10.750 5.51 |16.750 1.60 | 22.75 1.07
4.767 1.42 |10.767 5.51 |16.767 1.60 | 22.77 1.07
4.783 1.42 |10.783 5.51 |16.783 1.60 | 22.78 1.07
4.800 1.42 |10.800 5.51 |16.800 1.60 | 22.80 1.07
4.817 1.42 |10.817 5.51 |16.817 1.60 | 22.82 1.07
4.833 1.42 |10.833 5.51 |16.833 1.60 | 22.83 1.07
4.850 1.42 |10.850 5.51 |16.850 1.60 | 22.85 1.07
4.867 1.42 |10.867 5.51 |16.867 1.60 | 22.87 1.07
4.883 1.42 |10.883 5.51 |16.883 1.60 | 22.88 1.07
4.900 1.42 |10.900 5.51 |16.900 1.60 | 22.90 1.07
4.917 1.42 |10.917 5.51 |16.917 1.60 | 22.92 1.07
4.933 1.42 |10.933 5.51 |16.933 1.60 | 22.93 1.07
4.950 1.42 |10.950 5.51 |16.950 1.60 | 22.95 1.07
4.967 1.42 |10.967 5.51 |16.967 1.60 | 22.97 1.07
4.983 1.42 |10.983 5.51 |16.983 1.60 | 22.98 1.07
5.000 1.42 |11.000 5.51 |17.000 1.60 | 23.00 1.07
5.017 1.42 |11.017 8.52 |17.017 1.60 | 23.02 1.07
5.033 1.42 |11.033 8.52 |17.033 1.60 | 23.03 1.07
5.050 1.42 |11.050 8.52 |17.050 1.60 | 23.05 1.07
5.067 1.42 |11.067 8.52 |17.067 1.60 | 23.07 1.07
5.083 1.42 |11.083 8.52 |17.083 1.60 | 23.08 1.07
5.100 1.42 |11.100 8.52 |17.100 1.60 | 23.10 1.07
5.117 1.42 |11.117 8.52 |17.117 1.60 | 23.12 1.07
5.133 1.42 |11.133 8.52 |17.133 1.60 | 23.13 1.07

5.150 1.42 |11.150 8.52 |17.150 1.60 | 23.15 1.07
5.167 1.42 |11.167 8.52 |17.167 1.60 | 23.17 1.07
5.183 1.42 |11.183 8.52 |17.183 1.60 | 23.18 1.07
5.200 1.42 |11.200 8.52 |17.200 1.60 | 23.20 1.07
5.217 1.42 |11.217 8.52 |17.217 1.60 | 23.22 1.07
5.233 1.42 |11.233 8.52 |17.233 1.60 | 23.23 1.07
5.250 1.42 |11.250 8.52 |17.250 1.60 | 23.25 1.07
5.267 1.42 |11.267 8.52 |17.267 1.60 | 23.27 1.07
5.283 1.42 |11.283 8.52 |17.283 1.60 | 23.28 1.07
5.300 1.42 |11.300 8.52 |17.300 1.60 | 23.30 1.07
5.317 1.42 |11.317 8.52 |17.317 1.60 | 23.32 1.07
5.333 1.42 |11.333 8.52 |17.333 1.60 | 23.33 1.07
5.350 1.42 |11.350 8.52 |17.350 1.60 | 23.35 1.07
5.367 1.42 |11.367 8.52 |17.367 1.60 | 23.37 1.07
5.383 1.42 |11.383 8.52 |17.383 1.60 | 23.38 1.07
5.400 1.42 |11.400 8.52 |17.400 1.60 | 23.40 1.07
5.417 1.42 |11.417 8.52 |17.417 1.60 | 23.42 1.07
5.433 1.42 |11.433 8.52 |17.433 1.60 | 23.43 1.07
5.450 1.42 |11.450 8.52 |17.450 1.60 | 23.45 1.07
5.467 1.42 |11.467 8.52 |17.467 1.60 | 23.47 1.07
5.483 1.42 |11.483 8.52 |17.483 1.60 | 23.48 1.07
5.500 1.42 |11.500 8.52 |17.500 1.60 | 23.50 1.07
5.517 1.42 |11.517 36.93 |17.517 1.60 | 23.52 1.07
5.533 1.42 |11.533 36.94 |17.533 1.60 | 23.53 1.07
5.550 1.42 |11.550 36.94 |17.550 1.60 | 23.55 1.07
5.567 1.42 |11.567 36.94 |17.567 1.60 | 23.57 1.07
5.583 1.42 |11.583 36.94 |17.583 1.60 | 23.58 1.07
5.600 1.42 |11.600 36.94 |17.600 1.60 | 23.60 1.07
5.617 1.42 |11.617 36.94 |17.617 1.60 | 23.62 1.07
5.633 1.42 |11.633 36.94 |17.633 1.60 | 23.63 1.07
5.650 1.42 |11.650 36.94 |17.650 1.60 | 23.65 1.07
5.667 1.42 |11.667 36.94 |17.667 1.60 | 23.67 1.07
5.683 1.42 |11.683 36.94 |17.683 1.60 | 23.68 1.07
5.700 1.42 |11.700 36.94 |17.700 1.60 | 23.70 1.07
5.717 1.42 |11.717 36.94 |17.717 1.60 | 23.72 1.07
5.733 1.42 |11.733 36.94 |17.733 1.60 | 23.73 1.07
5.750 1.42 |11.750 36.94 |17.750 1.60 | 23.75 1.07
5.767 1.42 |11.767 98.04 |17.767 1.60 | 23.77 1.07
5.783 1.42 |11.783 98.04 |17.783 1.60 | 23.78 1.07
5.800 1.42 |11.800 98.04 |17.800 1.60 | 23.80 1.07
5.817 1.42 |11.817 98.04 |17.817 1.60 | 23.82 1.07
5.833 1.42 |11.833 98.04 |17.833 1.60 | 23.83 1.07
5.850 1.42 |11.850 98.04 |17.850 1.60 | 23.85 1.07
5.867 1.42 |11.867 98.04 |17.867 1.60 | 23.87 1.07
5.883 1.42 |11.883 98.04 |17.883 1.60 | 23.88 1.07
5.900 1.42 |11.900 98.04 |17.900 1.60 | 23.90 1.07
5.917 1.42 |11.917 98.04 |17.917 1.60 | 23.92 1.07
5.933 1.42 |11.933 98.04 |17.933 1.60 | 23.93 1.07
5.950 1.42 |11.950 98.04 |17.950 1.60 | 23.95 1.07
5.967 1.42 |11.967 98.04 |17.967 1.60 | 23.97 1.07
5.983 1.42 |11.983 98.04 |17.983 1.60 | 23.98 1.07
6.000 1.42 |12.000 98.04 |18.000 1.60 | 24.00 1.07

Unit Hyd Qpeak (cms)= 0.515

PEAK FLOW (cms)= 0.204 (i)
TIME TO PEAK (hrs)= 12.033
RUNOFF VOLUME (mm)= 34.451
TOTAL RAINFALL (mm)= 88.081
RUNOFF COEFFICIENT = 0.388

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0035)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0253): 1.51 0.204 12.03 34.45
+ ID2= 2 (0036): 85.33 4.241 12.67 53.36
=====

ID = 3 (0035): 86.84 4.266 12.67 58.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

=====

V V I SSSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

000 TTTT TTTT H H Y Y M M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O

000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voind.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\eb099708-391f-4a96-be00-d3538c30f2c6\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VHS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\eb099708-391f-4a96-be00-d3538c30f2c6\scenar

DATE: 03/24/2023 TIME: 11:14:32

USER:

COMMENTS: _____

** SIMULATION : Run 04 **

| MASS STORM | Filename: C:\Users\AbirA\AppData\Local\Temp\76b02a28-c3e0-40c5-9a3c-cd3cb026027b\cdfb3d47
| | ata\Local\Temp\76b02a28-c3e0-40c5-9a3c-cd3cb026027b\cdfb3d47
| Ptotal=103.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.03	6.25	2.06	12.25	14.86	18.25	1.86
0.50	1.03	6.50	2.06	12.50	14.86	18.50	1.86
0.75	1.03	6.75	2.06	12.75	7.64	18.75	1.86
1.00	1.03	7.00	2.06	13.00	7.64	19.00	1.86
1.25	1.03	7.25	2.06	13.25	1.44	19.25	1.86
1.50	1.03	7.50	2.06	13.50	1.44	19.50	1.86
1.75	1.03	7.75	2.06	13.75	8.46	19.75	1.86
2.00	1.06	8.00	2.06	14.00	8.46	20.00	1.86
2.25	1.34	8.25	2.79	14.25	3.10	20.25	1.24
2.50	1.34	8.50	2.79	14.50	3.10	20.50	1.24
2.75	1.34	8.75	2.79	14.75	3.10	20.75	1.24
3.00	1.34	9.00	2.79	15.00	3.10	21.00	1.24
3.25	1.34	9.25	3.30	15.25	3.10	21.25	1.24
3.50	1.34	9.50	3.30	15.50	3.10	21.50	1.24
3.75	1.34	9.75	3.72	15.75	3.10	21.75	1.24
4.00	1.34	10.00	3.72	16.00	3.10	22.00	1.24
4.25	1.65	10.25	4.75	16.25	1.86	22.25	1.24
4.50	1.65	10.50	4.75	16.50	1.86	22.50	1.24
4.75	1.65	10.75	6.40	16.75	1.86	22.75	1.24
5.00	1.65	11.00	6.40	17.00	1.86	23.00	1.24
5.25	1.65	11.25	9.91	17.25	1.86	23.25	1.24
5.50	1.65	11.50	9.91	17.50	1.86	23.50	1.24
5.75	1.65	11.75	42.93	17.75	1.86	23.75	1.24
6.00	1.65	12.00	113.93	18.00	1.86	24.00	1.24

| CALIB |
| NASHYD (1050) | Area (ha)= 4.49 Curve Number (CN)= 77.0
| ID= 1 DT= 2.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86

0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.767	1.44	7.767	2.06	13.767	8.46	19.77	1.86
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86
1.833	1.86	7.833	2.06	13.833	8.46	19.83	1.86
1.867	1.86	7.867	2.06	13.867	8.46	19.87	1.86
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86
1.933	1.86	7.933	2.06	13.933	8.46	19.93	1.86
1.967	1.86	7.967	2.06	13.967	8.46	19.97	1.86
2.000	1.86	8.000	2.06	14.000	8.45	20.00	1.86
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24

HRP8-PR-SWM_2-100 YEAR.OUT									
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24		
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24		
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24		
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24		
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24		
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24		
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24		
5.500	1.65	11.500	9.95	17.500	1.86	23.50	1.24		
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24		
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24		
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24		
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24		
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24		

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.676 (1)

TIME TO PEAK (hrs)= 12.067
 RUNOFF VOLUME (mm)= 55.392
 TOTAL RAINFALL (mm)= 103.199
 RUNOFF COEFFICIENT = 0.537

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP8-PR-SWM_2-100 YEAR.OUT

CALIB		Area (ha)= 4.37		Total Imp(%)= 46.00		Dir. Conn.(%)= 46.00	
STANDHYD (0250)							
ID= 1 DT= 2.0 min							
		IMPERVIOUS		PERVIOUS (i)			
Surface Area	(ha)=	2.01		2.36			
Dep. Storage	(mm)=	1.50		1.50			
Average Slope	(%)=	2.00		2.00			
Length	(m)=	170.68		40.00			
Mannings n	=	0.013		0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86		
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.500	1.03	6.500	2.06	12.500	14.85	18.50	1.86		
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86		
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86		
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86		
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86		
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86		
1.500	1.03	7.500	2.06	13.500	1.46	19.50	1.86		
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86		
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86		
1.767	1.03	7.767	2.06	13.767	8.46	19.77	1.86		
1.800	1.03	7.800	2.06	13.800	8.46	19.80	1.86		
1.833	1.03	7.833	2.06	13.833	8.46	19.83	1.86		
1.867	1.03	7.867	2.06	13.867	8.46	19.87	1.86		
1.900	1.03	7.900	2.06	13.900	8.46	19.90	1.86		
1.933	1.03	7.933	2.06	13.933	8.46	19.93	1.86		
1.967	1.03	7.967	2.06	13.967	8.46	19.97	1.86		
2.000	1.03	8.000	2.06	14.000	8.45	20.00	1.86		
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.26		

HRPB-PR-SWM_2-100 YEAR.OUT									
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24		
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24		
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24		
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24		
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24		
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24		

HRPB-PR-SWM_2-100_YEAR.OUT									
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24		
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24		
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24		
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24		
5.500	1.65	11.500	9.95	17.500	1.86	23.50	1.24		
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24		
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24		
5.767	1.65	11.767	78.53	17.767	1.86	23.77	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.867	1.65	11.867	113.93	17.867	1.86	23.87	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.933	1.65	11.933	113.93	17.933	1.86	23.93	1.24		
5.967	1.65	11.967	113.93	17.967	1.86	23.97	1.24		
6.000	1.65	12.000	113.80	18.000	1.86	24.00	1.24		
Max.Eff.Inten.(mm/hr)= 113.93 80.45									
over (min) 5.00 10.00									
Storage Coeff. (min)= 2.71 (ii) 9.86 (ii)									
Unit Hyd. Tpeak (min)= 4.00 10.00									
Unit Hyd. peak (cms)= 0.35 0.11									
TOTALS									
PEAK FLOW (cms)= 0.63 0.39 1.000 (iii)									
TIME TO PEAK (hrs)= 12.00 12.07 12.00									
RUNOFF VOLUME (mm)= 101.70 61.12 79.79									
TOTAL RAINFALL (mm)= 103.20 103.20 103.20									
RUNOFF COEFFICIENT = 0.99 0.59 0.77									
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:									
CN* = 79.0 Ia = Dep. Storage (Above)									
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.									
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.									

HRP8-PR-SWM_2-100 YEAR.OUT									
0.24	100.24	.477E+03	0.3	0.83	23.81				
0.28	100.28	.620E+03	0.5	0.91	21.56				
0.33	100.33	.779E+03	0.7	0.99	19.82				
0.39	100.39	.988E+03	1.0	1.14	17.21				
0.44	100.44	.122E+04	1.3	1.27	15.53				
0.50	100.50	.147E+04	1.7	1.37	14.34				
0.55	100.55	.174E+04	2.2	1.46	13.44				
0.61	100.61	.204E+04	2.7	1.54	12.74				
0.66	100.66	.236E+04	3.2	1.62	12.17				
0.72	100.72	.269E+04	3.8	1.68	11.70				
0.78	100.78	.306E+04	4.5	1.74	11.30				
0.83	100.83	.344E+04	5.2	1.80	10.96				
0.89	100.89	.385E+04	6.0	1.85	10.65				
0.94	100.94	.427E+04	6.9	1.90	10.38				
1.00	101.00	.472E+04	7.8	1.94	10.14				

<---- hydrograph ----> <-pipe / channel-->						
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0018)	8.86	1.62	12.00	67.42	0.49	1.35
OUTFLOW: ID= 1 (0037)	8.86	1.08	12.10	67.38	0.40	1.18

CALIB						
NASHYD (1051)						
ID= 1 DT= 8.0 min	Area	(ha)=	50.34	Curve Number (CN)=	82.0	
	Ia	(mm)=	0.60	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=		0.63			

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	1.03	6.133	2.06	12.133	14.87	18.13	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.533	1.03	6.533	2.06	12.533	13.06	18.53	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
1.067	1.03	7.067	2.06	13.067	4.54	19.07	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86		
1.600	1.03	7.600	2.06	13.600	6.71	19.60	1.86		
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86		
1.867	1.75	7.867	2.06	13.867	8.46	19.87	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24		
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
3.067	1.34	9.067	3.04	15.067	3.10	21.07	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.600	1.34	9.600	3.61	15.600	3.10	21.60	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.533	1.65	10.533	5.16	16.533	1.86	22.53	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24		
5.067	1.65	11.067	8.15	17.067	1.86	23.07	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24		
5.600	1.65	11.600	34.67	17.600	1.86	23.60	1.24		
5.733	1.65	11.733	42.93	17.733	1.86	23.73	1.24		
5.867	1.65	11.867	105.05	17.867	1.86	23.87	1.24		
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24		

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 3.626 (1)
TIME TO PEAK (hrs)= 12.533

HRP8-PR-SWM_2-100 YEAR.OUT
 RUNOFF VOLUME (mm)= 62.628
 TOTAL RAINFALL (mm)= 103.200
 RUNOFF COEFFICIENT = 0.607

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1051):	50.34	3.626	12.53	62.63
+ ID2= 2 (0037):	8.86	1.083	12.10	67.38
ID = 3 (0029):	59.20	4.298	12.40	63.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0251)			
ID= 1 DT= 3.0 min	Area (ha)=	10.65	
	Total Imp(%)=	37.00	Dir. Conn.(%)= 37.00

IMPERVIOUS			PERVIOUS (1)		
Surface Area	(ha)=	3.94			
Dep. Storage	(mm)=	1.50			
Average Slope	(%)=	2.00			
Length	(m)=	266.46			
Mannings n	=	0.013			

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
1.000	1.03	7.000	2.06	13.000	7.63	19.00	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86		
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86		
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86		
1.500	1.03	7.500	2.06	13.500	1.45	19.50	1.86		
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86		
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86		
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86		
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.800	1.86	7.800	2.06	13.800	8.46	19.80	1.86		
1.850	1.86	7.850	2.06	13.850	8.46	19.85	1.86		
1.900	1.86	7.900	2.06	13.900	8.46	19.90	1.86		
1.950	1.86	7.950	2.06	13.950	8.46	19.95	1.86		
2.000	1.86	8.000	2.06	14.000	8.46	20.00	1.86		
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24		
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24		
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24		
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24		
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24		
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24		
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		

HRP8-PR-SWM_2-100 YEAR.OUT									
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24		
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24		
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24		
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
4.000	1.34	10.000	3.72	16.000	3.09	22.00	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24		
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24		
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24		
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24		
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24		
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24		
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24		
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24		
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24		
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24		
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24		
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24		
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24		
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24		
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24		
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24		
5.500	1.65	11.500	9.92	17.500	1.86	23.50	1.24		
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24		
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24		
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24		
5.700	1.65	11.700	42.93	17.700	1.86	23.70	1.24		
5.750	1.65	11.750	42.97	17.750	1.86	23.75	1.24		
5.800	1.65	11.800	113.93	17.800	1.86	23.80	1.24		
5.850	1.65	11.850	113.93	17.850	1.86	23.85	1.24		
5.900	1.65	11.900	113.93	17.900	1.86	23.90	1.24		
5.950	1.65	11.950	113.93	17.950	1.86	23.95	1.24		
6.000	1.65	12.000	113.88	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)= 113.93 41.92
over (min) 6.00 33.00
Storage Coeff. (min)= 3.55 (ii) 31.34 (ii)
Unit Hyd. Tpeak (min)= 6.00 33.00
Unit Hyd. peak (cms)= 0.25 0.04

TOTALS
PEAK FLOW (cms)= 1.23 0.46
TIME TO PEAK (hrs)= 12.00 1.442 (iii)
RUNOFF VOLUME (mm)= 181.70 70.13
TOTAL RAINFALL (mm)= 183.20 183.20
RUNOFF COEFFICIENT = 0.99 0.50 0.68

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 72.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

HRP8-PR-SWM_2-100 YEAR.OUT
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0031) |
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0251): 10.65 1.442 12.00 70.13
+ ID2= 2 (0029): 59.20 4.298 12.40 63.34
=====

ID = 3 (0031): 69.85 4.926 12.40 64.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0039) |
IN= 2---> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0500
1.00 100.67 0.0500
2.00 100.33 0.0500 /0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel
5.00 100.33 0.0300 /0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .266E+02 0.0 0.18 46.14
0.09 100.09 .599E+02 0.0 0.27 30.87
0.14 100.14 .998E+02 0.1 0.33 24.63
0.19 100.19 .146E+03 0.1 0.39 21.04
0.24 100.24 .200E+03 0.2 0.44 18.63
0.28 100.28 .250E+03 0.3 0.49 16.87
0.33 100.33 .326E+03 0.4 0.53 15.51
0.39 100.39 .413E+03 0.5 0.61 13.47
0.44 100.44 .510E+03 0.7 0.68 12.15
0.50 100.50 .615E+03 0.9 0.73 11.22
0.55 100.55 .729E+03 1.2 0.78 10.52
0.61 100.61 .853E+03 1.4 0.83 9.97
0.66 100.66 .985E+03 1.7 0.86 9.53
0.72 100.72 .113E+04 2.1 0.90 9.16
0.78 100.78 .128E+04 2.4 0.93 8.84
0.83 100.83 .144E+04 2.8 0.96 8.57
0.89 100.89 .161E+04 3.2 0.99 8.34
0.94 100.94 .179E+04 3.7 1.01 8.13
1.00 101.00 .198E+04 4.1 1.04 7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED
<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0031) 69.85 4.93 12.40 64.37 0.99 1.03
OUTFLOW: ID= 1 (0039) 69.85 4.80 12.50 64.37 1.00 1.04

| CALIB |
| STANDHYD (0252) |
ID= 1 DT= 5.0 min
Area (ha)= 15.48
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.97 8.51
Dep. Storage (mm)= 1.50 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 321.25 100.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr
0.083 1.03 | 6.083 2.06 | 12.083 14.87 | 18.08 1.86
0.167 1.03 | 6.167 2.06 | 12.167 14.86 | 18.17 1.86
0.250 1.03 | 6.250 2.06 | 12.250 14.86 | 18.25 1.86
0.333 1.03 | 6.333 2.06 | 12.333 14.86 | 18.33 1.86
0.417 1.03 | 6.417 2.06 | 12.417 14.86 | 18.42 1.86

HRP8-PR-SWM_2-100 YEAR.OUT									
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.083	1.03	7.083	2.06	13.083	1.45	19.08	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86		
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86		
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86		
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86		
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86		
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86		
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86		
1.917	1.06	7.917	2.06	13.917	8.46	19.92	1.86		
2.000	1.06	8.000	2.06	14.000	8.46	20.00	1.86		
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24		
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24		
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24		
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24		
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24		
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24		
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24		
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24		
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24		
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24		
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24		
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24		
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24		
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24		
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24		
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24		
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24		
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24		
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24		
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24		
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24		
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24		
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24		
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24		
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24		
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24		
5.750	1.65	11.750	42.93	17.750	1.86	23.75	1.24		
5.833	1.65	11.833	113.93	17.833	1.86	23.83	1.24		
5.917	1.65	11.917	113.93	17.917	1.86	23.92	1.24		
6.000	1.65	12.000	113.93	18.000	1.86	24.00	1.24		

Max.Eff.Inten.(mm/hr)= 113.93 60.21
over (min) 5.00 20.00
Storage Coeff. (min)= 3.97 (ii) 18.95 (iii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.24 0.06

TOTALS
PEAK FLOW (cms)= 2.17 0.76 2.718 (iii)
TIME TO PEAK (hrs)= 12.00 12.17 12.00
RUNOFF VOLUME (mm)= 101.70 47.92 72.12
TOTAL RAINFALL (mm)= 103.20 103.20 103.20
RUNOFF COEFFICIENT = 0.99 0.46 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP8-PR-SWM_2-100 YEAR.OUT

```

-----
| ADD HYD ( 0033)|
| 1 + 2 = 3 |
-----
              AREA   QPEAK   TPEAK   R.V.
              (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0252): 15.48 2.718 12.00 72.12
+ ID2= 2 ( 0039): 69.85 4.798 12.50 64.37
=====
ID = 3 ( 0033): 85.33 5.828 12.00 65.79

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ROUTE CHN( 0040)|
| IN= 2---> OUT= 1 |
-----
              Routing time step (min)'= 2.00

```

```

<----- DATA FOR SECTION ( 1.1) ----->
Distance   Elevation   Manning
0.00       101.00       0.0500
1.00       100.67       0.0500
2.00       100.33       0.0500 /0.0300 Main Channel
3.00       100.00       0.0300 Main Channel
4.00       100.00       0.0300 Main Channel
5.00       100.33       0.0300 /0.0500 Main Channel
6.00       100.67       0.0500
7.00       101.00       0.0500

```

```

<----- TRAVEL TIME TABLE ----->
DEPTH      ELEV      VOLUME      FLOW RATE      VELOCITY      TRAV.TIME
(m)         (m)         (cu.m.)      (cms)          (m/s)         (min)
0.05 100.05 .155E+02 0.0 0.18 26.80
0.09 100.09 .348E+02 0.0 0.27 17.93
0.14 100.14 .580E+02 0.1 0.33 14.31
0.19 100.19 .850E+02 0.1 0.39 12.22
0.24 100.24 .116E+03 0.2 0.44 10.83
0.28 100.28 .151E+03 0.3 0.49 9.80
0.33 100.33 .189E+03 0.4 0.53 9.01
0.39 100.39 .240E+03 0.5 0.61 7.82
0.44 100.44 .296E+03 0.7 0.68 7.06
0.50 100.50 .357E+03 0.9 0.73 6.52
0.55 100.55 .424E+03 1.2 0.78 6.11
0.61 100.61 .496E+03 1.4 0.83 5.79
0.66 100.66 .573E+03 1.7 0.86 5.53
0.72 100.72 .655E+03 2.1 0.90 5.32
0.78 100.78 .743E+03 2.4 0.93 5.14
0.83 100.83 .836E+03 2.8 0.96 4.98
0.89 100.89 .934E+03 3.2 0.99 4.84
0.94 100.94 .104E+04 3.7 1.01 4.72
1.00 101.00 .115E+04 4.1 1.04 4.61

```

**** WARNING: TRAVEL TIME TABLE EXCEEDED

```

<---- hydrograph ----> <-pipe / channel->
              AREA   QPEAK   TPEAK   R.V.   MAX DEPTH MAX VEL
              (ha)   (cms)   (hrs)   (mm)   (m)         (m/s)
INFLOW : ID= 2 ( 0033) 85.33 5.83 12.00 65.79 0.99 1.03
OUTFLOW: ID= 1 ( 0040) 85.33 5.54 12.50 65.78 1.00 1.04

```

```

-----
| RESERVOIR( 0036)|
| IN= 2---> OUT= 1 |
| DT= 4.0 min |
-----
              OUTFLOW   STORAGE   OUTFLOW   STORAGE
              (cms)   (ha.m.)   (cms)   (ha.m.)
0.0000 0.0000 | 4.2410 0.9915
0.0760 0.3470 | 5.4870 1.0310
0.3892 0.6910 | 6.4930 1.0400
1.7310 0.8250 | 7.4900 1.0000
3.2400 0.9340 | 0.0000 0.0000

```

```

              AREA   QPEAK   TPEAK   R.V.
              (ha)   (cms)   (hrs)   (mm)
INFLOW : ID= 2 ( 0040) 85.330 5.536 12.50 65.78
OUTFLOW: ID= 1 ( 0036) 85.330 5.484 12.57 65.57

```

PEAK FLOW REDUCTION [Qout/Qin](%)= 99.86
TIME SHIFT OF PEAK FLOW (min)= 4.00
MAXIMUM STORAGE USED (ha.m.)= 1.0310

```

-----
| CALIB
| NASHYD ( 0253)| Area (ha)= 1.51 Curve Number (CN)= 75.0
| ID= 1 DT= 1.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

```

HRP8-PR-SWM_2-100 YEAR.OUT

----- U.H. Tp(hrs)= 0.11

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	1.03	6.017	2.06	12.017	14.93	18.02	1.86		
0.033	1.03	6.033	2.06	12.033	14.86	18.03	1.86		
0.050	1.03	6.050	2.06	12.050	14.86	18.05	1.86		
0.067	1.03	6.067	2.06	12.067	14.86	18.07	1.86		
0.083	1.03	6.083	2.06	12.083	14.86	18.08	1.86		
0.100	1.03	6.100	2.06	12.100	14.86	18.10	1.86		
0.117	1.03	6.117	2.06	12.117	14.86	18.12	1.86		
0.133	1.03	6.133	2.06	12.133	14.86	18.13	1.86		
0.150	1.03	6.150	2.06	12.150	14.86	18.15	1.86		
0.167	1.03	6.167	2.06	12.167	14.86	18.17	1.86		
0.183	1.03	6.183	2.06	12.183	14.86	18.18	1.86		
0.200	1.03	6.200	2.06	12.200	14.86	18.20	1.86		
0.217	1.03	6.217	2.06	12.217	14.86	18.22	1.86		
0.233	1.03	6.233	2.06	12.233	14.86	18.23	1.86		
0.250	1.03	6.250	2.06	12.250	14.86	18.25	1.86		
0.267	1.03	6.267	2.06	12.267	14.86	18.27	1.86		
0.283	1.03	6.283	2.06	12.283	14.86	18.28	1.86		
0.300	1.03	6.300	2.06	12.300	14.86	18.30	1.86		
0.317	1.03	6.317	2.06	12.317	14.86	18.32	1.86		
0.333	1.03	6.333	2.06	12.333	14.86	18.33	1.86		
0.350	1.03	6.350	2.06	12.350	14.86	18.35	1.86		
0.367	1.03	6.367	2.06	12.367	14.86	18.37	1.86		
0.383	1.03	6.383	2.06	12.383	14.86	18.38	1.86		
0.400	1.03	6.400	2.06	12.400	14.86	18.40	1.86		
0.417	1.03	6.417	2.06	12.417	14.86	18.42	1.86		
0.433	1.03	6.433	2.06	12.433	14.86	18.43	1.86		
0.450	1.03	6.450	2.06	12.450	14.86	18.45	1.86		
0.467	1.03	6.467	2.06	12.467	14.86	18.47	1.86		
0.483	1.03	6.483	2.06	12.483	14.86	18.48	1.86		
0.500	1.03	6.500	2.06	12.500	14.86	18.50	1.86		
0.517	1.03	6.517	2.06	12.517	7.64	18.52	1.86		
0.533	1.03	6.533	2.06	12.533	7.64	18.53	1.86		
0.550	1.03	6.550	2.06	12.550	7.64	18.55	1.86		
0.567	1.03	6.567	2.06	12.567	7.64	18.57	1.86		
0.583	1.03	6.583	2.06	12.583	7.64	18.58	1.86		
0.600	1.03	6.600	2.06	12.600	7.64	18.60	1.86		
0.617	1.03	6.617	2.06	12.617	7.64	18.62	1.86		
0.633	1.03	6.633	2.06	12.633	7.64	18.63	1.86		
0.650	1.03	6.650	2.06	12.650	7.64	18.65	1.86		
0.667	1.03	6.667	2.06	12.667	7.64	18.67	1.86		
0.683	1.03	6.683	2.06	12.683	7.64	18.68	1.86		
0.700	1.03	6.700	2.06	12.700	7.64	18.70	1.86		
0.717	1.03	6.717	2.06	12.717	7.64	18.72	1.86		
0.733	1.03	6.733	2.06	12.733	7.64	18.73	1.86		
0.750	1.03	6.750	2.06	12.750	7.64	18.75	1.86		
0.767	1.03	6.767	2.06	12.767	7.64	18.77	1.86		
0.783	1.03	6.783	2.06	12.783	7.64	18.78	1.86		
0.800	1.03	6.800	2.06	12.800	7.64	18.80	1.86		
0.817	1.03	6.817	2.06	12.817	7.64	18.82	1.86		
0.833	1.03	6.833	2.06	12.833	7.64	18.83	1.86		
0.850	1.03	6.850	2.06	12.850	7.64	18.85	1.86		
0.867	1.03	6.867	2.06	12.867	7.64	18.87	1.86		
0.883	1.03	6.883	2.06	12.883	7.64	18.88	1.86		
0.900	1.03	6.900	2.06	12.900	7.64	18.90	1.86		
0.917	1.03	6.917	2.06	12.917	7.64	18.92	1.86		
0.933	1.03	6.933	2.06	12.933	7.64	18.93	1.86		
0.950	1.03	6.950	2.06	12.950	7.64	18.95	1.86		
0.967	1.03	6.967	2.06	12.967	7.64	18.97	1.86		
0.983	1.03	6.983	2.06	12.983	7.64	18.98	1.86		
1.000	1.03	7.000	2.06	13.000	7.64	19.00	1.86		
1.017	1.03	7.017	2.06	13.017	1.44	19.02	1.86		
1.033	1.03	7.033	2.06	13.033	1.44	19.03	1.86		
1.050	1.03	7.050	2.06	13.050	1.44	19.05	1.86		
1.067	1.03	7.067	2.06	13.067	1.44	19.07	1.86		
1.083	1.03	7.083	2.06	13.083	1.44	19.08	1.86		
1.100	1.03	7.100	2.06	13.100	1.44	19.10	1.86		
1.117	1.03	7.117	2.06	13.117	1.44	19.12	1.86		
1.133	1.03	7.133	2.06	13.133	1.44	19.13	1.86		
1.150	1.03	7.150	2.06	13.150	1.44	19.15	1.86		
1.167	1.03	7.167	2.06	13.167	1.44	19.17	1.86		
1.183	1.03	7.183	2.06	13.183	1.44	19.18	1.86		
1.200	1.03	7.200	2.06	13.200	1.44	19.20	1.86		
1.217	1.03	7.217	2.06	13.217	1.44	19.22	1.86		
1.233	1.03	7.233	2.06	13.233	1.44	19.23	1.86		
1.250	1.03	7.250	2.06	13.250	1.44	19.25	1.86		
1.267	1.03	7.267	2.06	13.267	1.44	19.27	1.86		
1.283	1.03	7.283	2.06	13.283	1.44	19.28	1.86		
1.300	1.03	7.300	2.06	13.300	1.44	19.30	1.86		
1.317	1.03	7.317	2.06	13.317	1.44	19.32	1.86		

HRP8-PR-SWM_2-100 YEAR.OUT

1.333	1.03	7.333	2.06	13.333	1.44	19.33	1.86
1.350	1.03	7.350	2.06	13.350	1.44	19.35	1.86
1.367	1.03	7.367	2.06	13.367	1.44	19.37	1.86
1.383	1.03	7.383	2.06	13.383	1.44	19.38	1.86
1.400	1.03	7.400	2.06	13.400	1.44	19.40	1.86
1.417	1.03	7.417	2.06	13.417	1.44	19.42	1.86
1.433	1.03	7.433	2.06	13.433	1.44	19.43	1.86
1.450	1.03	7.450	2.06	13.450	1.44	19.45	1.86
1.467	1.03	7.467	2.06	13.467	1.44	19.47	1.86
1.483	1.03	7.483	2.06	13.483	1.44	19.48	1.86
1.500	1.03	7.500	2.06	13.500	1.44	19.50	1.86
1.517	1.03	7.517	2.06	13.517	8.46	19.52	1.86
1.533	1.03	7.533	2.06	13.533	8.46	19.53	1.86
1.550	1.03	7.550	2.06	13.550	8.46	19.55	1.86
1.567	1.03	7.567	2.06	13.567	8.46	19.57	1.86
1.583	1.03	7.583	2.06	13.583	8.46	19.58	1.86
1.600	1.03	7.600	2.06	13.600	8.46	19.60	1.86
1.617	1.03	7.617	2.06	13.617	8.46	19.62	1.86
1.633	1.03	7.633	2.06	13.633	8.46	19.63	1.86
1.650	1.03	7.650	2.06	13.650	8.46	19.65	1.86
1.667	1.03	7.667	2.06	13.667	8.46	19.67	1.86
1.683	1.03	7.683	2.06	13.683	8.46	19.68	1.86
1.700	1.03	7.700	2.06	13.700	8.46	19.70	1.86
1.717	1.03	7.717	2.06	13.717	8.46	19.72	1.86
1.733	1.03	7.733	2.06	13.733	8.46	19.73	1.86
1.750	1.03	7.750	2.06	13.750	8.46	19.75	1.86
1.767	1.06	7.767	2.06	13.767	8.46	19.77	1.86
1.783	1.06	7.783	2.06	13.783	8.46	19.78	1.86
1.800	1.06	7.800	2.06	13.800	8.46	19.80	1.86
1.817	1.06	7.817	2.06	13.817	8.46	19.82	1.86
1.833	1.06	7.833	2.06	13.833	8.46	19.83	1.86
1.850	1.06	7.850	2.06	13.850	8.46	19.85	1.86
1.867	1.06	7.867	2.06	13.867	8.46	19.87	1.86
1.883	1.06	7.883	2.06	13.883	8.46	19.88	1.86
1.900	1.06	7.900	2.06	13.900	8.46	19.90	1.86
1.917	1.06	7.917	2.06	13.917	8.46	19.92	1.86
1.933	1.06	7.933	2.06	13.933	8.46	19.93	1.86
1.950	1.06	7.950	2.06	13.950	8.46	19.95	1.86
1.967	1.06	7.967	2.06	13.967	8.46	19.97	1.86
1.983	1.06	7.983	2.06	13.983	8.46	19.98	1.86
2.000	1.06	8.000	2.07	14.000	8.46	20.00	1.86
2.017	1.34	8.017	2.79	14.017	3.11	20.02	1.24
2.033	1.34	8.033	2.79	14.033	3.10	20.03	1.24
2.050	1.34	8.050	2.79	14.050	3.10	20.05	1.24
2.067	1.34	8.067	2.79	14.067	3.10	20.07	1.24
2.083	1.34	8.083	2.79	14.083	3.10	20.08	1.24
2.100	1.34	8.100	2.79	14.100	3.10	20.10	1.24
2.117	1.34	8.117	2.79	14.117	3.10	20.12	1.24
2.133	1.34	8.133	2.79	14.133	3.10	20.13	1.24
2.150	1.34	8.150	2.79	14.150	3.10	20.15	1.24
2.167	1.34	8.167	2.79	14.167	3.10	20.17	1.24
2.183	1.34	8.183	2.79	14.183	3.10	20.18	1.24
2.200	1.34	8.200	2.79	14.200	3.10	20.20	1.24
2.217	1.34	8.217	2.79	14.217	3.10	20.22	1.24
2.233	1.34	8.233	2.79	14.233	3.10	20.23	1.24
2.250	1.34	8.250	2.79	14.250	3.10	20.25	1.24
2.267	1.34	8.267	2.79	14.267	3.10	20.27	1.24
2.283	1.34	8.283	2.79	14.283	3.10	20.28	1.24
2.300	1.34	8.300	2.79	14.300	3.10	20.30	1.24
2.317	1.34	8.317	2.79	14.317	3.10	20.32	1.24
2.333	1.34	8.333	2.79	14.333	3.10	20.33	1.24
2.350	1.34	8.350	2.79	14.350	3.10	20.35	1.24
2.367	1.34	8.367	2.79	14.367	3.10	20.37	1.24
2.383	1.34	8.383	2.79	14.383	3.10	20.38	1.24
2.400	1.34	8.400	2.79	14.400	3.10	20.40	1.24
2.417	1.34	8.417	2.79	14.417	3.10	20.42	1.24
2.433	1.34	8.433	2.79	14.433	3.10	20.43	1.24
2.450	1.34	8.450	2.79	14.450	3.10	20.45	1.24
2.467	1.34	8.467	2.79	14.467	3.10	20.47	1.24
2.483	1.34	8.483	2.79	14.483	3.10	20.48	1.24
2.500	1.34	8.500	2.79	14.500	3.10	20.50	1.24
2.517	1.34	8.517	2.79	14.517	3.10	20.52	1.24
2.533	1.34	8.533	2.79	14.533	3.10	20.53	1.24
2.550	1.34	8.550	2.79	14.550	3.10	20.55	1.24
2.567	1.34	8.567	2.79	14.567	3.10	20.57	1.24
2.583	1.34	8.583	2.79	14.583	3.10	20.58	1.24
2.600	1.34	8.600	2.79	14.600	3.10	20.60	1.24
2.617	1.34	8.617	2.79	14.617	3.10	20.62	1.24
2.633	1.34	8.633	2.79	14.633	3.10	20.63	1.24
2.650	1.34	8.650	2.79	14.650	3.10	20.65	1.24
2.667	1.34	8.667	2.79	14.667	3.10	20.67	1.24
2.683	1.34	8.683	2.79	14.683	3.10	20.68	1.24
2.700	1.34	8.700	2.79	14.700	3.10	20.70	1.24
2.717	1.34	8.717	2.79	14.717	3.10	20.72	1.24
2.733	1.34	8.733	2.79	14.733	3.10	20.73	1.24
2.750	1.34	8.750	2.79	14.750	3.10	20.75	1.24
2.767	1.34	8.767	2.79	14.767	3.10	20.77	1.24

HRPB-PR-SWM_2-100 YEAR.OUT									
2.783	1.34	8.783	2.79	14.783	3.10	20.78	1.24		
2.800	1.34	8.800	2.79	14.800	3.10	20.80	1.24		
2.817	1.34	8.817	2.79	14.817	3.10	20.82	1.24		
2.833	1.34	8.833	2.79	14.833	3.10	20.83	1.24		
2.850	1.34	8.850	2.79	14.850	3.10	20.85	1.24		
2.867	1.34	8.867	2.79	14.867	3.10	20.87	1.24		
2.883	1.34	8.883	2.79	14.883	3.10	20.88	1.24		
2.900	1.34	8.900	2.79	14.900	3.10	20.90	1.24		
2.917	1.34	8.917	2.79	14.917	3.10	20.92	1.24		
2.933	1.34	8.933	2.79	14.933	3.10	20.93	1.24		
2.950	1.34	8.950	2.79	14.950	3.10	20.95	1.24		
2.967	1.34	8.967	2.79	14.967	3.10	20.97	1.24		
2.983	1.34	8.983	2.79	14.983	3.10	20.98	1.24		
3.000	1.34	9.000	2.79	15.000	3.10	21.00	1.24		
3.017	1.34	9.017	3.30	15.017	3.10	21.02	1.24		
3.033	1.34	9.033	3.30	15.033	3.10	21.03	1.24		
3.050	1.34	9.050	3.30	15.050	3.10	21.05	1.24		
3.067	1.34	9.067	3.30	15.067	3.10	21.07	1.24		
3.083	1.34	9.083	3.30	15.083	3.10	21.08	1.24		
3.100	1.34	9.100	3.30	15.100	3.10	21.10	1.24		
3.117	1.34	9.117	3.30	15.117	3.10	21.12	1.24		
3.133	1.34	9.133	3.30	15.133	3.10	21.13	1.24		
3.150	1.34	9.150	3.30	15.150	3.10	21.15	1.24		
3.167	1.34	9.167	3.30	15.167	3.10	21.17	1.24		
3.183	1.34	9.183	3.30	15.183	3.10	21.18	1.24		
3.200	1.34	9.200	3.30	15.200	3.10	21.20	1.24		
3.217	1.34	9.217	3.30	15.217	3.10	21.22	1.24		
3.233	1.34	9.233	3.30	15.233	3.10	21.23	1.24		
3.250	1.34	9.250	3.30	15.250	3.10	21.25	1.24		
3.267	1.34	9.267	3.30	15.267	3.10	21.27	1.24		
3.283	1.34	9.283	3.30	15.283	3.10	21.28	1.24		
3.300	1.34	9.300	3.30	15.300	3.10	21.30	1.24		
3.317	1.34	9.317	3.30	15.317	3.10	21.32	1.24		
3.333	1.34	9.333	3.30	15.333	3.10	21.33	1.24		
3.350	1.34	9.350	3.30	15.350	3.10	21.35	1.24		
3.367	1.34	9.367	3.30	15.367	3.10	21.37	1.24		
3.383	1.34	9.383	3.30	15.383	3.10	21.38	1.24		
3.400	1.34	9.400	3.30	15.400	3.10	21.40	1.24		
3.417	1.34	9.417	3.30	15.417	3.10	21.42	1.24		
3.433	1.34	9.433	3.30	15.433	3.10	21.43	1.24		
3.450	1.34	9.450	3.30	15.450	3.10	21.45	1.24		
3.467	1.34	9.467	3.30	15.467	3.10	21.47	1.24		
3.483	1.34	9.483	3.30	15.483	3.10	21.48	1.24		
3.500	1.34	9.500	3.30	15.500	3.10	21.50	1.24		
3.517	1.34	9.517	3.72	15.517	3.10	21.52	1.24		
3.533	1.34	9.533	3.72	15.533	3.10	21.53	1.24		
3.550	1.34	9.550	3.72	15.550	3.10	21.55	1.24		
3.567	1.34	9.567	3.72	15.567	3.10	21.57	1.24		
3.583	1.34	9.583	3.72	15.583	3.10	21.58	1.24		
3.600	1.34	9.600	3.72	15.600	3.10	21.60	1.24		
3.617	1.34	9.617	3.72	15.617	3.10	21.62	1.24		
3.633	1.34	9.633	3.72	15.633	3.10	21.63	1.24		
3.650	1.34	9.650	3.72	15.650	3.10	21.65	1.24		
3.667	1.34	9.667	3.72	15.667	3.10	21.67	1.24		
3.683	1.34	9.683	3.72	15.683	3.10	21.68	1.24		
3.700	1.34	9.700	3.72	15.700	3.10	21.70	1.24		
3.717	1.34	9.717	3.72	15.717	3.10	21.72	1.24		
3.733	1.34	9.733	3.72	15.733	3.10	21.73	1.24		
3.750	1.34	9.750	3.72	15.750	3.10	21.75	1.24		
3.767	1.34	9.767	3.72	15.767	3.10	21.77	1.24		
3.783	1.34	9.783	3.72	15.783	3.10	21.78	1.24		
3.800	1.34	9.800	3.72	15.800	3.10	21.80	1.24		
3.817	1.34	9.817	3.72	15.817	3.10	21.82	1.24		
3.833	1.34	9.833	3.72	15.833	3.10	21.83	1.24		
3.850	1.34	9.850	3.72	15.850	3.10	21.85	1.24		
3.867	1.34	9.867	3.72	15.867	3.10	21.87	1.24		
3.883	1.34	9.883	3.72	15.883	3.10	21.88	1.24		
3.900	1.34	9.900	3.72	15.900	3.10	21.90	1.24		
3.917	1.34	9.917	3.72	15.917	3.10	21.92	1.24		
3.933	1.34	9.933	3.72	15.933	3.10	21.93	1.24		
3.950	1.34	9.950	3.72	15.950	3.10	21.95	1.24		
3.967	1.34	9.967	3.72	15.967	3.10	21.97	1.24		
3.983	1.34	9.983	3.72	15.983	3.10	21.98	1.24		
4.000	1.34	10.000	3.72	16.000	3.10	22.00	1.24		
4.017	1.65	10.017	4.75	16.017	1.86	22.02	1.24		
4.033	1.65	10.033	4.75	16.033	1.86	22.03	1.24		
4.050	1.65	10.050	4.75	16.050	1.86	22.05	1.24		
4.067	1.65	10.067	4.75	16.067	1.86	22.07	1.24		
4.083	1.65	10.083	4.75	16.083	1.86	22.08	1.24		
4.100	1.65	10.100	4.75	16.100	1.86	22.10	1.24		
4.117	1.65	10.117	4.75	16.117	1.86	22.12	1.24		
4.133	1.65	10.133	4.75	16.133	1.86	22.13	1.24		
4.150	1.65	10.150	4.75	16.150	1.86	22.15	1.24		
4.167	1.65	10.167	4.75	16.167	1.86	22.17	1.24		
4.183	1.65	10.183	4.75	16.183	1.86	22.18	1.24		
4.200	1.65	10.200	4.75	16.200	1.86	22.20	1.24		
4.217	1.65	10.217	4.75	16.217	1.86	22.22	1.24		

HRPB-PR-SWM_2-100 YEAR.OUT							
4.233	1.65	10.233	4.75	16.233	1.86	22.23	1.24
4.250	1.65	10.250	4.75	16.250	1.86	22.25	1.24
4.267	1.65	10.267	4.75	16.267	1.86	22.27	1.24
4.283	1.65	10.283	4.75	16.283	1.86	22.28	1.24
4.300	1.65	10.300	4.75	16.300	1.86	22.30	1.24
4.317	1.65	10.317	4.75	16.317	1.86	22.32	1.24
4.333	1.65	10.333	4.75	16.333	1.86	22.33	1.24
4.350	1.65	10.350	4.75	16.350	1.86	22.35	1.24
4.367	1.65	10.367	4.75	16.367	1.86	22.37	1.24
4.383	1.65	10.383	4.75	16.383	1.86	22.38	1.24
4.400	1.65	10.400	4.75	16.400	1.86	22.40	1.24
4.417	1.65	10.417	4.75	16.417	1.86	22.42	1.24
4.433	1.65	10.433	4.75	16.433	1.86	22.43	1.24
4.450	1.65	10.450	4.75	16.450	1.86	22.45	1.24
4.467	1.65	10.467	4.75	16.467	1.86	22.47	1.24
4.483	1.65	10.483	4.75	16.483	1.86	22.48	1.24
4.500	1.65	10.500	4.75	16.500	1.86	22.50	1.24
4.517	1.65	10.517	6.40	16.517	1.86	22.52	1.24
4.533	1.65	10.533	6.40	16.533	1.86	22.53	1.24
4.550	1.65	10.550	6.40	16.550	1.86	22.55	1.24
4.567	1.65	10.567	6.40	16.567	1.86	22.57	1.24
4.583	1.65	10.583	6.40	16.583	1.86	22.58	1.24
4.600	1.65	10.600	6.40	16.600	1.86	22.60	1.24
4.617	1.65	10.617	6.40	16.617	1.86	22.62	1.24
4.633	1.65	10.633	6.40	16.633	1.86	22.63	1.24
4.650	1.65	10.650	6.40	16.650	1.86	22.65	1.24
4.667	1.65	10.667	6.40	16.667	1.86	22.67	1.24
4.683	1.65	10.683	6.40	16.683	1.86	22.68	1.24
4.700	1.65	10.700	6.40	16.700	1.86	22.70	1.24
4.717	1.65	10.717	6.40	16.717	1.86	22.72	1.24
4.733	1.65	10.733	6.40	16.733	1.86	22.73	1.24
4.750	1.65	10.750	6.40	16.750	1.86	22.75	1.24
4.767	1.65	10.767	6.40	16.767	1.86	22.77	1.24
4.783	1.65	10.783	6.40	16.783	1.86	22.78	1.24
4.800	1.65	10.800	6.40	16.800	1.86	22.80	1.24
4.817	1.65	10.817	6.40	16.817	1.86	22.82	1.24
4.833	1.65	10.833	6.40	16.833	1.86	22.83	1.24
4.850	1.65	10.850	6.40	16.850	1.86	22.85	1.24
4.867	1.65	10.867	6.40	16.867	1.86	22.87	1.24
4.883	1.65	10.883	6.40	16.883	1.86	22.88	1.24
4.900	1.65	10.900	6.40	16.900	1.86	22.90	1.24
4.917	1.65	10.917	6.40	16.917	1.86	22.92	1.24
4.933	1.65	10.933	6.40	16.933	1.86	22.93	1.24
4.950	1.65	10.950	6.40	16.950	1.86	22.95	1.24
4.967	1.65	10.967	6.40	16.967	1.86	22.97	1.24
4.983	1.65	10.983	6.40	16.983	1.86	22.98	1.24
5.000	1.65	11.000	6.40	17.000	1.86	23.00	1.24
5.017	1.65	11.017	9.91	17.017	1.86	23.01	1.24
5.033	1.65	11.033	9.91	17.033	1.86	23.03	1.24
5.050	1.65	11.050	9.91	17.050	1.86	23.05	1.24
5.067	1.65	11.067	9.91	17.067	1.86	23.07	1.24
5.083	1.65	11.083	9.91	17.083	1.86	23.08	1.24
5.100	1.65	11.100	9.91	17.100	1.86	23.10	1.24
5.117	1.65	11.117	9.91	17.117	1.86	23.12	1.24
5.133	1.65	11.133	9.91	17.133	1.86	23.13	1.24
5.150	1.65	11.150	9.91	17.150	1.86	23.15	1.24
5.167	1.65	11.167	9.91	17.167	1.86	23.17	1.24
5.183	1.65	11.183	9.91	17.183	1.86	23.18	1.24
5.200	1.65	11.200	9.91	17.200	1.86	23.20	1.24
5.217	1.65	11.217	9.91	17.217	1.86	23.22	1.24
5.233	1.65	11.233	9.91	17.233	1.86	23.23	1.24
5.250	1.65	11.250	9.91	17.250	1.86	23.25	1.24
5.267	1.65	11.267	9.91	17.267	1.86	23.27	1.24
5.283	1.65	11.283	9.91	17.283	1.86	23.28	1.24
5.300	1.65	11.300	9.91	17.300	1.86	23.30	1.24
5.317	1.65	11.317	9.91	17.317	1.86	23.32	1.24
5.333	1.65	11.333	9.91	17.333	1.86	23.33	1.24
5.350	1.65	11.350	9.91	17.350	1.86	23.35	1.24
5.367	1.65	11.367	9.91	17.367	1.86	23.37	1.24
5.383	1.65	11.383	9.91	17.383	1.86	23.38	1.24
5.400	1.65	11.400	9.91	17.400	1.86	23.40	1.24
5.417	1.65	11.417	9.91	17.417	1.86	23.42	1.24
5.433	1.65	11.433	9.91	17.433	1.86	23.43	1.24
5.450	1.65	11.450	9.91	17.450	1.86	23.45	1.24
5.467	1.65	11.467	9.91	17.467	1.86	23.47	1.24
5.483	1.65	11.483	9.91	17.483	1.86	23.48	1.24
5.500	1.65	11.500	9.91	17.500	1.86	23.50	1.24
5.517	1.65	11.517	42.92	17.517	1.86	23.52	1.24
5.533	1.65	11.533	42.93	17.533	1.86	23.53	1.24
5.550	1.65	11.550	42.93	17.550	1.86	23.55	1.24
5.567	1.65	11.567	42.93	17.567	1.86	23.57	1.24
5.583	1.65	11.583	42.93	17.583	1.86	23.58	1.24
5.600	1.65	11.600	42.93	17.600	1.86	23.60	1.24
5.617	1.65	11.617	42.93	17.617	1.86	23.62	1.24
5.633	1.65	11.633	42.93	17.633	1.86	23.63	1.24
5.650	1.65	11.650	42.93	17.650	1.86	23.65	1.24
5.667	1.65	11.667	42.93	17.667	1.86	23.67	1.24

HRP8-PR-SWM_2-100 YEAR.OUT											
5.683	1.65	[11.683	42.93		17.683	1.86		23.68	1.24		
5.700	1.65	[11.700	42.93		17.700	1.86		23.70	1.24		
5.717	1.65	[11.717	42.93		17.717	1.86		23.72	1.24		
5.733	1.65	[11.733	42.93		17.733	1.86		23.73	1.24		
5.750	1.65	[11.750	42.93		17.750	1.86		23.75	1.24		
5.767	1.65	[11.767	113.90		17.767	1.86		23.77	1.24		
5.783	1.65	[11.783	113.93		17.783	1.86		23.78	1.24		
5.800	1.65	[11.800	113.93		17.800	1.86		23.80	1.24		
5.817	1.65	[11.817	113.93		17.817	1.86		23.82	1.24		
5.833	1.65	[11.833	113.93		17.833	1.86		23.83	1.24		
5.850	1.65	[11.850	113.93		17.850	1.86		23.85	1.24		
5.867	1.65	[11.867	113.93		17.867	1.86		23.87	1.24		
5.883	1.65	[11.883	113.93		17.883	1.86		23.88	1.24		
5.900	1.65	[11.900	113.93		17.900	1.86		23.90	1.24		
5.917	1.65	[11.917	113.93		17.917	1.86		23.92	1.24		
5.933	1.65	[11.933	113.93		17.933	1.86		23.93	1.24		
5.950	1.65	[11.950	113.93		17.950	1.86		23.95	1.24		
5.967	1.65	[11.967	113.93		17.967	1.86		23.97	1.24		
5.983	1.65	[11.983	113.93		17.983	1.86		23.98	1.24		
6.000	1.65	[12.000	113.93		18.000	1.86		24.00	1.24		

Unit Hyd Qpeak (cms)= 0.515

PEAK FLOW (cms)= 0.259 (i)
TIME TO PEAK (hrs)= 12.033
RUNOFF VOLUME (mm)= 43.872
TOTAL RAINFALL (mm)= 103.201
RUNOFF COEFFICIENT = 0.425

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)					
1	2	3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)
ID1= 1 (0253):			1.51	0.259	12.03
+ ID2= 2 (0036):			85.33	5.484	12.57
ID = 3 (0035):			86.84	5.525	12.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
0 0 T T H H Y Y MM MM 0 0
0 0 T T H H Y M M 0 0
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voind.dat
Output filename: C:\Users\Abira\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\va5a9234a-d409-4721-925e-a1c8e4e6b140\scenar
Summary filename: C:\Users\Abira\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\va5a9234a-d409-4721-925e-a1c8e4e6b140\scenar

DATE: 03/24/2023 TIME: 11:14:32

USER:

COMMENTS: _____

** SIMULATION : Run 05 **

MASS STORM Filename: C:\Users\Abira\AppData\Local\Temp\76b02a28-c3e0-40c5-9a3c-cd3cb026027b\95accb52

HRP8-PR-SWM_2-100 YEAR.OUT
| Ptotal=115.20 mm | Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.15	6.25	2.30	12.25	16.59	18.25	2.07
0.50	1.15	6.50	2.30	12.50	16.59	18.50	2.07
0.75	1.15	6.75	2.30	12.75	8.52	18.75	2.07
1.00	1.15	7.00	2.30	13.00	8.52	19.00	2.07
1.25	1.15	7.25	2.30	13.25	1.61	19.25	2.07
1.50	1.15	7.50	2.30	13.50	1.61	19.50	2.07
1.75	1.15	7.75	2.30	13.75	9.45	19.75	2.07
2.00	2.07	8.00	2.30	14.00	9.45	20.00	2.07
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38
3.00	1.50	9.00	3.11	15.00	3.46	21.00	1.38
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38
3.50	1.50	9.50	3.69	15.50	3.46	21.50	1.38
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38
4.00	1.50	10.00	4.15	16.00	3.46	22.00	1.38
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38
4.50	1.84	10.50	5.30	16.50	2.07	22.50	1.38
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38
5.00	1.84	11.00	7.14	17.00	2.07	23.00	1.38
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38
5.50	1.84	11.50	11.06	17.50	2.07	23.50	1.38
5.75	1.84	11.75	47.92	17.75	2.07	23.75	1.38
6.00	1.84	12.00	127.18	18.00	2.07	24.00	1.38

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME '	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07
1.000	1.15	7.000	2.30	13.000	8.51	19.00	2.07
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07

HRP8-PR-SWM_2-100 YEAR.OUT									
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07		
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07		
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.767	1.61	7.767	2.30	13.767	9.45	19.77	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38		
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38		
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38		
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38		
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38		
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38		
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38		
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38		
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38		
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38		
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38		
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38		
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38		
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38		
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38		
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38		
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38		
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38		
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38		
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38		
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38		
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38		
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38		
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38		
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38		
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38		
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38		
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38		
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38		
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38		

HRP8-PR-SWM_2-100 YEAR.OUT							
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.500	1.84	11.500	11.10	17.500	2.07	23.50	1.38
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.767	1.84	11.767	87.66	17.767	2.07	23.77	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38
6.000	1.84	12.000	127.03	18.000	2.07	24.00	1.38

HRPB-PR-SWM_2-100 YEAR.OUT									
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07		
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07		
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07		
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07		
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07		
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07		
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07		
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07		
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07		
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07		
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07		
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07		
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07		
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07		
1.000	1.15	7.000	2.30	13.000	8.51	19.00	2.07		
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07		
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07		
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07		
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07		
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07		
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07		
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07		
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07		
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07		
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07		
1.500	1.15	7.500	2.30	13.500	1.63	19.50	2.07		
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07		
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07		
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07		
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07		
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07		
1.767	1.61	7.767	2.30	13.767	9.45	19.77	2.07		
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
2.000	2.07	8.000	2.30	14.000	9.43	20.00	2.07		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		

HRPB-PR-SWM_2-100 YEAR.OUT							
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38
5.000	1.84	11.000	7.15	17.000	2.07	23.00	1.38
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.500	1.84	11.500	11.10	17.500	2.07	23.50	1.38
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.767	1.84	11.767	87.66	17.767	2.07	23.77	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38
6.000	1.84	12.000	127.03	18.000	2.07	24.00	1.38

HRP8-PR-SWM_2-100 YEAR.OUT

Max.Eff.Inten.(mm/hr)= 127.18 93.56
over (min) 5.00 10.00
Storage Coeff. (min)= 2.60 (ii) 9.43 (iii)
Unit Hyd. Tpeak (min)= 4.00 10.00
Unit Hyd. peak (cms)= 0.36 0.12

PEAK FLOW (cms)= 0.71 0.46 1.144 (iii)
TIME TO PEAK (hrs)= 12.00 12.03 12.00
RUNOFF VOLUME (mm)= 113.70 71.33 90.82
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.62 0.79

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1050):	4.49	0.797	12.07	65.26
+ ID2= 2 (0250):	4.37	1.144	12.00	90.82
ID = 3 (0018):	8.86	1.882	12.00	77.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)	Routing time step (min)'= 2.00
IN= 2---> OUT= 1	

Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0018)	0.86	1.00	12.00	77.87	0.52
OUTFLOW: ID= 1 (0037)	0.86	1.28	12.10	77.83	0.44

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

HRP8-PR-SWM_2-100 YEAR.OUT

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.533	1.15	6.533	2.30	12.533	14.57	18.53	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07
1.067	1.15	7.067	2.30	13.067	5.97	19.07	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07
1.600	1.15	7.600	2.30	13.600	7.49	19.60	2.07
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07
1.867	1.96	7.867	2.30	13.867	9.45	19.87	2.07
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38
3.067	1.50	9.067	3.40	15.067	3.46	21.07	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.600	1.50	9.600	4.03	15.600	3.46	21.60	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.533	1.84	10.533	5.76	16.533	2.07	22.53	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38
5.067	1.84	11.067	9.10	17.067	2.07	23.07	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38
5.600	1.84	11.600	38.71	17.600	2.07	23.60	1.38
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38
5.867	1.84	11.867	117.27	17.867	2.07	23.87	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 4.241 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 73.166
TOTAL RAINFALL (mm)= 115.200
RUNOFF COEFFICIENT = 0.635

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1051):	50.34	4.241	12.53	73.17
+ ID2= 2 (0037):	8.86	1.283	12.10	77.83
ID = 3 (0029):	59.20	5.020	12.40	73.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	10.65
STANDHYD (0251)	Total Imp(%)=	37.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	37.00

IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.94
Dep. Storage (mm)=	1.50
Average Slope (%)=	2.00
Length (m)=	266.46
Mannings n	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

HRPB-PR-SWM_2-100 YEAR.OUT

HRPB-PR-SWM_2-100 YEAR.OUT

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07
0.500	1.15	6.500	2.30	12.500	16.58	18.50	2.07
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07
1.500	1.15	7.500	2.30	13.500	1.62	19.50	2.07
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.800	2.07	7.800	2.30	13.800	9.45	19.80	2.07
1.850	2.07	7.850	2.30	13.850	9.45	19.85	2.07
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07
2.000	2.07	8.000	2.30	14.000	9.44	20.00	2.07
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
4.000	1.50	10.000	4.15	16.000	3.45	22.00	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38

4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38
5.500	1.84	11.500	11.08	17.500	2.07	23.50	1.38
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38
5.750	1.84	11.750	47.97	17.750	2.07	23.75	1.38
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38
6.000	1.84	12.000	127.12	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 52.89
over (min) 6.00 30.00
Storage Coeff. (min)= 3.39 (ii) 28.72 (ii)
Unit Hyd. Tpeak (min)= 6.00 30.00
Unit Hyd. peak (cms)= 0.26 0.04

PEAK FLOW (cms)= 1.37 0.58 *TOTALS*
TIME TO PEAK (hrs)= 12.00 1.671 (iii)
RUNOFF VOLUME (mm)= 113.70 60.84 80.40
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.99 0.53 0.70

(i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN² = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0031) |
1 + 2 = 3
ID1= 1 (0251): 10.65 1.671 12.00 80.40
+ ID2= 2 (0029): 50.20 5.020 12.40 73.86
=====

ID = 3 (0031): 69.85 5.781 12.40 74.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0039) |
| IN= 2----> OUT= 1 | Routing time step (min)!= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0500
1.00 100.67 0.0500
2.00 100.33 0.0500 / 0.0300 Main Channel
3.00 100.00 0.0300 Main Channel
4.00 100.00 0.0300 Main Channel
5.00 100.33 0.0300 / 0.0500 Main Channel
6.00 100.67 0.0500
7.00 101.00 0.0500

<----- TRAVEL TIME TABLE ----->

HRP8-PR-SWM_2-100 YEAR.OUT					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.990E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ---->						<-pipe / channel->	
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0031)	69.85	5.78	12.40	74.86	0.99	1.03	
OUTFLOW: ID= 1 (0039)	69.85	5.63	12.50	74.85	1.00	1.04	

CALIB	
STANDHYD (0252)	
ID= 1 DT= 5.0 min	

Area (ha)=	15.48
Total Imp(%)=	45.00
Dir. Conn.(%)=	45.00

Surface Area	(ha)=	6.97	8.51
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	321.25	100.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.15	6.083	2.30	12.083	16.60	18.08	2.07		
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07		
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07		
0.583	1.15	6.583	2.30	12.583	8.53	18.58	2.07		
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07		
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07		
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07		
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07		
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07		
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07		
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07		
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07		
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07		
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07		
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07		
1.583	1.15	7.583	2.30	13.583	9.44	19.58	2.07		
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07		
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07		
1.833	2.07	7.833	2.30	13.833	9.45	19.83	2.07		
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07		
2.000	2.07	8.000	2.30	14.000	9.45	20.00	2.07		
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38		

HRP8-PR-SWM_2-100 YEAR.OUT					
3.167	1.50	9.167	3.69	15.167	3.46
3.250	1.50	9.250	3.69	15.250	3.46
3.333	1.50	9.333	3.69	15.333	3.46
3.417	1.50	9.417	3.69	15.417	3.46
3.500	1.50	9.500	3.69	15.500	3.46
3.583	1.50	9.583	4.15	15.583	3.46
3.667	1.50	9.667	4.15	15.667	3.46
3.750	1.50	9.750	4.15	15.750	3.46
3.833	1.50	9.833	4.15	15.833	3.46
3.917	1.50	9.917	4.15	15.917	3.46
4.000	1.50	10.000	4.15	16.000	3.46
4.083	1.84	10.083	5.30	16.083	2.07
4.167	1.84	10.167	5.30	16.167	2.07
4.250	1.84	10.250	5.30	16.250	2.07
4.333	1.84	10.333	5.30	16.333	2.07
4.417	1.84	10.417	5.30	16.417	2.07
4.500	1.84	10.500	5.30	16.500	2.07
4.583	1.84	10.583	7.14	16.583	2.07
4.667	1.84	10.667	7.14	16.667	2.07
4.750	1.84	10.750	7.14	16.750	2.07
4.833	1.84	10.833	7.14	16.833	2.07
4.917	1.84	10.917	7.14	16.917	2.07
5.000	1.84	11.000	7.14	17.000	2.07
5.083	1.84	11.083	11.06	17.083	2.07
5.167	1.84	11.167	11.06	17.167	2.07
5.250	1.84	11.250	11.06	17.250	2.07
5.333	1.84	11.333	11.06	17.333	2.07
5.417	1.84	11.417	11.06	17.417	2.07
5.500	1.84	11.500	11.06	17.500	2.07
5.583	1.84	11.583	47.92	17.583	2.07
5.667	1.84	11.667	47.92	17.667	2.07
5.750	1.84	11.750	47.92	17.750	2.07
5.833	1.84	11.833	127.17	17.833	2.07
5.917	1.84	11.917	127.18	17.917	2.07
6.000	1.84	12.000	127.18	18.000	2.07

Max.Eff.Inten.(mm/hr)=	127.18	71.43
over (min)	5.00	20.00
Storage Coeff. (min)=	3.00 (ii)	17.79 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.25	0.06
TOTALS		
PEAK FLOW (cms)=	2.43	0.92
TIME TO PEAK (hrs)=	12.00	12.17
RUNOFF VOLUME (mm)=	113.70	56.75
TOTAL RAINFALL (mm)=	115.20	115.20
RUNOFF COEFFICIENT =	0.99	0.49
		0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0033)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0252):	15.48	3.104	12.00	82.37
+ ID2= 2 (0039):	69.85	5.627	12.50	74.85
=====				
ID = 3 (0033):	85.33	6.683	12.00	76.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)	
IN= 2 ---> OUT= 1	Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)

HRP8-PR-SWM_2-100 YEAR.OUT									
0.05	100.05	.155E+02	0.0	0.18	26.80				
0.09	100.09	.348E+02	0.0	0.27	17.93				
0.14	100.14	.588E+02	0.1	0.33	14.31				
0.19	100.19	.858E+02	0.1	0.39	12.22				
0.24	100.24	.116E+03	0.2	0.44	10.83				
0.28	100.28	.151E+03	0.3	0.49	9.80				
0.33	100.33	.189E+03	0.4	0.53	9.01				
0.39	100.39	.240E+03	0.5	0.61	7.82				
0.44	100.44	.296E+03	0.7	0.68	7.06				
0.50	100.50	.357E+03	0.9	0.73	6.52				
0.55	100.55	.424E+03	1.2	0.78	6.11				
0.61	100.61	.496E+03	1.4	0.83	5.79				
0.66	100.66	.573E+03	1.7	0.86	5.53				
0.72	100.72	.656E+03	2.1	0.90	5.32				
0.78	100.78	.743E+03	2.4	0.93	5.14				
0.83	100.83	.836E+03	2.8	0.96	4.98				
0.89	100.89	.934E+03	3.2	0.99	4.84				
0.94	100.94	.104E+04	3.7	1.01	4.72				
1.00	101.00	.115E+04	4.1	1.04	4.61				

**** WARNING: TRAVEL TIME TABLE EXCEEDED									
<-- hydrograph ----> <-pipe / channel-->									
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL			
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)			
INFLOW : ID= 2 (0033)	85.33	6.68	12.00	76.23	0.99	1.03			
OUTFLOW: ID= 1 (0040)	85.33	6.49	12.47	76.23	1.00	1.04			

OVERFLOW IS OFF									
RESERVOIR(0036)									
IN= 2----> OUT= 1									
DT= 4.0 min									

	OUTFLOW	STORAGE		OUTFLOW	STORAGE				
	(cms)	(ha.m.)		(cms)	(ha.m.)				
	0.0000	0.0000		4.2410	0.9915				
	0.0760	0.3470		5.4870	1.0310				
	0.3892	0.6910		6.4930	1.0400				
	1.7310	0.8250		7.4900	1.0000				
	3.2400	0.9340		8.0000	0.0000				
	AREA	QPEAK	TPEAK	R.V.					
	(ha)	(cms)	(hrs)	(mm)					
INFLOW : ID= 2 (0040)	85.330	6.493	12.47	76.23					
OUTFLOW: ID= 1 (0036)	85.330	6.490	12.50	76.01					
PEAK FLOW REDUCTION [Qout/Qin](%)= 99.96									
TIME SHIFT OF PEAK FLOW (min)= 2.00									
MAXIMUM STORAGE USED (ha.m.)= 1.0400									

CALIB									
NASHYD (0253)									
ID= 1 DT= 1.0 min									

	Area	(ha)=	1.51	Curve Number	(CN)= 75.0				
	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00				
	U.H. Tp(hrs)=	0.11							

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.017	1.15	6.017	2.30	12.017	16.66	18.02	2.07		
0.033	1.15	6.033	2.30	12.033	16.59	18.03	2.07		
0.050	1.15	6.050	2.30	12.050	16.59	18.05	2.07		
0.067	1.15	6.067	2.30	12.067	16.59	18.07	2.07		
0.083	1.15	6.083	2.30	12.083	16.59	18.08	2.07		
0.100	1.15	6.100	2.30	12.100	16.59	18.10	2.07		
0.117	1.15	6.117	2.30	12.117	16.59	18.12	2.07		
0.133	1.15	6.133	2.30	12.133	16.59	18.13	2.07		
0.150	1.15	6.150	2.30	12.150	16.59	18.15	2.07		
0.167	1.15	6.167	2.30	12.167	16.59	18.17	2.07		
0.183	1.15	6.183	2.30	12.183	16.59	18.18	2.07		
0.200	1.15	6.200	2.30	12.200	16.59	18.20	2.07		
0.217	1.15	6.217	2.30	12.217	16.59	18.22	2.07		
0.233	1.15	6.233	2.30	12.233	16.59	18.23	2.07		
0.250	1.15	6.250	2.30	12.250	16.59	18.25	2.07		
0.267	1.15	6.267	2.30	12.267	16.59	18.27	2.07		
0.283	1.15	6.283	2.30	12.283	16.59	18.28	2.07		
0.300	1.15	6.300	2.30	12.300	16.59	18.30	2.07		
0.317	1.15	6.317	2.30	12.317	16.59	18.32	2.07		
0.333	1.15	6.333	2.30	12.333	16.59	18.33	2.07		
0.350	1.15	6.350	2.30	12.350	16.59	18.35	2.07		
0.367	1.15	6.367	2.30	12.367	16.59	18.37	2.07		
0.383	1.15	6.383	2.30	12.383	16.59	18.38	2.07		
0.400	1.15	6.400	2.30	12.400	16.59	18.40	2.07		

HRP8-PR-SWM_2-100 YEAR.OUT							
0.417	1.15	6.417	2.30	12.417	16.59	18.42	2.07
0.433	1.15	6.433	2.30	12.433	16.59	18.43	2.07
0.450	1.15	6.450	2.30	12.450	16.59	18.45	2.07
0.467	1.15	6.467	2.30	12.467	16.59	18.47	2.07
0.483	1.15	6.483	2.30	12.483	16.59	18.48	2.07
0.500	1.15	6.500	2.30	12.500	16.59	18.50	2.07
0.517	1.15	6.517	2.30	12.517	8.53	18.52	2.07
0.533	1.15	6.533	2.30	12.533	8.52	18.53	2.07
0.550	1.15	6.550	2.30	12.550	8.52	18.55	2.07
0.567	1.15	6.567	2.30	12.567	8.52	18.57	2.07
0.583	1.15	6.583	2.30	12.583	8.52	18.58	2.07
0.600	1.15	6.600	2.30	12.600	8.52	18.60	2.07
0.617	1.15	6.617	2.30	12.617	8.52	18.62	2.07
0.633	1.15	6.633	2.30	12.633	8.52	18.63	2.07
0.650	1.15	6.650	2.30	12.650	8.52	18.65	2.07
0.667	1.15	6.667	2.30	12.667	8.52	18.67	2.07
0.683	1.15	6.683	2.30	12.683	8.52	18.68	2.07
0.700	1.15	6.700	2.30	12.700	8.52	18.70	2.07
0.717	1.15	6.717	2.30	12.717	8.52	18.72	2.07
0.733	1.15	6.733	2.30	12.733	8.52	18.73	2.07
0.750	1.15	6.750	2.30	12.750	8.52	18.75	2.07
0.767	1.15	6.767	2.30	12.767	8.52	18.77	2.07
0.783	1.15	6.783	2.30	12.783	8.52	18.78	2.07
0.800	1.15	6.800	2.30	12.800	8.52	18.80	2.07
0.817	1.15	6.817	2.30	12.817	8.52	18.82	2.07
0.833	1.15	6.833	2.30	12.833	8.52	18.83	2.07
0.850	1.15	6.850	2.30	12.850	8.52	18.85	2.07
0.867	1.15	6.867	2.30	12.867	8.52	18.87	2.07
0.883	1.15	6.883	2.30	12.883	8.52	18.88	2.07
0.900	1.15	6.900	2.30	12.900	8.52	18.90	2.07
0.917	1.15	6.917	2.30	12.917	8.52	18.92	2.07
0.933	1.15	6.933	2.30	12.933	8.52	18.93	2.07
0.950	1.15	6.950	2.30	12.950	8.52	18.95	2.07
0.967	1.15	6.967	2.30	12.967	8.52	18.97	2.07
0.983	1.15	6.983	2.30	12.983	8.52	18.98	2.07
1.000	1.15	7.000	2.30	13.000	8.52	19.00	2.07
1.017	1.15	7.017	2.30	13.017	1.62	19.02	2.07
1.033	1.15	7.033	2.30	13.033	1.61	19.03	2.07
1.050	1.15	7.050	2.30	13.050	1.61	19.05	2.07
1.067	1.15	7.067	2.30	13.067	1.61	19.07	2.07
1.083	1.15	7.083	2.30	13.083	1.61	19.08	2.07
1.100	1.15	7.100	2.30	13.100	1.61	19.10	2.07
1.117	1.15	7.117	2.30	13.117	1.61	19.12	2.07
1.133	1.15	7.133	2.30	13.133	1.61	19.13	2.07
1.150	1.15	7.150	2.30	13.150	1.61	19.15	2.07
1.167	1.15	7.167	2.30	13.167	1.61	19.17	2.07
1.183	1.15	7.183	2.30	13.183	1.61	19.18	2.07
1.200	1.15	7.200	2.30	13.200	1.61	19.20	2.07
1.217	1.15	7.217	2.30	13.217	1.61	19.22	2.07
1.233	1.15	7.233	2.30	13.233	1.61	19.23	2.07
1.250	1.15	7.250	2.30	13.250	1.61	19.25	2.07
1.267	1.15	7.267	2.30	13.267	1.61	19.27	2.07
1.283	1.15	7.283	2.30	13.283	1.61	19.28	2.07
1.300	1.15	7.300	2.30	13.300	1.61	19.30	2.07
1.317	1.15	7.317	2.30	13.317	1.61	19.32	2.07
1.333	1.15	7.333	2.30	13.333	1.61	19.33	2.07
1.350	1.15	7.350	2.30	13.350	1.61	19.35	2.07
1.367	1.15	7.367	2.30	13.367	1.61	19.37	2.07
1.383	1.15	7.383	2.30	13.383	1.61	19.38	2.07
1.400	1.15	7.400	2.30	13.400	1.61	19.40	2.07
1.417	1.15	7.417	2.30	13.417	1.61	19.42	2.07
1.433	1.15	7.433	2.30	13.433	1.61	19.43	2.07
1.450	1.15	7.450	2.30	13.450	1.61	19.45	2.07
1.467	1.15	7.467	2.30	13.467	1.61	19.47	2.07
1.483	1.15	7.483	2.30	13.483	1.61	19.48	2.07
1.500	1.15	7.500	2.30	13.500	1.61	19.50	2.07
1.517	1.15	7.517	2.30	13.517	9.45	19.52	2.07
1.533	1.15	7.533	2.30	13.533	9.45	19.53	2.07
1.550	1.15	7.550	2.30	13.550	9.45	19.55	2.07
1.567	1.15	7.567	2.30	13.567	9.45	19.57	2.07
1.583	1.15	7.583	2.30	13.583	9.45	19.58	2.07
1.600	1.15	7.600	2.30	13.600	9.45	19.60	2.07
1.617	1.15	7.617	2.30	13.617	9.45	19.62	2.07
1.633	1.15	7.633	2.30	13.633	9.45	19.63	2.07
1.650	1.15	7.650	2.30	13.650	9.45	19.65	2.07
1.667	1.15	7.667	2.30	13.667	9.45	19.67	2.07
1.683	1.15	7.683	2.30	13.683	9.45	19.68	2.07
1.700	1.15	7.700	2.30	13.700	9.45	19.70	2.07
1.717	1.15	7.717	2.30	13.717	9.45	19.72	2.07
1.733	1.15	7.733	2.30	13.733	9.45	19.73	2.07
1.750	1.15	7.750	2.30	13.750	9.45	19.75	2.07
1.767	2.97	7.767	2.30	13.767	9.45	19.77	2.07
1.783	2.97	7.783	2.30	13.783	9.45	19.78	2.07
1.800	2.97	7.800	2.30	13.800	9.45	19.80	2.07
1.817	2.97	7.817	2.30	13.817	9.45	19.82	2.07
1.833	2.97	7.833	2.30	13.833	9.45	19.83	2.07
1.850	2.97	7.850	2.30	13.850	9.45	19.85	2.07

HRPB-PR-SWM_2-100 YEAR.OUT									
1.867	2.07	7.867	2.30	13.867	9.45	19.87	2.07		
1.883	2.07	7.883	2.30	13.883	9.45	19.88	2.07		
1.900	2.07	7.900	2.30	13.900	9.45	19.90	2.07		
1.917	2.07	7.917	2.30	13.917	9.45	19.92	2.07		
1.933	2.07	7.933	2.30	13.933	9.45	19.93	2.07		
1.950	2.07	7.950	2.30	13.950	9.45	19.95	2.07		
1.967	2.07	7.967	2.30	13.967	9.45	19.97	2.07		
1.983	2.07	7.983	2.30	13.983	9.45	19.98	2.07		
2.000	2.07	8.000	2.31	14.000	9.45	20.00	2.07		
2.017	1.50	8.017	3.11	14.017	3.47	20.02	1.39		
2.033	1.50	8.033	3.11	14.033	3.46	20.03	1.38		
2.050	1.50	8.050	3.11	14.050	3.46	20.05	1.38		
2.067	1.50	8.067	3.11	14.067	3.46	20.07	1.38		
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38		
2.100	1.50	8.100	3.11	14.100	3.46	20.10	1.38		
2.117	1.50	8.117	3.11	14.117	3.46	20.12	1.38		
2.133	1.50	8.133	3.11	14.133	3.46	20.13	1.38		
2.150	1.50	8.150	3.11	14.150	3.46	20.15	1.38		
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38		
2.183	1.50	8.183	3.11	14.183	3.46	20.18	1.38		
2.200	1.50	8.200	3.11	14.200	3.46	20.20	1.38		
2.217	1.50	8.217	3.11	14.217	3.46	20.22	1.38		
2.233	1.50	8.233	3.11	14.233	3.46	20.23	1.38		
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38		
2.267	1.50	8.267	3.11	14.267	3.46	20.27	1.38		
2.283	1.50	8.283	3.11	14.283	3.46	20.28	1.38		
2.300	1.50	8.300	3.11	14.300	3.46	20.30	1.38		
2.317	1.50	8.317	3.11	14.317	3.46	20.32	1.38		
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38		
2.350	1.50	8.350	3.11	14.350	3.46	20.35	1.38		
2.367	1.50	8.367	3.11	14.367	3.46	20.37	1.38		
2.383	1.50	8.383	3.11	14.383	3.46	20.38	1.38		
2.400	1.50	8.400	3.11	14.400	3.46	20.40	1.38		
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38		
2.433	1.50	8.433	3.11	14.433	3.46	20.43	1.38		
2.450	1.50	8.450	3.11	14.450	3.46	20.45	1.38		
2.467	1.50	8.467	3.11	14.467	3.46	20.47	1.38		
2.483	1.50	8.483	3.11	14.483	3.46	20.48	1.38		
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38		
2.517	1.50	8.517	3.11	14.517	3.46	20.52	1.38		
2.533	1.50	8.533	3.11	14.533	3.46	20.53	1.38		
2.550	1.50	8.550	3.11	14.550	3.46	20.55	1.38		
2.567	1.50	8.567	3.11	14.567	3.46	20.57	1.38		
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38		
2.600	1.50	8.600	3.11	14.600	3.46	20.60	1.38		
2.617	1.50	8.617	3.11	14.617	3.46	20.62	1.38		
2.633	1.50	8.633	3.11	14.633	3.46	20.63	1.38		
2.650	1.50	8.650	3.11	14.650	3.46	20.65	1.38		
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38		
2.683	1.50	8.683	3.11	14.683	3.46	20.68	1.38		
2.700	1.50	8.700	3.11	14.700	3.46	20.70	1.38		
2.717	1.50	8.717	3.11	14.717	3.46	20.72	1.38		
2.733	1.50	8.733	3.11	14.733	3.46	20.73	1.38		
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38		
2.767	1.50	8.767	3.11	14.767	3.46	20.77	1.38		
2.783	1.50	8.783	3.11	14.783	3.46	20.78	1.38		
2.800	1.50	8.800	3.11	14.800	3.46	20.80	1.38		
2.817	1.50	8.817	3.11	14.817	3.46	20.82	1.38		
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38		
2.850	1.50	8.850	3.11	14.850	3.46	20.85	1.38		
2.867	1.50	8.867	3.11	14.867	3.46	20.87	1.38		
2.883	1.50	8.883	3.11	14.883	3.46	20.88	1.38		
2.900	1.50	8.900	3.11	14.900	3.46	20.90	1.38		
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38		
2.933	1.50	8.933	3.11	14.933	3.46	20.93	1.38		
2.950	1.50	8.950	3.11	14.950	3.46	20.95	1.38		
2.967	1.50	8.967	3.11	14.967	3.46	20.97	1.38		
2.983	1.50	8.983	3.11	14.983	3.46	20.98	1.38		
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38		
3.017	1.50	9.017	3.69	15.017	3.46	21.02	1.38		
3.033	1.50	9.033	3.69	15.033	3.46	21.03	1.38		
3.050	1.50	9.050	3.69	15.050	3.46	21.05	1.38		
3.067	1.50	9.067	3.69	15.067	3.46	21.07	1.38		
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38		
3.100	1.50	9.100	3.69	15.100	3.46	21.10	1.38		
3.117	1.50	9.117	3.69	15.117	3.46	21.12	1.38		
3.133	1.50	9.133	3.69	15.133	3.46	21.13	1.38		
3.150	1.50	9.150	3.69	15.150	3.46	21.15	1.38		
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38		
3.183	1.50	9.183	3.69	15.183	3.46	21.18	1.38		
3.200	1.50	9.200	3.69	15.200	3.46	21.20	1.38		
3.217	1.50	9.217	3.69	15.217	3.46	21.22	1.38		
3.233	1.50	9.233	3.69	15.233	3.46	21.23	1.38		
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38		
3.267	1.50	9.267	3.69	15.267	3.46	21.27	1.38		
3.283	1.50	9.283	3.69	15.283	3.46	21.28	1.38		
3.300	1.50	9.300	3.69	15.300	3.46	21.30	1.38		

HRPB-PR-SWM_2-100 YEAR.OUT							
3.317	1.50	9.317	3.69	15.317	3.46	21.32	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.350	1.50	9.350	3.69	15.350	3.46	21.35	1.38
3.367	1.50	9.367	3.69	15.367	3.46	21.37	1.38
3.383	1.50	9.383	3.69	15.383	3.46	21.38	1.38
3.400	1.50	9.400	3.69	15.400	3.46	21.40	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.433	1.50	9.433	3.69	15.433	3.46	21.43	1.38
3.450	1.50	9.450	3.69	15.450	3.46	21.45	1.38
3.467	1.50	9.467	3.69	15.467	3.46	21.47	1.38
3.483	1.50	9.483	3.69	15.483	3.46	21.48	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.517	1.50	9.517	4.15	15.517	3.46	21.52	1.38
3.533	1.50	9.533	4.15	15.533	3.46	21.53	1.38
3.550	1.50	9.550	4.15	15.550	3.46	21.55	1.38
3.567	1.50	9.567	4.15	15.567	3.46	21.57	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.600	1.50	9.600	4.15	15.600	3.46	21.60	1.38
3.617	1.50	9.617	4.15	15.617	3.46	21.62	1.38
3.633	1.50	9.633	4.15	15.633	3.46	21.63	1.38
3.650	1.50	9.650	4.15	15.650	3.46	21.65	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.683	1.50	9.683	4.15	15.683	3.46	21.68	1.38
3.700	1.50	9.700	4.15	15.700	3.46	21.70	1.38
3.717	1.50	9.717	4.15	15.717	3.46	21.72	1.38
3.733	1.50	9.733	4.15	15.733	3.46	21.73	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.767	1.50	9.767	4.15	15.767	3.46	21.77	1.38
3.783	1.50	9.783	4.15	15.783	3.46	21.78	1.38
3.800	1.50	9.800	4.15	15.800	3.46	21.80	1.38
3.817	1.50	9.817	4.15	15.817	3.46	21.82	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.850	1.50	9.850	4.15	15.850	3.46	21.85	1.38
3.867	1.50	9.867	4.15	15.867	3.46	21.87	1.38
3.883	1.50	9.883	4.15	15.883	3.46	21.88	1.38
3.900	1.50	9.900	4.15	15.900	3.46	21.90	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
3.933	1.50	9.933	4.15	15.933	3.46	21.93	1.38
3.950	1.50	9.950	4.15	15.950	3.46	21.95	1.38
3.967	1.50	9.967	4.15	15.967	3.46	21.97	1.38
3.983	1.50	9.983	4.15	15.983	3.46	21.98	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.017	1.84	10.017	5.30	16.017	2.08	22.02	1.38
4.033	1.84	10.033	5.30	16.033	2.07	22.03	1.38
4.050	1.84	10.050	5.30	16.050	2.07	22.05	1.38
4.067	1.84	10.067	5.30	16.067	2.07	22.07	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.100	1.84	10.100	5.30	16.100	2.07	22.10	1.38
4.117	1.84	10.117	5.30	16.117	2.07	22.12	1.38
4.133	1.84	10.133	5.30	16.133	2.07	22.13	1.38
4.150	1.84	10.150	5.30	16.150	2.07	22.15	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.183	1.84	10.183	5.30	16.183	2.07	22.18	1.38
4.200	1.84	10.200	5.30	16.200	2.07	22.20	1.38
4.217	1.84	10.217	5.30	16.217	2.07	22.22	1.38
4.233	1.84	10.233	5.30	16.233	2.07	22.23	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.267	1.84	10.267	5.30	16.267	2.07	22.27	1.38
4.283	1.84	10.283	5.30	16.283	2.07	22.28	1.38
4.300	1.84	10.300	5.30	16.300	2.07	22.30	1.38
4.317	1.84	10.317	5.30	16.317	2.07	22.32	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.350	1.84	10.350	5.30	16.350	2.07	22.35	1.38
4.367	1.84	10.367	5.30	16.367	2.07	22.37	1.38
4.383	1.84	10.383	5.30	16.383	2.07	22.38	1.38
4.400	1.84	10.400	5.30	16.400	2.07	22.40	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.433	1.84	10.433	5.30	16.433	2.07	22.43	1.38
4.450	1.84	10.450	5.30	16.450	2.07	22.45	1.38
4.467	1.84	10.467	5.30	16.467	2.07	22.47	1.38
4.483	1.84	10.483	5.30	16.483	2.07	22.48	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.517	1.84	10.517	7.14	16.517	2.07	22.52	1.38
4.533	1.84	10.533	7.14	16.533	2.07	22.53	1.38
4.550	1.84	10.550	7.14	16.550	2.07	22.55	1.38
4.567	1.84	10.567	7.14	16.567	2.07	22.57	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.600	1.84	10.600	7.14	16.600	2.07	22.60	1.38
4.617	1.84	10.617	7.14	16.617	2.07	22.62	1.38
4.633	1.84	10.633	7.14	16.633	2.07	22.63	1.38
4.650	1.84	10.650	7.14	16.650	2.07	22.65	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.683	1.84	10.683	7.14	16.683	2.07	22.68	1.38
4.700	1.84	10.700	7.14	16.700	2.07	22.70	1.38
4.717	1.84	10.717	7.14	16.717	2.07	22.72	1.38
4.733	1.84	10.733	7.14	16.733	2.07	22.73	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38

HRP8-PR-SWM_2-100 YEAR.OUT											
4.767	1.84	10.767	7.14	16.767	2.07	22.77	1.38				
4.783	1.84	10.783	7.14	16.783	2.07	22.78	1.38				
4.800	1.84	10.800	7.14	16.800	2.07	22.80	1.38				
4.817	1.84	10.817	7.14	16.817	2.07	22.82	1.38				
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38				
4.850	1.84	10.850	7.14	16.850	2.07	22.85	1.38				
4.867	1.84	10.867	7.14	16.867	2.07	22.87	1.38				
4.883	1.84	10.883	7.14	16.883	2.07	22.88	1.38				
4.900	1.84	10.900	7.14	16.900	2.07	22.90	1.38				
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38				
4.933	1.84	10.933	7.14	16.933	2.07	22.93	1.38				
4.950	1.84	10.950	7.14	16.950	2.07	22.95	1.38				
4.967	1.84	10.967	7.14	16.967	2.07	22.97	1.38				
4.983	1.84	10.983	7.14	16.983	2.07	22.98	1.38				
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38				
5.017	1.84	11.017	11.06	17.017	2.07	23.02	1.38				
5.033	1.84	11.033	11.06	17.033	2.07	23.03	1.38				
5.050	1.84	11.050	11.06	17.050	2.07	23.05	1.38				
5.067	1.84	11.067	11.06	17.067	2.07	23.07	1.38				
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38				
5.100	1.84	11.100	11.06	17.100	2.07	23.10	1.38				
5.117	1.84	11.117	11.06	17.117	2.07	23.12	1.38				
5.133	1.84	11.133	11.06	17.133	2.07	23.13	1.38				
5.150	1.84	11.150	11.06	17.150	2.07	23.15	1.38				
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38				
5.183	1.84	11.183	11.06	17.183	2.07	23.18	1.38				
5.200	1.84	11.200	11.06	17.200	2.07	23.20	1.38				
5.217	1.84	11.217	11.06	17.217	2.07	23.22	1.38				
5.233	1.84	11.233	11.06	17.233	2.07	23.23	1.38				
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38				
5.267	1.84	11.267	11.06	17.267	2.07	23.27	1.38				
5.283	1.84	11.283	11.06	17.283	2.07	23.28	1.38				
5.300	1.84	11.300	11.06	17.300	2.07	23.30	1.38				
5.317	1.84	11.317	11.06	17.317	2.07	23.32	1.38				
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38				
5.350	1.84	11.350	11.06	17.350	2.07	23.35	1.38				
5.367	1.84	11.367	11.06	17.367	2.07	23.37	1.38				
5.383	1.84	11.383	11.06	17.383	2.07	23.38	1.38				
5.400	1.84	11.400	11.06	17.400	2.07	23.40	1.38				
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38				
5.433	1.84	11.433	11.06	17.433	2.07	23.43	1.38				
5.450	1.84	11.450	11.06	17.450	2.07	23.45	1.38				
5.467	1.84	11.467	11.06	17.467	2.07	23.47	1.38				
5.483	1.84	11.483	11.06	17.483	2.07	23.48	1.38				
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38				
5.517	1.84	11.517	47.91	17.517	2.07	23.52	1.38				
5.533	1.84	11.533	47.92	17.533	2.07	23.53	1.38				
5.550	1.84	11.550	47.92	17.550	2.07	23.55	1.38				
5.567	1.84	11.567	47.92	17.567	2.07	23.57	1.38				
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38				
5.600	1.84	11.600	47.92	17.600	2.07	23.60	1.38				
5.617	1.84	11.617	47.92	17.617	2.07	23.62	1.38				
5.633	1.84	11.633	47.92	17.633	2.07	23.63	1.38				
5.650	1.84	11.650	47.92	17.650	2.07	23.65	1.38				
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38				
5.683	1.84	11.683	47.92	17.683	2.07	23.68	1.38				
5.700	1.84	11.700	47.92	17.700	2.07	23.70	1.38				
5.717	1.84	11.717	47.92	17.717	2.07	23.72	1.38				
5.733	1.84	11.733	47.92	17.733	2.07	23.73	1.38				
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38				
5.767	1.84	11.767	127.14	17.767	2.07	23.77	1.38				
5.783	1.84	11.783	127.18	17.783	2.07	23.78	1.38				
5.800	1.84	11.800	127.18	17.800	2.07	23.80	1.38				
5.817	1.84	11.817	127.18	17.817	2.07	23.82	1.38				
5.833	1.84	11.833	127.18	17.833	2.07	23.83	1.38				
5.850	1.84	11.850	127.18	17.850	2.07	23.85	1.38				
5.867	1.84	11.867	127.18	17.867	2.07	23.87	1.38				
5.883	1.84	11.883	127.18	17.883	2.07	23.88	1.38				
5.900	1.84	11.900	127.18	17.900	2.07	23.90	1.38				
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38				
5.933	1.84	11.933	127.18	17.933	2.07	23.93	1.38				
5.950	1.84	11.950	127.18	17.950	2.07	23.95	1.38				
5.967	1.84	11.967	127.18	17.967	2.07	23.97	1.38				
5.983	1.84	11.983	127.18	17.983	2.07	23.98	1.38				
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38				

Unit Hyd Qpeak (cms)= 0.515

PEAK FLOW (cms)= 0.305 (1)
TIME TO PEAK (hrs)= 12.017
RUNOFF VOLUME (mm)= 52.086
TOTAL RAINFALL (mm)= 115.201
RUNOFF COEFFICIENT = 0.452

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP8-PR-SWM_2-100 YEAR.OUT

```
-----
| ADD HYD ( 0035) |
| 1 + 2 = 3 |
-----
ID1= 1 ( 0253):      AREA      QPEAK      TPEAK      R.V.
                  (ha)      (cms)      (hrs)      (mm)
+ ID2= 2 ( 0036):      85.33      6.490      12.50      76.01
=====
ID = 3 ( 0035):      86.84      6.543      12.50      73.00
=====
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
V  V  I  SSSS  U  U  A  L      (v 6.1.2002)
V  V  I  SS   U  U  A  A  L
V  V  I  SS   U  U  AAAAA L
V  V  I  SS   U  U  A  A  L
VV   I  SSSS  UUUUU  A  A  LLLLL

000  TTTT  TTTT  H  H  Y  Y  M  M  000  TM
0 0  T  T  H  H  Y  Y  MM MM 0 0
0 0  T  T  H  H  Y  Y  M  M 0 0
000  T  T  H  H  Y  Y  M  M 000

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```

***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\V02\voin.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\2d478ec0-39fd-451e-8a17-53c1c689b29c\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\2d478ec0-39fd-451e-8a17-53c1c689b29c\scenar

DATE: 03/24/2023 TIME: 11:14:31

USER:

COMMENTS: _____

```
-----
** SIMULATION : Run 06 **
=====
```

```
-----
| MASS STORM |      Filename: C:\Users\AbirA\AppData\Local\Temp\
|            |      76002a28-c3e8-40c5-9a3c-cd3cb026027b\29085551a
|            |      Comments: Mass 24-Hour SCS Type II Design Storm
| Ptotal=127.20 mm |
-----
```

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.27	6.25	2.54	12.25	18.32	18.25	2.29	
0.50	1.27	6.50	2.54	12.50	18.32	18.50	2.29	
0.75	1.27	6.75	2.54	12.75	9.41	18.75	2.29	
1.00	1.27	7.00	2.54	13.00	9.41	19.00	2.29	
1.25	1.27	7.25	2.54	13.25	1.78	19.25	2.29	
1.50	1.27	7.50	2.54	13.50	1.78	19.50	2.29	
1.75	1.27	7.75	2.54	13.75	10.43	19.75	2.29	
2.00	2.29	8.00	2.54	14.00	10.43	20.00	2.29	
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53	
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53	
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53	
3.00	1.65	9.00	3.43	15.00	3.82	21.00	1.53	
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53	
3.50	1.65	9.50	4.07	15.50	3.82	21.50	1.53	
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53	
4.00	1.65	10.00	4.58	16.00	3.82	22.00	1.53	
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53	
4.50	2.04	10.50	5.85	16.50	2.29	22.50	1.53	
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53	
5.00	2.04	11.00	7.89	17.00	2.29	23.00	1.53	
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53	
5.50	2.04	11.50	12.21	17.50	2.29	23.50	1.53	
5.75	2.04	11.75	52.92	17.75	2.29	23.75	1.53	
6.00	2.04	12.00	140.43	18.00	2.29	24.00	1.53	

HRP8-PR-SWM_2-100 YEAR.OUT

2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.533	2.04	10.533	5.85	16.533	2.29	22.53	1.53
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53

HRPB-PR-SWM_2-100 YEAR.OUT

5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.921 (1)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 75.383
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.593

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0250)	Area (ha)= 4.37
ID= 1 DT= 2.0 min	Total Imp(%)= 46.00 Dir. Conn.(%)= 46.00

Surface Area	(ha)=	IMPERVIOUS	PERVIOUS (1)
Dep. Storage	(mm)=	2.01	2.36
Average Slope	(%)=	1.50	1.50
Length	(m)=	2.00	2.00
Mannings n	=	170.68	40.00
		0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29
0.500	1.27	6.500	2.54	12.500	18.30	18.50	2.29
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29
1.000	1.27	7.000	2.54	13.000	9.40	19.00	2.29
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29

HRPB-PR-SWM_2-100 YEAR.OUT

1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29
1.500	1.27	7.500	2.54	13.500	1.80	19.50	2.29
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.767	1.78	7.767	2.54	13.767	10.43	19.77	2.29
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29
2.000	2.29	8.000	2.54	14.000	10.42	20.00	2.29
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.533	1.65	9.533	4.58	15.533	3.82	21.53	1.53
3.567	1.65	9.567	4.58	15.567	3.82	21.57	1.53
3.600	1.65	9.600	4.58	15.600	3.82	21.60	1.53
3.633	1.65	9.633	4.58	15.633	3.82	21.63	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.700	1.65	9.700	4.58	15.700	3.82	21.70	1.53
3.733	1.65	9.733	4.58	15.733	3.82	21.73	1.53
3.767	1.65	9.767	4.58	15.767	3.82	21.77	1.53
3.800	1.65	9.800	4.58	15.800	3.82	21.80	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53
4.000	1.65	10.000	4.58	16.000	3.81	22.00	1.53
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53

HRP8-PR-SWM_2-100 YEAR.OUT

HRP8-PR-SWM_2-100 YEAR.OUT

4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.500	2.04	11.500	12.26	17.500	2.29	23.50	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.767	2.04	11.767	96.79	17.767	2.29	23.77	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
6.000	2.04	12.000	140.26	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)=	140.43	106.86
over (min)	5.00	10.00
Storage Coeff. (min)=	2.50 (ii)	9.07 (ii)
Unit Hyd. Tpeak (min)=	4.00	10.00
Unit Hyd. peak (cms)=	0.37	0.12
PEAK FLOW (cms)=	0.78	0.53
TIME TO PEAK (hrs)=	12.00	12.03
RUNOFF VOLUME (mm)=	125.70	81.77
TOTAL RAINFALL (mm)=	127.20	127.20
RUNOFF COEFFICIENT =	0.99	0.64

TOTALS
1.290 (iii)
12.00
101.98
127.20
0.80

- (i) ON PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN= 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1050):	4.49	0.921	12.07	75.38
+ ID2= 2 (0250):	4.37	1.290	12.00	101.98
ID = 3 (0018):	8.86	2.145	12.00	88.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0037)
IN= 2--> OUT= 1

Routing time step (min)'= 2.00

Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 /0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 /0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0018)	8.86	2.15	12.00	88.50	0.55	1.46
OUTFLOW: ID= 1 (0037)	8.86	1.48	12.10	88.46	0.47	1.31

CALIB
NASHYD (1051)
ID= 1 DT= 8.0 min

Area (ha)= 50.34
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.63

Curve Number (CN)= 82.0

of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29
0.533	1.27	6.533	2.54	12.533	16.00	18.53	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29
1.067	1.27	7.067	2.54	13.067	5.60	19.07	2.29
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29
1.600	1.27	7.600	2.54	13.600	8.27	19.60	2.29
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29
1.867	2.16	7.867	2.54	13.867	10.43	19.87	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53
3.067	1.65	9.067	3.75	15.067	3.82	21.07	1.53
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53
3.600	1.65	9.600	4.45	15.600	3.82	21.60	1.53

HRP8-PR-SWM_2-100 YEAR.OUT

3.733	1.65		9.733	4.58		15.733	3.82		21.73	1.53
3.867	1.65		9.867	4.58		15.867	3.82		21.87	1.53
4.000	1.65		10.000	4.58		16.000	3.82		22.00	1.53
4.133	2.04		10.133	5.85		16.133	2.29		22.13	1.53
4.267	2.04		10.267	5.85		16.267	2.29		22.27	1.53
4.400	2.04		10.400	5.85		16.400	2.29		22.40	1.53
4.533	2.04		10.533	6.36		16.533	2.29		22.53	1.53
4.667	2.04		10.667	7.89		16.667	2.29		22.67	1.53
4.800	2.04		10.800	7.89		16.800	2.29		22.80	1.53
4.933	2.04		10.933	7.89		16.933	2.29		22.93	1.53
5.067	2.04		11.067	10.05		17.067	2.29		23.07	1.53
5.200	2.04		11.200	12.21		17.200	2.29		23.20	1.53
5.333	2.04		11.333	12.21		17.333	2.29		23.33	1.53
5.467	2.04		11.467	12.21		17.467	2.29		23.47	1.53
5.600	2.04		11.600	42.74		17.600	2.29		23.60	1.53
5.733	2.04		11.733	52.92		17.733	2.29		23.73	1.53
5.867	2.04		11.867	129.49		17.867	2.29		23.87	1.53
6.000	2.04		12.000	140.43		18.000	2.29		24.00	1.53

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 4.864 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 83.982
TOTAL RAINFALL (mm)= 127.200
RUNOFF COEFFICIENT = 0.660

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (1051):	50.34	4.864	12.53	83.90	
+ ID2= 2 (0037):	8.86	1.485	12.10	88.46	
=====					
ID = 3 (0029):	59.20	5.754	12.40	84.58	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0251)			
ID= 1 DT= 3.0 min			
	IMPERVIOUS		
Surface Area	(ha)=	3.94	6.71
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	266.46	220.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN		TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr		hrs	mm/hr	hrs	mm/hr	
0.050	1.27		6.050	2.54		12.050	18.32		18.05
0.100	1.27		6.100	2.54		12.100	18.32		18.10
0.150	1.27		6.150	2.54		12.150	18.32		18.15
0.200	1.27		6.200	2.54		12.200	18.32		18.20
0.250	1.27		6.250	2.54		12.250	18.32		18.25
0.300	1.27		6.300	2.54		12.300	18.32		18.30
0.350	1.27		6.350	2.54		12.350	18.32		18.35
0.400	1.27		6.400	2.54		12.400	18.32		18.40
0.450	1.27		6.450	2.54		12.450	18.32		18.45
0.500	1.27		6.500	2.54		12.500	18.31		18.50
0.550	1.27		6.550	2.54		12.550	9.41		18.55
0.600	1.27		6.600	2.54		12.600	9.41		18.60
0.650	1.27		6.650	2.54		12.650	9.41		18.65
0.700	1.27		6.700	2.54		12.700	9.41		18.70
0.750	1.27		6.750	2.54		12.750	9.41		18.75
0.800	1.27		6.800	2.54		12.800	9.41		18.80
0.850	1.27		6.850	2.54		12.850	9.41		18.85
0.900	1.27		6.900	2.54		12.900	9.41		18.90
0.950	1.27		6.950	2.54		12.950	9.41		18.95
1.000	1.27		7.000	2.54		13.000	9.41		19.00
1.050	1.27		7.050	2.54		13.050	1.78		19.05
1.100	1.27		7.100	2.54		13.100	1.78		19.10
1.150	1.27		7.150	2.54		13.150	1.78		19.15
1.200	1.27		7.200	2.54		13.200	1.78		19.20
1.250	1.27		7.250	2.54		13.250	1.78		19.25
1.300	1.27		7.300	2.54		13.300	1.78		19.30
1.350	1.27		7.350	2.54		13.350	1.78		19.35

HRP8-PR-SWM_2-100 YEAR.OUT

1.400	1.27		7.400	2.54		13.400	1.78		19.40	2.29
1.450	1.27		7.450	2.54		13.450	1.78		19.45	2.29
1.500	1.27		7.500	2.54		13.500	1.79		19.50	2.29
1.550	1.27		7.550	2.54		13.550	10.43		19.55	2.29
1.600	1.27		7.600	2.54		13.600	10.43		19.60	2.29
1.650	1.27		7.650	2.54		13.650	10.43		19.65	2.29
1.700	1.27		7.700	2.54		13.700	10.43		19.70	2.29
1.750	1.27		7.750	2.54		13.750	10.43		19.75	2.29
1.800	2.29		7.800	2.54		13.800	10.43		19.80	2.29
1.850	2.29		7.850	2.54		13.850	10.43		19.85	2.29
1.900	2.29		7.900	2.54		13.900	10.43		19.90	2.29
1.950	2.29		7.950	2.54		13.950	10.43		19.95	2.29
2.000	2.29		8.000	2.54		14.000	10.43		20.00	2.29
2.050	1.65		8.050	3.43		14.050	3.82		20.05	1.53
2.100	1.65		8.100	3.43		14.100	3.82		20.10	1.53
2.150	1.65		8.150	3.43		14.150	3.82		20.15	1.53
2.200	1.65		8.200	3.43		14.200	3.82		20.20	1.53
2.250	1.65		8.250	3.43		14.250	3.82		20.25	1.53
2.300	1.65		8.300	3.43		14.300	3.82		20.30	1.53
2.350	1.65		8.350	3.43		14.350	3.82		20.35	1.53
2.400	1.65		8.400	3.43		14.400	3.82		20.40	1.53
2.450	1.65		8.450	3.43		14.450	3.82		20.45	1.53
2.500	1.65		8.500	3.43		14.500	3.82		20.50	1.53
2.550	1.65		8.550	3.43		14.550	3.82		20.55	1.53
2.600	1.65		8.600	3.43		14.600	3.82		20.60	1.53
2.650	1.65		8.650	3.43		14.650	3.82		20.65	1.53
2.700	1.65		8.700	3.43		14.700	3.82		20.70	1.53
2.750	1.65		8.750	3.43		14.750	3.82		20.75	1.53
2.800	1.65		8.800	3.43		14.800	3.82		20.80	1.53
2.850	1.65		8.850	3.43		14.850	3.82		20.85	1.53
2.900	1.65		8.900	3.43		14.900	3.82		20.90	1.53
2.950	1.65		8.950	3.43		14.950	3.82		20.95	1.53
3.000	1.65		9.000	3.43		15.000	3.82		21.00	1.53
3.050	1.65		9.050	4.07		15.050	3.82		21.05	1.53
3.100	1.65		9.100	4.07		15.100	3.82		21.10	1.53
3.150	1.65		9.150	4.07		15.150	3.82		21.15	1.53
3.200	1.65		9.200	4.07		15.200	3.82		21.20	1.53
3.250	1.65		9.250	4.07		15.250	3.82		21.25	1.53
3.300	1.65		9.300	4.07		15.300	3.82		21.30	1.53
3.350	1.65		9.350	4.07		15.350	3.82		21.35	1.53
3.400	1.65		9.400	4.07		15.400	3.82		21.40	1.53
3.450	1.65		9.450	4.07		15.450	3.82		21.45	1.53
3.500	1.65		9.500	4.07		15.500	3.82		21.50	1.53
3.550	1.65		9.550	4.58		15.550	3.82		21.55	1.53
3.600	1.65		9.600	4.58		15.600	3.82		21.60	1.53
3.650	1.65		9.650	4.58		15.650	3.82		21.65	1.53
3.700	1.65		9.700	4.58		15.700	3.82		21.70	1.53
3.750	1.65		9.750	4.58		15.750	3.82		21.75	1.53
3.800	1.65		9.800	4.58		15.800	3.82		21.80	1.53
3.850	1.65		9.850	4.58		15.850	3.82		21.85	1.53
3.900	1.65		9.900	4.58		15.900	3.82		21.90	1.53
3.950	1.65		9.950	4.58		15.950	3.82		21.95	1.53
4.000	1.65		10.000	4.58		16.000	3.81		22.00	1.53
4.050	2.04		10.050	5.85		16.050	2.29		22.05	1.53
4.100	2.04		10.100	5.85		16.100	2.29		22.10	1.53
4.150	2.04		10.150	5.85		16.150	2.29		22.15	1.53
4.200	2.04		10.200	5.85		16.200	2.29		22.20	1.53
4.250	2.04		10.250	5.85		16.250	2.29		22.25	1.53
4.300	2.04		10.300	5.85		16.300	2.29		22.30	1.53
4.350	2.04		10.350	5.85		16.350	2.29		22.35	1.53
4.400	2.04		10.400	5.85		16.400	2.29		22.40	1.53
4.450	2.04		10.450	5.85		16.450	2.29		22.45	1.53
4.500	2.04		10.500	5.85		16.500	2.29		22.50	1.53
4.550	2.04		10.550	7.89		16.550	2.29		22.55	1.53
4.600	2.04		10.600	7.89		16.600	2.29		22.60	1.53
4.650	2.04		10.650	7.89		16.650	2.29		22.65	1.53
4.700	2.04		10.700	7.89		16.700	2.29		22.70	1.53
4.750	2.04		10.750	7.89		16.750	2.29		22.75	1.53
4.800	2.04		10.800	7.89		16.800	2.29		22.80	1.53
4.850	2.04		10.850	7.89		16.850	2.29		22.85	1.53
4.900	2.04		10.900	7.89		16.900	2.29		22.90	1.53
4.950	2.04		10.950	7.89		16.950	2.29		22.95	1.53
5.000	2.04		11.000	7.89		17.000	2.29		23.00	1.53
5.050	2.04		11.050	12.21		17.050	2.29		23.05	1.53
5.100	2.04		11.100	12.21		17.100	2.29		23.10	1.53
5.150	2.04		11.150	12.21		17.150	2.29		23.15	1.53
5.200	2.04		11.200	12.21		17.200	2.29		23.20	1.53
5.250	2.04		11.250	12.21		17.250	2.29		23.25	1.53
5.300	2.04		11.300	12.21		17.300	2.29		23.30	1.53
5.350	2.04		11.350	12.21		17.350	2.29		23.35	1.53
5.400	2.04		11.400	12.21		17.400	2.29		23.40	1.53
5.450	2.04		11.450	12.21		17.450	2.29		23.45	1.53
5.500	2.04		11.500	12.23		17.500	2.29		23.50	1.53
5.550	2.04		11.550	12.23		17.550	2.29		23.55	1.53
5.600	2.04		11.600	52.92		17.600	2.29		23.60	1.53
5.650	2.04		11.650	52.92		17.650	2.29		23.65	1.53
5.700	2.04		11.700	52.92		17.700	2.29		23.70	1.53

HRP8-PR-SWM_2-100 YEAR.OUT									
5.750	2.04	[11.750	52.96	[17.750	2.29	[23.75	1.53		
5.800	2.04	[11.800	140.43	[17.800	2.29	[23.80	1.53		
5.850	2.04	[11.850	140.43	[17.850	2.29	[23.85	1.53		
5.900	2.04	[11.900	140.43	[17.900	2.29	[23.90	1.53		
5.950	2.04	[11.950	140.43	[17.950	2.29	[23.95	1.53		
6.000	2.04	[12.000	140.36	[18.000	2.29	[24.00	1.53		
Max.Eff.Inten.(mm/hr)= 140.43 65.89									
over (min) 6.00 27.00									
Storage Coeff. (min)= 3.26 (ii) 26.45 (ii)									
Unit Hyd. Tpeak (min)= 6.00 27.00									
Unit Hyd. peak (cms)= 0.26 0.04									
TOTALS									
PEAK FLOW (cms)= 1.52 0.71 1.920 (iii)									
TIME TO PEAK (hrs)= 12.00 12.30 12.00									
RUNOFF VOLUME (mm)= 125.70 70.38 90.85									
TOTAL RAINFALL (mm)= 127.20 127.20 127.20									
RUNOFF COEFFICIENT = 0.99 0.55 0.71									

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0251):	10.65	1.920	12.00	90.85
+ ID2= 2 (0029):	59.20	5.754	12.40	84.58
=====				
ID = 3 (0031):	69.85	6.641	12.40	85.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0039)	
IN= 2--> OUT= 1	

Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 /0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 /0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.599E+02	0.0	0.27	30.87
0.14	100.14	.998E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.208E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ---->					<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0031)	69.85	6.64	12.40	85.54	0.99	1.03
OUTFLOW: ID= 1 (0039)	69.85	6.48	12.47	85.53	1.00	1.04

HRP8-PR-SWM_2-100 YEAR.OUT

CALIB	
STANDHYD (0252)	
ID= 1 DT= 5.0 min	

Area (ha)= 15.48
Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 6.97	8.51	
Dep. Storage	(mm)= 1.50	1.50	
Average Slope	(%)= 2.00	2.00	
Length	(m)= 321.25	100.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	1.27	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29
2.000	2.29	8.000	2.54	14.000	10.43	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53

HRP8-PR-SWM_2-100 YEAR.OUT									
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53		
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53		
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53		
Max.Eff.Inten.(mm/hr)=		140.43	83.05						
over (min)		5.00	20.00						
Storage Coeff. (min)=		3.65 (ii)	16.82 (ii)						
Unit Hyd. Tpeak (min)=		5.00	20.00						
Unit Hyd. peak (cms)=		0.25	0.06						
PEAK FLOW (cms)=		2.69	1.10	3.498 (iii)					
TIME TO PEAK (hrs)=		12.00	12.17	12.00					
RUNOFF VOLUME (mm)=		125.70	65.89	92.80					
TOTAL RAINFALL (mm)=		127.20	127.20	127.20					
RUNOFF COEFFICIENT =		0.99	0.52	0.73					

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0033)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0252):	15.48	3.498	12.00	92.80
+ ID2= 2 (0039):	69.85	6.476	12.47	85.53
=====				
ID = 3 (0033):	85.33	7.616	12.00	86.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0040)	
IN= 2--> OUT= 1	

<----- DATA FOR SECTION (1.1) ----->			
Distance	Elevation	Manning	
0.00	101.00	0.0500	
1.00	100.67	0.0500	
2.00	100.33	0.0500 / 0.0300	Main Channel
3.00	100.00	0.0300	Main Channel
4.00	100.00	0.0300	Main Channel
5.00	100.33	0.0300 / 0.0500	Main Channel
6.00	100.67	0.0500	
7.00	101.00	0.0500	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.155E+02	0.0	0.18	26.80
0.09	100.09	.348E+02	0.0	0.27	17.93
0.14	100.14	.580E+02	0.1	0.33	14.31
0.19	100.19	.850E+02	0.1	0.39	12.22
0.24	100.24	.116E+03	0.2	0.44	10.83
0.28	100.28	.151E+03	0.3	0.49	9.80
0.33	100.33	.189E+03	0.4	0.53	9.01
0.39	100.39	.240E+03	0.5	0.61	7.82
0.44	100.44	.296E+03	0.7	0.68	7.06
0.50	100.50	.357E+03	0.9	0.73	6.52
0.55	100.55	.424E+03	1.2	0.78	6.11
0.61	100.61	.496E+03	1.4	0.83	5.79
0.66	100.66	.573E+03	1.7	0.86	5.53
0.72	100.72	.655E+03	2.1	0.90	5.32
0.78	100.78	.743E+03	2.4	0.93	5.14
0.83	100.83	.836E+03	2.8	0.96	4.98
0.89	100.89	.934E+03	3.2	0.99	4.84
0.94	100.94	.104E+04	3.7	1.01	4.72
1.00	101.00	.115E+04	4.1	1.04	4.61

**** WARNING: TRAVEL TIME TABLE EXCEEDED

<---- hydrograph ---->		<-pipe / channel->	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
85.33	7.62	12.00	86.87
85.33	7.49	12.47	86.86
INFLOW : ID= 2 (0033)		85.33	12.00
OUTFLOW: ID= 1 (0040)		85.33	12.47

RESERVOIR(0036) OVERFLOW IS OFF

HRP8-PR-SWM_2-100 YEAR.OUT									
IN= 2--> OUT= 1		OUTFLOW		STORAGE		OUTFLOW		STORAGE	
DT= 4.0 min		(cms)		(ha.m.)		(cms)		(ha.m.)	
		0.0000		0.0000		4.2410		0.9915	
		0.0760		0.3470		5.4870		1.0310	
		0.3892		0.6910		6.4930		1.0400	
		1.7310		0.8250		7.4900		1.0800	
		3.2400		0.9340		0.0000		0.0000	
		AREA		QPEAK		TPEAK		R.V.	
		(ha)		(cms)		(hrs)		(mm)	
INFLOW : ID= 2 (0040)		85.330		7.490		12.47		86.86	
OUTFLOW: ID= 1 (0036)		85.330		7.421		12.53		86.64	
		PEAK FLOW		REDUCTION		[Qout/Qin](%)= 99.08			
		TIME SHIFT OF PEAK FLOW				(min)= 4.00			
		MAXIMUM STORAGE		USED		(ha.m.)= 1.0774			

CALIB					
NASHWD (0253)	Area	(ha)=	1.51	Curve Number (CN)=	75.0
ID= 1 DT= 1.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=		0.11		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	1.27	6.017	2.54	12.017	18.40	18.02	2.29				
0.033	1.27	6.033	2.54	12.033	18.32	18.03	2.29				
0.050	1.27	6.050	2.54	12.050	18.32	18.05	2.29				
0.067	1.27	6.067	2.54	12.067	18.32	18.07	2.29				
0.083	1.27	6.083	2.54	12.083	18.32	18.08	2.29				
0.100	1.27	6.100	2.54	12.100	18.32	18.10	2.29				
0.117	1.27	6.117	2.54	12.117	18.32	18.12	2.29				
0.133	1.27	6.133	2.54	12.133	18.32	18.13	2.29				
0.150	1.27	6.150	2.54	12.150	18.32	18.15	2.29				
0.167	1.27	6.167	2.54	12.167	18.32	18.17	2.29				
0.183	1.27	6.183	2.54	12.183	18.32	18.18	2.29				
0.200	1.27	6.200	2.54	12.200	18.32	18.20	2.29				
0.217	1.27	6.217	2.54	12.217	18.32	18.22	2.29				
0.233	1.27	6.233	2.54	12.233	18.32	18.23	2.29				
0.250	1.27	6.250	2.54	12.250	18.32	18.25	2.29				
0.267	1.27	6.267	2.54	12.267	18.32	18.27	2.29				
0.283	1.27	6.283	2.54	12.283	18.32	18.28	2.29				
0.300	1.27	6.300	2.54	12.300	18.32	18.30	2.29				
0.317	1.27	6.317	2.54	12.317	18.32	18.32	2.29				
0.333	1.27	6.333	2.54	12.333	18.32	18.33	2.29				
0.350	1.27	6.350	2.54	12.350	18.32	18.35	2.29				
0.367	1.27	6.367	2.54	12.367	18.32	18.37	2.29				
0.383	1.27	6.383	2.54	12.383	18.32	18.38	2.29				
0.400	1.27	6.400	2.54	12.400	18.32	18.40	2.29				
0.417	1.27	6.417	2.54	12.417	18.32	18.42	2.29				
0.433	1.27	6.433	2.54	12.433	18.32	18.43	2.29				
0.450	1.27	6.450	2.54	12.450	18.32	18.45	2.29				
0.467	1.27	6.467	2.54	12.467	18.32	18.47	2.29				
0.483	1.27	6.483	2.54	12.483	18.32	18.48	2.29				
0.500	1.27	6.500	2.54	12.500	18.32	18.50	2.29				
0.517	1.27	6.517	2.54	12.517	9.42	18.52	2.29				
0.533	1.27	6.533	2.54	12.533	9.41	18.53	2.29				
0.550	1.27	6.550	2.54	12.550	9.41	18.55	2.29				
0.567	1.27	6.567	2.54	12.567	9.41	18.57	2.29				
0.583	1.27	6.583	2.54	12.583	9.41	18.58	2.29				
0.600	1.27	6.600	2.54	12.600	9.41	18.60	2.29				
0.617	1.27	6.617	2.54	12.617	9.41	18.62	2.29				
0.633	1.27	6.633	2.54	12.633	9.41	18.63	2.29				
0.650	1.27	6.650	2.54	12.650	9.41	18.65	2.29				
0.667	1.27	6.667	2.54	12.667	9.41	18.67	2.29				
0.683	1.27	6.683	2.54	12.683	9.41	18.68	2.29				
0.700	1.27	6.700	2.54	12.700	9.41	18.70	2.29				
0.717	1.27	6.717	2.54	12.717	9.41	18.72	2.29				
0.733	1.27	6.733	2.54	12.733	9.41	18.73	2.29				
0.750	1.27	6.750	2.54	12.750	9.41	18.75	2.29				
0.767	1.27	6.767	2.54	12.767	9.41	18.77	2.29				
0.783	1.27	6.783	2.54	12.783	9.41	18.78	2.29				
0.800	1.27	6.800	2.54	12.800	9.41	18.80	2.29				
0.817	1.27	6.817	2.54	12.817	9.41	18.82	2.29				
0.833	1.27	6.833	2.54	12.833	9.41	18.83	2.29				
0.850	1.27	6.850	2.54	12.850	9.41	18.85	2.29				
0.867	1.27	6.867	2.54	12.867	9.41	18.87	2.29				
0.883	1.27	6.883	2.54	12.883	9.41	18.88	2.29				
0.900	1.27	6.900	2.54	12.900	9.41	18.90	2.29				
0.917	1.27	6.917	2.54	12.917	9.41	18.92	2.29				
0.933	1.27	6.933	2.54	12.933	9.41	18.93	2.29				

HRPB-PR-SWM_2-100 YEAR.OUT									
0.950	1.27	6.950	2.54	12.950	9.41	18.95	2.29		
0.967	1.27	6.967	2.54	12.967	9.41	18.97	2.29		
0.983	1.27	6.983	2.54	12.983	9.41	18.98	2.29		
1.000	1.27	7.000	2.54	13.000	9.41	19.00	2.29		
1.917	1.27	7.917	2.54	13.917	1.78	19.02	2.29		
1.033	1.27	7.033	2.54	13.033	1.78	19.03	2.29		
1.050	1.27	7.050	2.54	13.050	1.78	19.05	2.29		
1.067	1.27	7.067	2.54	13.067	1.78	19.07	2.29		
1.083	1.27	7.083	2.54	13.083	1.78	19.08	2.29		
1.100	1.27	7.100	2.54	13.100	1.78	19.10	2.29		
1.117	1.27	7.117	2.54	13.117	1.78	19.12	2.29		
1.133	1.27	7.133	2.54	13.133	1.78	19.13	2.29		
1.150	1.27	7.150	2.54	13.150	1.78	19.15	2.29		
1.167	1.27	7.167	2.54	13.167	1.78	19.17	2.29		
1.183	1.27	7.183	2.54	13.183	1.78	19.18	2.29		
1.200	1.27	7.200	2.54	13.200	1.78	19.20	2.29		
1.217	1.27	7.217	2.54	13.217	1.78	19.22	2.29		
1.233	1.27	7.233	2.54	13.233	1.78	19.23	2.29		
1.250	1.27	7.250	2.54	13.250	1.78	19.25	2.29		
1.267	1.27	7.267	2.54	13.267	1.78	19.27	2.29		
1.283	1.27	7.283	2.54	13.283	1.78	19.28	2.29		
1.300	1.27	7.300	2.54	13.300	1.78	19.30	2.29		
1.317	1.27	7.317	2.54	13.317	1.78	19.32	2.29		
1.333	1.27	7.333	2.54	13.333	1.78	19.33	2.29		
1.350	1.27	7.350	2.54	13.350	1.78	19.35	2.29		
1.367	1.27	7.367	2.54	13.367	1.78	19.37	2.29		
1.383	1.27	7.383	2.54	13.383	1.78	19.38	2.29		
1.400	1.27	7.400	2.54	13.400	1.78	19.40	2.29		
1.417	1.27	7.417	2.54	13.417	1.78	19.42	2.29		
1.433	1.27	7.433	2.54	13.433	1.78	19.43	2.29		
1.450	1.27	7.450	2.54	13.450	1.78	19.45	2.29		
1.467	1.27	7.467	2.54	13.467	1.78	19.47	2.29		
1.483	1.27	7.483	2.54	13.483	1.78	19.48	2.29		
1.500	1.27	7.500	2.54	13.500	1.78	19.50	2.29		
1.517	1.27	7.517	2.54	13.517	10.41	19.52	2.29		
1.533	1.27	7.533	2.54	13.533	10.43	19.53	2.29		
1.550	1.27	7.550	2.54	13.550	10.43	19.55	2.29		
1.567	1.27	7.567	2.54	13.567	10.43	19.57	2.29		
1.583	1.27	7.583	2.54	13.583	10.43	19.58	2.29		
1.600	1.27	7.600	2.54	13.600	10.43	19.60	2.29		
1.617	1.27	7.617	2.54	13.617	10.43	19.62	2.29		
1.633	1.27	7.633	2.54	13.633	10.43	19.63	2.29		
1.650	1.27	7.650	2.54	13.650	10.43	19.65	2.29		
1.667	1.27	7.667	2.54	13.667	10.43	19.67	2.29		
1.683	1.27	7.683	2.54	13.683	10.43	19.68	2.29		
1.700	1.27	7.700	2.54	13.700	10.43	19.70	2.29		
1.717	1.27	7.717	2.54	13.717	10.43	19.72	2.29		
1.733	1.27	7.733	2.54	13.733	10.43	19.73	2.29		
1.750	1.27	7.750	2.54	13.750	10.43	19.75	2.29		
1.767	2.29	7.767	2.54	13.767	10.43	19.77	2.29		
1.783	2.29	7.783	2.54	13.783	10.43	19.78	2.29		
1.800	2.29	7.800	2.54	13.800	10.43	19.80	2.29		
1.817	2.29	7.817	2.54	13.817	10.43	19.82	2.29		
1.833	2.29	7.833	2.54	13.833	10.43	19.83	2.29		
1.850	2.29	7.850	2.54	13.850	10.43	19.85	2.29		
1.867	2.29	7.867	2.54	13.867	10.43	19.87	2.29		
1.883	2.29	7.883	2.54	13.883	10.43	19.88	2.29		
1.900	2.29	7.900	2.54	13.900	10.43	19.90	2.29		
1.917	2.29	7.917	2.54	13.917	10.43	19.92	2.29		
1.933	2.29	7.933	2.54	13.933	10.43	19.93	2.29		
1.950	2.29	7.950	2.54	13.950	10.43	19.95	2.29		
1.967	2.29	7.967	2.54	13.967	10.43	19.97	2.29		
1.983	2.29	7.983	2.54	13.983	10.43	19.98	2.29		
2.000	2.29	8.000	2.55	14.000	10.43	20.00	2.29		
2.017	1.65	8.017	3.43	14.017	3.82	20.02	1.53		
2.033	1.65	8.033	3.43	14.033	3.82	20.03	1.53		
2.050	1.65	8.050	3.43	14.050	3.82	20.05	1.53		
2.067	1.65	8.067	3.43	14.067	3.82	20.07	1.53		
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53		
2.100	1.65	8.100	3.43	14.100	3.82	20.10	1.53		
2.117	1.65	8.117	3.43	14.117	3.82	20.12	1.53		
2.133	1.65	8.133	3.43	14.133	3.82	20.13	1.53		
2.150	1.65	8.150	3.43	14.150	3.82	20.15	1.53		
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53		
2.183	1.65	8.183	3.43	14.183	3.82	20.18	1.53		
2.200	1.65	8.200	3.43	14.200	3.82	20.20	1.53		
2.217	1.65	8.217	3.43	14.217	3.82	20.22	1.53		
2.233	1.65	8.233	3.43	14.233	3.82	20.23	1.53		
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53		
2.267	1.65	8.267	3.43	14.267	3.82	20.27	1.53		
2.283	1.65	8.283	3.43	14.283	3.82	20.28	1.53		
2.300	1.65	8.300	3.43	14.300	3.82	20.30	1.53		
2.317	1.65	8.317	3.43	14.317	3.82	20.32	1.53		
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53		
2.350	1.65	8.350	3.43	14.350	3.82	20.35	1.53		
2.367	1.65	8.367	3.43	14.367	3.82	20.37	1.53		
2.383	1.65	8.383	3.43	14.383	3.82	20.38	1.53		

HRPB-PR-SWM_2-100 YEAR.OUT									
2.400	1.65	8.400	3.43	14.400	3.82	20.40	1.53		
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53		
2.433	1.65	8.433	3.43	14.433	3.82	20.43	1.53		
2.450	1.65	8.450	3.43	14.450	3.82	20.45	1.53		
2.467	1.65	8.467	3.43	14.467	3.82	20.47	1.53		
2.483	1.65	8.483	3.43	14.483	3.82	20.48	1.53		
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53		
2.517	1.65	8.517	3.43	14.517	3.82	20.52	1.53		
2.533	1.65	8.533	3.43	14.533	3.82	20.53	1.53		
2.550	1.65	8.550	3.43	14.550	3.82	20.55	1.53		
2.567	1.65	8.567	3.43	14.567	3.82	20.57	1.53		
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53		
2.600	1.65	8.600	3.43	14.600	3.82	20.60	1.53		
2.617	1.65	8.617	3.43	14.617	3.82	20.62	1.53		
2.633	1.65	8.633	3.43	14.633	3.82	20.63	1.53		
2.650	1.65	8.650	3.43	14.650	3.82	20.65	1.53		
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53		
2.683	1.65	8.683	3.43	14.683	3.82	20.68	1.53		
2.700	1.65	8.700	3.43	14.700	3.82	20.70	1.53		
2.717	1.65	8.717	3.43	14.717	3.82	20.72	1.53		
2.733	1.65	8.733	3.43	14.733	3.82	20.73	1.53		
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53		
2.767	1.65	8.767	3.43	14.767	3.82	20.77	1.53		
2.783	1.65	8.783	3.43	14.783	3.82	20.78	1.53		
2.800	1.65	8.800	3.43	14.800	3.82	20.80	1.53		
2.817	1.65	8.817	3.43	14.817	3.82	20.82	1.53		
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53		
2.850	1.65	8.850	3.43	14.850	3.82	20.85	1.53		
2.867	1.65	8.867	3.43	14.867	3.82	20.87	1.53		
2.883	1.65	8.883	3.43	14.883	3.82	20.88	1.53		
2.900	1.65	8.900	3.43	14.900	3.82	20.90	1.53		
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53		
2.933	1.65	8.933	3.43	14.933	3.82	20.93	1.53		
2.950	1.65	8.950	3.43	14.950	3.82	20.95	1.53		
2.967	1.65	8.967	3.43	14.967	3.82	20.97	1.53		
2.983	1.65	8.983	3.43	14.983	3.82	20.98	1.53		
3.000	1.65	9.000	3.44	15.000	3.82	21.00	1.53		
3.017	1.65	9.017	4.07	15.017	3.82	21.02	1.53		
3.033	1.65	9.033	4.07	15.033	3.82	21.03	1.53		
3.050	1.65	9.050	4.07	15.050	3.82	21.05	1.53		
3.067	1.65	9.067	4.07	15.067	3.82	21.07	1.53		
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53		
3.100	1.65	9.100	4.07	15.100	3.82	21.10	1.53		
3.117	1.65	9.117	4.07	15.117	3.82	21.12	1.53		
3.133	1.65	9.133	4.07	15.133	3.82	21.13	1.53		
3.150	1.65	9.150	4.07	15.150	3.82	21.15	1.53		
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53		
3.183	1.65	9.183	4.07	15.183	3.82	21.18	1.53		
3.200	1.65	9.200	4.07	15.200	3.82	21.20	1.53		
3.217	1.65	9.217	4.07	15.217	3.82	21.22	1.53		
3.233	1.65	9.233	4.07	15.233	3.82	21.23	1.53		
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53		
3.267	1.65	9.267	4.07	15.267	3.82	21.27	1.53		
3.283	1.65	9.283	4.07	15.283	3.82	21.28	1.53		
3.300	1.65	9.300	4.07	15.300	3.82	21.30	1.53		
3.317	1.65	9.317	4.07	15.317	3.82	21.32	1.53		
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53		
3.350	1.65	9.350	4.07	15.350	3.82	21.35	1.53		
3.367	1.65	9.367	4.07	15.367	3.82	21.37	1.53		
3.383	1.65	9.383	4.07	15.383	3.82	21.38	1.53		
3.400	1.65	9.400	4.07	15.400	3.82	21.40	1.53		
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53		
3.433	1.65	9.433	4.07	15.433	3.82	21.43	1.53		
3.450	1.65	9.450	4.07	15.450	3.82	21.45	1.53		
3.467	1.65	9.467	4.07	15.467	3.82	21.47	1.53		
3.483	1.65	9.483	4.07	15.483	3.82	21.48	1.53		
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53		
3.517	1.65	9.517	4.07	15.517	3.82	21.51	1.53		
3.533	1.65	9.533	4.07	15.533	3.82	21.53	1.53		
3.550	1.65	9.550	4.07	15.550	3.82	21.55	1.53		
3.567	1.65	9.567	4.07	15.567	3.82	21.57	1.53		
3.583	1.65	9.583	4.07	15.583	3.82	21.58	1.53		
3.600	1.65	9.600	4.07	15.600	3.82	21.60	1.53		
3.617	1.65	9.617	4.07	15.617	3.82	21.62	1.53		
3.633	1.65	9.633	4.07	15.633	3.82	21.63	1.53		
3.650	1.65	9.650	4.07	15.650	3.82	21.65	1.53		
3.667	1.65	9.667	4.07	15.667	3.82	21.67	1.53		
3.683	1.65	9.683	4.07	15.683	3.82	21.68	1.53		
3.700	1.65	9.700	4.07	15.700	3.82	21.70	1.53		
3.717	1.65	9.717	4.07	15.717	3.82	21.72	1.53		
3.733	1.65	9.733	4.07	15.733	3.82	21.73	1.53		
3.750	1.65	9.750	4.07	15.750	3.82	21.75	1.53		
3.767	1.65	9.767	4.07	15.767	3.82	21.77	1.53		
3.783	1.65	9.783	4.07	15.783	3.82	21.78	1.53		
3.800	1.65	9.800	4.07	15.800	3.82	21.80	1.53		
3.817	1.65	9.817	4.07	15.817	3.82	21.82	1.53		
3.833	1.65	9.833	4.07	15.833	3.82	21.83	1.53		

HRPB-PR-SWM_2-100 YEAR.OUT									
3.850	1.65	9.850	4.58	15.850	3.82	21.85	1.53		
3.867	1.65	9.867	4.58	15.867	3.82	21.87	1.53		
3.883	1.65	9.883	4.58	15.883	3.82	21.88	1.53		
3.900	1.65	9.900	4.58	15.900	3.82	21.90	1.53		
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53		
3.933	1.65	9.933	4.58	15.933	3.82	21.93	1.53		
3.950	1.65	9.950	4.58	15.950	3.82	21.95	1.53		
3.967	1.65	9.967	4.58	15.967	3.82	21.97	1.53		
3.983	1.65	9.983	4.58	15.983	3.82	21.98	1.53		
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53		
4.017	2.04	10.017	5.85	16.017	2.30	22.02	1.53		
4.033	2.04	10.033	5.85	16.033	2.29	22.03	1.53		
4.050	2.04	10.050	5.85	16.050	2.29	22.05	1.53		
4.067	2.04	10.067	5.85	16.067	2.29	22.07	1.53		
4.083	2.04	10.083	5.85	16.083	2.29	22.08	1.53		
4.100	2.04	10.100	5.85	16.100	2.29	22.10	1.53		
4.117	2.04	10.117	5.85	16.117	2.29	22.12	1.53		
4.133	2.04	10.133	5.85	16.133	2.29	22.13	1.53		
4.150	2.04	10.150	5.85	16.150	2.29	22.15	1.53		
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53		
4.183	2.04	10.183	5.85	16.183	2.29	22.18	1.53		
4.200	2.04	10.200	5.85	16.200	2.29	22.20	1.53		
4.217	2.04	10.217	5.85	16.217	2.29	22.22	1.53		
4.233	2.04	10.233	5.85	16.233	2.29	22.23	1.53		
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53		
4.267	2.04	10.267	5.85	16.267	2.29	22.27	1.53		
4.283	2.04	10.283	5.85	16.283	2.29	22.28	1.53		
4.300	2.04	10.300	5.85	16.300	2.29	22.30	1.53		
4.317	2.04	10.317	5.85	16.317	2.29	22.32	1.53		
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53		
4.350	2.04	10.350	5.85	16.350	2.29	22.35	1.53		
4.367	2.04	10.367	5.85	16.367	2.29	22.37	1.53		
4.383	2.04	10.383	5.85	16.383	2.29	22.38	1.53		
4.400	2.04	10.400	5.85	16.400	2.29	22.40	1.53		
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53		
4.433	2.04	10.433	5.85	16.433	2.29	22.43	1.53		
4.450	2.04	10.450	5.85	16.450	2.29	22.45	1.53		
4.467	2.04	10.467	5.85	16.467	2.29	22.47	1.53		
4.483	2.04	10.483	5.85	16.483	2.29	22.48	1.53		
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53		
4.517	2.04	10.517	7.89	16.517	2.29	22.52	1.53		
4.533	2.04	10.533	7.89	16.533	2.29	22.53	1.53		
4.550	2.04	10.550	7.89	16.550	2.29	22.55	1.53		
4.567	2.04	10.567	7.89	16.567	2.29	22.57	1.53		
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53		
4.600	2.04	10.600	7.89	16.600	2.29	22.60	1.53		
4.617	2.04	10.617	7.89	16.617	2.29	22.62	1.53		
4.633	2.04	10.633	7.89	16.633	2.29	22.63	1.53		
4.650	2.04	10.650	7.89	16.650	2.29	22.65	1.53		
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53		
4.683	2.04	10.683	7.89	16.683	2.29	22.68	1.53		
4.700	2.04	10.700	7.89	16.700	2.29	22.70	1.53		
4.717	2.04	10.717	7.89	16.717	2.29	22.72	1.53		
4.733	2.04	10.733	7.89	16.733	2.29	22.73	1.53		
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53		
4.767	2.04	10.767	7.89	16.767	2.29	22.77	1.53		
4.783	2.04	10.783	7.89	16.783	2.29	22.78	1.53		
4.800	2.04	10.800	7.89	16.800	2.29	22.80	1.53		
4.817	2.04	10.817	7.89	16.817	2.29	22.82	1.53		
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53		
4.850	2.04	10.850	7.89	16.850	2.29	22.85	1.53		
4.867	2.04	10.867	7.89	16.867	2.29	22.87	1.53		
4.883	2.04	10.883	7.89	16.883	2.29	22.88	1.53		
4.900	2.04	10.900	7.89	16.900	2.29	22.90	1.53		
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53		
4.933	2.04	10.933	7.89	16.933	2.29	22.93	1.53		
4.950	2.04	10.950	7.89	16.950	2.29	22.95	1.53		
4.967	2.04	10.967	7.89	16.967	2.29	22.97	1.53		
4.983	2.04	10.983	7.89	16.983	2.29	22.98	1.53		
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53		
5.017	2.04	11.017	12.21	17.017	2.29	23.02	1.53		
5.033	2.04	11.033	12.21	17.033	2.29	23.03	1.53		
5.050	2.04	11.050	12.21	17.050	2.29	23.05	1.53		
5.067	2.04	11.067	12.21	17.067	2.29	23.07	1.53		
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53		
5.100	2.04	11.100	12.21	17.100	2.29	23.10	1.53		
5.117	2.04	11.117	12.21	17.117	2.29	23.12	1.53		
5.133	2.04	11.133	12.21	17.133	2.29	23.13	1.53		
5.150	2.04	11.150	12.21	17.150	2.29	23.15	1.53		
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53		
5.183	2.04	11.183	12.21	17.183	2.29	23.18	1.53		
5.200	2.04	11.200	12.21	17.200	2.29	23.20	1.53		
5.217	2.04	11.217	12.21	17.217	2.29	23.22	1.53		
5.233	2.04	11.233	12.21	17.233	2.29	23.23	1.53		
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53		
5.267	2.04	11.267	12.21	17.267	2.29	23.27	1.53		
5.283	2.04	11.283	12.21	17.283	2.29	23.28	1.53		

HRPB-PR-SWM_2-100_YEAR.OUT							
5.300	2.04	11.300	12.21	17.300	2.29	23.30	1.53
5.317	2.04	11.317	12.21	17.317	2.29	23.32	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.350	2.04	11.350	12.21	17.350	2.29	23.35	1.53
5.367	2.04	11.367	12.21	17.367	2.29	23.37	1.53
5.383	2.04	11.383	12.21	17.383	2.29	23.38	1.53
5.400	2.04	11.400	12.21	17.400	2.29	23.40	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.433	2.04	11.433	12.21	17.433	2.29	23.43	1.53
5.450	2.04	11.450	12.21	17.450	2.29	23.45	1.53
5.467	2.04	11.467	12.21	17.467	2.29	23.47	1.53
5.483	2.04	11.483	12.21	17.483	2.29	23.48	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.517	2.04	11.517	52.91	17.517	2.29	23.52	1.53
5.533	2.04	11.533	52.92	17.533	2.29	23.53	1.53
5.550	2.04	11.550	52.92	17.550	2.29	23.55	1.53
5.567	2.04	11.567	52.92	17.567	2.29	23.57	1.53
5.583	2.04	11.583	52.92	17.583	2.29	23.58	1.53
5.600	2.04	11.600	52.92	17.600	2.29	23.60	1.53
5.617	2.04	11.617	52.92	17.617	2.29	23.62	1.53
5.633	2.04	11.633	52.92	17.633	2.29	23.63	1.53
5.650	2.04	11.650	52.92	17.650	2.29	23.65	1.53
5.667	2.04	11.667	52.92	17.667	2.29	23.67	1.53
5.683	2.04	11.683	52.92	17.683	2.29	23.68	1.53
5.700	2.04	11.700	52.92	17.700	2.29	23.70	1.53
5.717	2.04	11.717	52.92	17.717	2.29	23.72	1.53
5.733	2.04	11.733	52.92	17.733	2.29	23.73	1.53
5.750	2.04	11.750	52.92	17.750	2.29	23.75	1.53
5.767	2.04	11.767	140.39	17.767	2.29	23.77	1.53
5.783	2.04	11.783	140.43	17.783	2.29	23.78	1.53
5.800	2.04	11.800	140.43	17.800	2.29	23.80	1.53
5.817	2.04	11.817	140.43	17.817	2.29	23.82	1.53
5.833	2.04	11.833	140.43	17.833	2.29	23.83	1.53
5.850	2.04	11.850	140.43	17.850	2.29	23.85	1.53
5.867	2.04	11.867	140.43	17.867	2.29	23.87	1.53
5.883	2.04	11.883	140.43	17.883	2.29	23.88	1.53
5.900	2.04	11.900	140.43	17.900	2.29	23.90	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
5.933	2.04	11.933	140.43	17.933	2.29	23.93	1.53
5.950	2.04	11.950	140.43	17.950	2.29	23.95	1.53
5.967	2.04	11.967	140.43	17.967	2.29	23.97	1.53
5.983	2.04	11.983	140.43	17.983	2.29	23.98	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

E.3 VO Output 25 mm Storm



V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat

Output filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\13194e82-542a-4ed3-8db3-76b3a53d3976\scenar

Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\13194e82-542a-4ed3-8db3-76b3a53d3976\scenar

DATE: 04/17/2023

TIME: 03:59:19

USER:

COMMENTS: _____

** SIMULATION : Run 07

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\9ee90fb3-1a3b-49ee-ba4a-b713aba58252\159001f7
Ptotal= 25.00 mm Comments: Mass 24-Hour SCS Type II Design Storm
Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.25	6.25	0.50	12.25	3.60	18.25	0.45	
0.50	0.25	6.50	0.50	12.50	3.60	18.50	0.45	
0.75	0.25	6.75	0.50	12.75	1.85	18.75	0.45	
1.00	0.25	7.00	0.50	13.00	1.85	19.00	0.45	
1.25	0.25	7.25	0.50	13.25	0.35	19.25	0.45	
1.50	0.25	7.50	0.50	13.50	0.35	19.50	0.45	
1.75	0.25	7.75	0.50	13.75	2.05	19.75	0.45	
2.00	0.45	8.00	0.50	14.00	2.05	20.00	0.45	
2.25	0.33	8.25	0.68	14.25	0.75	20.25	0.30	
2.50	0.32	8.50	0.67	14.50	0.75	20.50	0.30	
2.75	0.33	8.75	0.68	14.75	0.75	20.75	0.30	
3.00	0.32	9.00	0.68	15.00	0.75	21.00	0.30	
3.25	0.32	9.25	0.68	15.25	0.75	21.25	0.30	
3.50	0.32	9.50	0.68	15.50	0.75	21.50	0.30	
3.75	0.33	9.75	0.90	15.75	0.75	21.75	0.30	
4.00	0.32	10.00	0.90	16.00	0.75	22.00	0.30	
4.25	0.40	10.25	1.15	16.25	0.45	22.25	0.30	
4.50	0.40	10.50	1.15	16.50	0.45	22.50	0.30	
4.75	0.40	10.75	1.55	16.75	0.45	22.75	0.30	
5.00	0.40	11.00	1.55	17.00	0.45	23.00	0.30	
5.25	0.40	11.25	2.40	17.25	0.45	23.25	0.30	
5.50	0.40	11.50	2.40	17.50	0.45	23.50	0.30	
5.75	0.40	11.75	10.40	17.75	0.45	23.75	0.30	
6.00	0.40	12.00	27.60	18.00	0.45	24.00	0.30	

CALIB STANDHYD (0200) Area (ha)= 10.34
ID= 1 DT= 3.0 min Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.17	5.17
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	0.40
Length (m)=	262.55	40.00
Mannings n	=	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.050	0.25	6.050	0.50	12.050	3.60	18.05	0.45	
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45	
0.150	0.25	6.150	0.50	12.150	3.60	18.15	0.45	
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45	
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45	
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45	
0.350	0.25	6.350	0.50	12.350	3.60	18.35	0.45	
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45	
0.450	0.25	6.450	0.50	12.450	3.60	18.45	0.45	
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45	
0.550	0.25	6.550	0.50	12.550	1.85	18.55	0.45	
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45	
0.650	0.25	6.650	0.50	12.650	1.85	18.65	0.45	
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45	
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45	
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45	
0.850	0.25	6.850	0.50	12.850	1.85	18.85	0.45	
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45	
0.950	0.25	6.950	0.50	12.950	1.85	18.95	0.45	
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45	
1.050	0.25	7.050	0.50	13.050	0.35	19.05	0.45	
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45	
1.150	0.25	7.150	0.50	13.150	0.35	19.15	0.45	
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45	
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45	
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45	
1.350	0.25	7.350	0.50	13.350	0.35	19.35	0.45	
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45	
1.450	0.25	7.450	0.50	13.450	0.35	19.45	0.45	
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45	
1.550	0.25	7.550	0.50	13.550	2.05	19.55	0.45	
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45	
1.650	0.25	7.650	0.50	13.650	2.05	19.65	0.45	
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45	
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45	
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45	
1.850	0.45	7.850	0.50	13.850	2.05	19.85	0.45	
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45	
1.950	0.45	7.950	0.50	13.950	2.05	19.95	0.45	
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45	
2.050	0.33	8.050	0.68	14.050	0.75	20.05	0.30	
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30	
2.150	0.33	8.150	0.68	14.150	0.75	20.15	0.30	
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30	
2.250	0.33	8.250	0.68	14.250	0.75	20.25	0.30	
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30	
2.350	0.32	8.350	0.67	14.350	0.75	20.35	0.30	
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30	
2.450	0.32	8.450	0.67	14.450	0.75	20.45	0.30	
2.500	0.32	8.500	0.68	14.500	0.75	20.50	0.30	
2.550	0.32	8.550	0.68	14.550	0.75	20.55	0.30	
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30	
2.650	0.33	8.650	0.68	14.650	0.75	20.65	0.30	
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30	
2.750	0.33	8.750	0.68	14.750	0.75	20.75	0.30	
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30	
2.850	0.32	8.850	0.68	14.850	0.75	20.85	0.30	
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30	
2.950	0.32	8.950	0.68	14.950	0.75	20.95	0.30	
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30	
3.050	0.32	9.050	0.80	15.050	0.75	21.05	0.30	
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30	
3.150	0.32	9.150	0.80	15.150	0.75	21.15	0.30	
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30	
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30	
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30	
3.350	0.32	9.350	0.80	15.350	0.75	21.35	0.30	
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30	
3.450	0.32	9.450	0.80	15.450	0.75	21.45	0.30	
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30	
3.550	0.32	9.550	0.90	15.550	0.75	21.55	0.30	
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30	
3.650	0.33	9.650	0.90	15.650	0.75	21.65	0.30	
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30	
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30	
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30	
3.850	0.32	9.850	0.90	15.850	0.75	21.85	0.30	
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30	
3.950	0.32	9.950	0.90	15.950	0.75	21.95	0.30	
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30	

HRP2_PR-SWM_25mm Storm.OUT									
4.050	0.40	10.050	1.15	16.050	0.45	22.05	0.30		
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30		
4.150	0.40	10.150	1.15	16.150	0.45	22.15	0.30		
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30		
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30		
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30		
4.350	0.40	10.350	1.15	16.350	0.45	22.35	0.30		
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30		
4.450	0.40	10.450	1.15	16.450	0.45	22.45	0.30		
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30		
4.550	0.40	10.550	1.55	16.550	0.45	22.55	0.30		
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30		
4.650	0.40	10.650	1.55	16.650	0.45	22.65	0.30		
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30		
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30		
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30		
4.850	0.40	10.850	1.55	16.850	0.45	22.85	0.30		
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30		
4.950	0.40	10.950	1.55	16.950	0.45	22.95	0.30		
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30		
5.050	0.40	11.050	2.40	17.050	0.45	23.05	0.30		
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30		
5.150	0.40	11.150	2.40	17.150	0.45	23.15	0.30		
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30		
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30		
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30		
5.350	0.40	11.350	2.40	17.350	0.45	23.35	0.30		
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30		
5.450	0.40	11.450	2.40	17.450	0.45	23.45	0.30		
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30		
5.550	0.40	11.550	10.40	17.550	0.45	23.55	0.30		
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30		
5.650	0.40	11.650	10.40	17.650	0.45	23.65	0.30		
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30		
5.750	0.40	11.750	10.41	17.750	0.45	23.75	0.30		
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30		
5.850	0.40	11.850	27.60	17.850	0.45	23.85	0.30		
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30		
5.950	0.40	11.950	27.60	17.950	0.45	23.95	0.30		
6.000	0.40	12.000	27.59	18.000	0.45	24.00	0.30		
TOTALS									
PEAK FLOW (cms)=	0.37		0.02		0.370	(iii)			
TIME TO PEAK (hrs)=	12.00		12.90		12.00				
RUNOFF VOLUME (mm)=	23.50		4.52		14.00				
TOTAL RAINFALL (mm)=	25.00		25.00		25.00				
RUNOFF COEFFICIENT =	0.94		0.18		0.56				

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB									
STANDHYD (0201)	Area (ha)=	21.81							
ID= 1 DT= 4.0 min	Total Imp(%)=	70.00	Dir. Conn.(%)=	70.00					

Surface Area (ha)=	15.27	6.54							
Dep. Storage (mm)=	1.50	1.50							
Average Slope (%)=	2.00	2.00							
Length (m)=	381.31	40.00							
Manning's n	=	0.013	0.250						
NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.									

TIME RAIN TIME RAIN TIME RAIN TIME RAIN TIME RAIN									
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr									
0.067 0.25 6.067 0.50 12.067 3.60 18.07 0.45									
0.133 0.25 6.133 0.50 12.133 3.60 18.13 0.45									
0.200 0.25 6.200 0.50 12.200 3.60 18.20 0.45									
0.267 0.25 6.267 0.50 12.267 3.60 18.27 0.45									
0.333 0.25 6.333 0.50 12.333 3.60 18.33 0.45									
0.400 0.25 6.400 0.50 12.400 3.60 18.40 0.45									
0.467 0.25 6.467 0.50 12.467 3.60 18.47 0.45									
0.533 0.25 6.533 0.50 12.533 2.73 18.53 0.45									

HRP2_PR-SWM_25mm Storm.OUT							
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45
0.733	0.25	6.733	0.50	12.733	1.85	18.73	0.45
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45
0.867	0.25	6.867	0.50	12.867	1.85	18.87	0.45
0.933	0.25	6.933	0.50	12.933	1.85	18.93	0.45
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45
1.067	0.25	7.067	0.50	13.067	0.35	19.07	0.45
1.133	0.25	7.133	0.50	13.133	0.35	19.13	0.45
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45
1.267	0.25	7.267	0.50	13.267	0.35	19.27	0.45
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45
1.467	0.25	7.467	0.50	13.467	0.35	19.47	0.45
1.533	0.25	7.533	0.50	13.533	1.20	19.53	0.45
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45
1.733	0.25	7.733	0.50	13.733	2.05	19.73	0.45
1.800	0.45	7.800	0.67	13.800	2.05	19.80	0.45
1.867	0.45	7.867	0.50	13.867	2.05	19.87	0.45
1.933	0.45	7.933	0.50	13.933	2.05	19.93	0.45
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45
2.067	0.33	8.067	0.67	14.067	0.75	20.07	0.30
2.133	0.33	8.133	0.68	14.133	0.75	20.13	0.30
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30
2.267	0.32	8.267	0.67	14.267	0.75	20.27	0.30
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30
2.467	0.32	8.467	0.67	14.467	0.75	20.47	0.30
2.533	0.32	8.533	0.67	14.533	0.75	20.53	0.30
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30
2.733	0.33	8.733	0.68	14.733	0.75	20.73	0.30
2.800	0.32	8.800	0.67	14.800	0.75	20.80	0.30
2.867	0.32	8.867	0.68	14.867	0.75	20.87	0.30
2.933	0.32	8.933	0.68	14.933	0.75	20.93	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.067	0.32	9.067	0.80	15.067	0.75	21.07	0.30
3.133	0.32	9.133	0.80	15.133	0.75	21.13	0.30
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30
3.267	0.32	9.267	0.80	15.267	0.75	21.27	0.30
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30
3.467	0.32	9.467	0.80	15.467	0.75	21.47	0.30
3.533	0.32	9.533	0.85	15.533	0.75	21.53	0.30
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30
3.733	0.33	9.733	0.90	15.733	0.75	21.73	0.30
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30
3.867	0.32	9.867	0.90	15.867	0.75	21.87	0.30
3.933	0.32	9.933	0.90	15.933	0.75	21.93	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.067	0.40	10.067	1.15	16.067	0.45	22.07	0.30
4.133	0.40	10.133	1.15	16.133	0.45	22.13	0.30
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30
4.267	0.40	10.267	1.15	16.267	0.45	22.27	0.30
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30
4.467	0.40	10.467	1.15	16.467	0.45	22.47	0.30
4.533	0.40	10.533	1.35	16.533	0.45	22.53	0.30
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30
4.733	0.40	10.733	1.55	16.733	0.45	22.73	0.30
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30
4.867	0.40	10.867	1.55	16.867	0.45	22.87	0.30
4.933	0.40	10.933	1.55	16.933	0.45	22.93	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.067	0.40	11.067	2.40	17.067	0.45	23.07	0.30
5.133	0.40	11.133	2.40	17.133	0.45	23.13	0.30
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30
5.267	0.40	11.267	2.40	17.267	0.45	23.27	0.30
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30
5.467	0.40	11.467	2.40	17.467	0.45	23.47	0.30
5.533	0.40	11.533	6.40	17.533	0.45	23.53	0.30
5.600	0.40	11.600	6.40	17.600	0.45	23.60	0.30
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30
5.733	0.40	11.733	10.40	17.733	0.45	23.73	0.30
5.800	0.40	11.800	23.30	17.800	0.45	23.80	0.30
5.867	0.40	11.867	27.60	17.867	0.45	23.87	0.30
5.933	0.40	11.933	27.60	17.933	0.45	23.93	0.30
6.000	0.40	12.000	27.60	18.000	0.45	24.00	0.30
Max.Eff.Inten.(mm/hr)=				27.60	3.56		
over/(hr)=				8.00	36.00		
Storage Coeff. (min)=				7.75 (ii)	34.55 (ii)		
Unit Hyd. Tpeak (min)=				8.00	36.00		

Unit Hyd. peak (cms)= 0.14 0.03 HRP2_PR-SWM_25mm Storm.OUT
TOTALS
PEAK FLOW (cms)= 1.01 0.04 1.023 (iii)
TIME TO PEAK (hrs)= 12.00 12.47 12.00
RUNOFF VOLUME (mm)= 23.50 4.52 17.00
TOTAL RAINFALL (mm)= 25.00 25.00 25.00
RUNOFF COEFFICIENT = 0.94 0.18 0.71

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0010)|
| IN= 2---> OUT= 1 |
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 3.3540 0.2580
0.0000 0.0000 | 4.4590 0.2991
1.9670 0.1600 | 5.1190 0.3310
2.9090 0.2200 | 5.7930 0.3620
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0201) 21.810 1.023 12.00 17.00
OUTFLOW: ID= 1 (0010) 21.810 0.714 12.13 17.00
PEAK FLOW REDUCTION [Qout/Qin](%)= 69.79
TIME SHIFT OF PEAK FLOW (min)= 8.00
MAXIMUM STORAGE USED (ha.m.)= 0.0592

| ADD HYD (0009)|
1 + 2 = 3
ID1= 1 (0010): 21.81 0.714 12.13 17.00
+ ID2= 2 (0200): 10.34 0.370 12.00 14.00
=====

ID = 3 (0009): 32.15 0.997 12.05 16.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH
=====

HRP6.1-PR-SWM_25mm Storm.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y Y M M O O
000 T T H H Y Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\042f1695-dc87-4ff3-b4d7-589057de909c\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\042f1695-dc87-4ff3-b4d7-589057de909c\scenar

DATE: 04/17/2023 TIME: 04:09:58

USER:

COMMENTS: _____

** SIMULATION : Run 07

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\ f9d4c5c4-79fb-4c17-8421-0313040be30a\159001f7
Ptotal= 25.00 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.25	6.25	0.50	12.25	3.60	18.25	0.45	
0.50	0.25	6.50	0.50	12.50	3.60	18.50	0.45	
0.75	0.25	6.75	0.50	12.75	1.85	18.75	0.45	
1.00	0.25	7.00	0.50	13.00	1.85	19.00	0.45	
1.25	0.25	7.25	0.50	13.25	0.35	19.25	0.45	
1.50	0.25	7.50	0.50	13.50	0.35	19.50	0.45	
1.75	0.25	7.75	0.50	13.75	2.05	19.75	0.45	
2.00	0.45	8.00	0.50	14.00	2.05	20.00	0.45	
2.25	0.33	8.25	0.68	14.25	0.75	20.25	0.30	
2.50	0.32	8.50	0.67	14.50	0.75	20.50	0.30	
2.75	0.33	8.75	0.68	14.75	0.75	20.75	0.30	
3.00	0.32	9.00	0.68	15.00	0.75	21.00	0.30	
3.25	0.32	9.25	0.68	15.25	0.75	21.25	0.30	
3.50	0.32	9.50	0.68	15.50	0.75	21.50	0.30	
3.75	0.33	9.75	0.90	15.75	0.75	21.75	0.30	
4.00	0.32	10.00	0.90	16.00	0.75	22.00	0.30	
4.25	0.40	10.25	1.15	16.25	0.45	22.25	0.30	
4.50	0.40	10.50	1.15	16.50	0.45	22.50	0.30	
4.75	0.40	10.75	1.55	16.75	0.45	22.75	0.30	
5.00	0.40	11.00	1.55	17.00	0.45	23.00	0.30	
5.25	0.40	11.25	2.40	17.25	0.45	23.25	0.30	
5.50	0.40	11.50	2.40	17.50	0.45	23.50	0.30	
5.75	0.40	11.75	10.40	17.75	0.45	23.75	0.30	
6.00	0.40	12.00	27.60	18.00	0.45	24.00	0.30	

CALIB NASHYD (1030) Area (ha)= 30.38 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.50

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.25	6.083	0.50	12.083	3.60	18.08	0.45	
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45	
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45	
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45	
0.417	0.25	6.417	0.50	12.417	3.60	18.42	0.45	
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45	
0.583	0.25	6.583	0.50	12.583	1.85	18.58	0.45	
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45	
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45	
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45	
0.917	0.25	6.917	0.50	12.917	1.85	18.92	0.45	
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45	
1.083	0.25	7.083	0.50	13.083	0.35	19.08	0.45	
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45	
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45	
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45	
1.417	0.25	7.417	0.50	13.417	0.35	19.42	0.45	
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45	
1.583	0.25	7.583	0.50	13.583	2.05	19.58	0.45	
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45	
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45	
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45	
1.917	0.45	7.917	0.50	13.917	2.05	19.92	0.45	
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45	
2.083	0.33	8.083	0.68	14.083	0.75	20.08	0.30	
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30	
2.250	0.33	8.250	0.67	14.250	0.75	20.25	0.30	
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30	
2.417	0.32	8.417	0.67	14.417	0.75	20.42	0.30	
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30	
2.583	0.32	8.583	0.68	14.583	0.75	20.58	0.30	
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30	
2.750	0.33	8.750	0.67	14.750	0.75	20.75	0.30	
2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30	
2.917	0.32	8.917	0.68	14.917	0.75	20.92	0.30	
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30	
3.083	0.32	9.083	0.68	15.083	0.75	21.08	0.30	
3.167	0.32	9.167	0.80	15.167	0.75	21.17	0.30	
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30	
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30	
3.417	0.32	9.417	0.80	15.417	0.75	21.42	0.30	
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30	
3.583	0.32	9.583	0.90	15.583	0.75	21.58	0.30	
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30	
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30	
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30	
3.917	0.32	9.917	0.90	15.917	0.75	21.92	0.30	
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30	
4.083	0.40	10.083	1.15	16.083	0.45	22.08	0.30	
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30	
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30	
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30	
4.417	0.40	10.417	1.15	16.417	0.45	22.42	0.30	
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30	
4.583	0.40	10.583	1.55	16.583	0.45	22.58	0.30	
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30	
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30	
4.833	0.40	10.833	1.55	16.833	0.45	22.83	0.30	
4.917	0.40	10.917	1.55	16.917	0.45	22.92	0.30	
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30	
5.083	0.40	11.083	2.40	17.083	0.45	23.08	0.30	
5.167	0.40	11.167	2.40	17.167	0.45	23.17	0.30	
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30	
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30	
5.417	0.40	11.417	2.40	17.417	0.45	23.42	0.30	
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30	
5.583	0.40	11.583	10.40	17.583	0.45	23.58	0.30	
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30	
5.750	0.40	11.750	10.40	17.750	0.45	23.75	0.30	
5.833	0.40	11.833	27.60	17.833	0.45	23.83	0.30	
5.917	0.40	11.917	27.60	17.917	0.45	23.92	0.30	
6.000	0.40	12.000	27.60	18.000	0.45	24.00	0.30	

Unit Hyd Qpeak (cms)= 2.298

PEAK FLOW (cms)= 0.149 (1)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 4.172
TOTAL RAINFALL (mm)= 25.000
RUNOFF COEFFICIENT = 0.167

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0021)

HRP6.1-PR-SWM_25mm Storm.OUT
| IN= 2--> OUT= 1 | Routing time step (min)'= 4.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0000 /0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 /0.0000	Main Channel	
6.00	100.67	0.0000		
7.00	101.00	0.0000		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.145E+02	0.0	0.34	13.16
0.09	100.09	.327E+02	0.1	0.51	8.00
0.14	100.14	.545E+02	0.1	0.64	7.02
0.19	100.19	.800E+02	0.2	0.75	6.00
0.24	100.24	.109E+03	0.3	0.85	5.31
0.28	100.28	.142E+03	0.5	0.94	4.81
0.33	100.33	.178E+03	0.7	1.02	4.42
0.39	100.39	.226E+03	1.0	1.17	3.84
0.44	100.44	.279E+03	1.3	1.30	3.47
0.50	100.50	.336E+03	1.7	1.40	3.21
0.55	100.55	.399E+03	2.2	1.49	3.02
0.61	100.61	.466E+03	2.7	1.57	2.87
0.66	100.66	.539E+03	3.3	1.63	2.75
0.72	100.72	.616E+03	3.9	1.69	2.66
0.78	100.78	.690E+03	4.5	1.75	2.58
0.83	100.83	.766E+03	5.2	1.80	2.51
0.89	100.89	.879E+03	6.0	1.84	2.45
0.94	100.94	.977E+03	6.8	1.88	2.39
1.00	101.00	.108E+04	7.7	1.92	2.35

<---- hydrograph ---->					<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (1030)	30.38	0.15	12.42	4.17	0.15	0.66
OUTFLOW: ID= 1 (0021)	30.38	0.15	12.50	4.17	0.15	0.66

CALIB			
NASHYD (0230)	Area (ha)=	9.14	Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.42	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	0.25	6.083	0.50	12.083	3.60	18.08	0.45		
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45		
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45		
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45		
0.417	0.25	6.417	0.50	12.417	3.60	18.42	0.45		
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45		
0.583	0.25	6.583	0.50	12.583	1.85	18.58	0.45		
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45		
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45		
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45		
0.917	0.25	6.917	0.50	12.917	1.85	18.92	0.45		
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45		
1.083	0.25	7.083	0.50	13.083	0.35	19.08	0.45		
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45		
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45		
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45		
1.417	0.25	7.417	0.50	13.417	0.35	19.42	0.45		
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45		
1.583	0.25	7.583	0.50	13.583	2.05	19.58	0.45		
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45		
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45		
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45		
1.917	0.45	7.917	0.50	13.917	2.05	19.92	0.45		
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45		
2.083	0.33	8.083	0.68	14.083	0.75	20.08	0.30		
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30		
2.250	0.33	8.250	0.67	14.250	0.75	20.25	0.30		
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30		
2.417	0.32	8.417	0.67	14.417	0.75	20.42	0.30		
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30		

2.583	0.32	8.583	0.68	14.583	0.75	20.58	0.30
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30
2.750	0.33	8.750	0.67	14.750	0.75	20.75	0.30
2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30
2.917	0.32	8.917	0.68	14.917	0.75	20.92	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.083	0.32	9.083	0.80	15.083	0.75	21.08	0.30
3.167	0.32	9.167	0.80	15.167	0.75	21.17	0.30
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30
3.417	0.32	9.417	0.80	15.417	0.75	21.42	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.583	0.32	9.583	0.90	15.583	0.75	21.58	0.30
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30
3.917	0.32	9.917	0.90	15.917	0.75	21.92	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.083	0.40	10.083	1.15	16.083	0.45	22.08	0.30
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30
4.417	0.40	10.417	1.15	16.417	0.45	22.42	0.30
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30
4.583	0.40	10.583	1.55	16.583	0.45	22.58	0.30
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30
4.833	0.40	10.833	1.55	16.833	0.45	22.83	0.30
4.917	0.40	10.917	1.55	16.917	0.45	22.92	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.083	0.40	11.083	2.40	17.083	0.45	23.08	0.30
5.167	0.40	11.167	2.40	17.167	0.45	23.17	0.30
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30
5.417	0.40	11.417	2.40	17.417	0.45	23.42	0.30
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30
5.583	0.40	11.583	10.40	17.583	0.45	23.58	0.30
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30
5.750	0.40	11.750	10.40	17.750	0.45	23.75	0.30
5.833	0.40	11.833	27.60	17.833	0.45	23.83	0.30
5.917	0.40	11.917	27.60	17.917	0.45	23.92	0.30
6.000	0.40	12.000	27.60	18.000	0.45	24.00	0.30

Unit Hyd Qpeak (cms)= 0.827

PEAK FLOW (cms)=	0.066 (1)
TIME TO PEAK (hrs)=	12.333
RUNOFF VOLUME (mm)=	5.279
TOTAL RAINFALL (mm)=	25.000
RUNOFF COEFFICIENT	= 0.211

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0021):	30.38	0.146	12.50	4.17
+ ID2= 2 (0230):	9.14	0.066	12.33	5.28
ID = 3 (0003):	39.52	0.207	12.50	4.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0030)				
IN= 2--> OUT= 1	OVERFLOW IS OFF			
DT= 5.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	2.7760	0.2010
	1.0940	0.0700	3.2380	0.2400
	1.8140	0.1110	3.7590	0.2830
	2.2340	0.1460	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0003)	39.520	0.207	12.50	4.43
OUTFLOW: ID= 1 (0030)	39.520	0.193	12.67	4.43
PEAK FLOW REDUCTION [Qout/Qin](%)=	93.04			
TIME SHIFT OF PEAK FLOW (min)=	10.00			
MAXIMUM STORAGE USED (ha.m.)=	0.0124			

HRP6.1-PR-SWM_25mm Storm.OUT

CALIB			
STANDHYD (0231)	Area (ha)=	7.45	
ID= 1 DT= 2.0 min	Total Imp(%)=	24.00	Dir. Conn.(%)= 24.00

Surface Area	(ha)=	1.79	5.66
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	1.10
Length	(m)=	222.86	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.25	6.033	0.50	12.033	3.60	18.03	0.45
0.067	0.25	6.067	0.50	12.067	3.60	18.07	0.45
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45
0.133	0.25	6.133	0.50	12.133	3.60	18.13	0.45
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45
0.233	0.25	6.233	0.50	12.233	3.60	18.23	0.45
0.267	0.25	6.267	0.50	12.267	3.60	18.27	0.45
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45
0.367	0.25	6.367	0.50	12.367	3.60	18.37	0.45
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45
0.433	0.25	6.433	0.50	12.433	3.60	18.43	0.45
0.467	0.25	6.467	0.50	12.467	3.60	18.47	0.45
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45
0.533	0.25	6.533	0.50	12.533	1.85	18.53	0.45
0.567	0.25	6.567	0.50	12.567	1.85	18.57	0.45
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45
0.633	0.25	6.633	0.50	12.633	1.85	18.63	0.45
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45
0.733	0.25	6.733	0.50	12.733	1.85	18.73	0.45
0.767	0.25	6.767	0.50	12.767	1.85	18.77	0.45
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45
0.867	0.25	6.867	0.50	12.867	1.85	18.87	0.45
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45
0.933	0.25	6.933	0.50	12.933	1.85	18.93	0.45
0.967	0.25	6.967	0.50	12.967	1.85	18.97	0.45
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45
1.033	0.25	7.033	0.50	13.033	0.35	19.03	0.45
1.067	0.25	7.067	0.50	13.067	0.35	19.07	0.45
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45
1.133	0.25	7.133	0.50	13.133	0.35	19.13	0.45
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45
1.233	0.25	7.233	0.50	13.233	0.35	19.23	0.45
1.267	0.25	7.267	0.50	13.267	0.35	19.27	0.45
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45
1.367	0.25	7.367	0.50	13.367	0.35	19.37	0.45
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45
1.433	0.25	7.433	0.50	13.433	0.35	19.43	0.45
1.467	0.25	7.467	0.50	13.467	0.35	19.47	0.45
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45
1.533	0.25	7.533	0.50	13.533	2.05	19.53	0.45
1.567	0.25	7.567	0.50	13.567	2.05	19.57	0.45
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45
1.633	0.25	7.633	0.50	13.633	2.05	19.63	0.45
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45
1.733	0.25	7.733	0.50	13.733	2.05	19.73	0.45
1.767	0.35	7.767	0.50	13.767	2.05	19.77	0.45
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45
1.867	0.45	7.867	0.50	13.867	2.05	19.87	0.45
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45
1.933	0.45	7.933	0.50	13.933	2.05	19.93	0.45
1.967	0.45	7.967	0.50	13.967	2.05	19.97	0.45
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45
2.033	0.33	8.033	0.67	14.033	0.75	20.03	0.30
2.067	0.33	8.067	0.68	14.067	0.75	20.07	0.30
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30
2.133	0.33	8.133	0.68	14.133	0.75	20.13	0.30
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30
2.233	0.33	8.233	0.68	14.233	0.75	20.23	0.30
2.267	0.32	8.267	0.68	14.267	0.75	20.27	0.30
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30

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2.367	0.32	8.367	0.67	14.367	0.75	20.37	0.30
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30
2.433	0.32	8.433	0.67	14.433	0.75	20.43	0.30
2.467	0.32	8.467	0.67	14.467	0.75	20.47	0.30
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30
2.533	0.32	8.533	0.68	14.533	0.75	20.53	0.30
2.567	0.33	8.567	0.68	14.567	0.75	20.57	0.30
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30
2.633	0.33	8.633	0.68	14.633	0.75	20.63	0.30
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30
2.733	0.33	8.733	0.68	14.733	0.75	20.73	0.30
2.767	0.32	8.767	0.68	14.767	0.75	20.77	0.30
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30
2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30
2.867	0.32	8.867	0.68	14.867	0.75	20.87	0.30
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30
2.933	0.32	8.933	0.68	14.933	0.75	20.93	0.30
2.967	0.32	8.967	0.68	14.967	0.75	20.97	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.033	0.32	9.033	0.80	15.033	0.75	21.03	0.30
3.067	0.32	9.067	0.80	15.067	0.75	21.07	0.30
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30
3.133	0.32	9.133	0.80	15.133	0.75	21.13	0.30
3.167	0.32	9.167	0.80	15.167	0.75	21.17	0.30
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30
3.233	0.32	9.233	0.80	15.233	0.75	21.23	0.30
3.267	0.32	9.267	0.80	15.267	0.75	21.27	0.30
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30
3.367	0.32	9.367	0.80	15.367	0.75	21.37	0.30
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30
3.433	0.32	9.433	0.80	15.433	0.75	21.43	0.30
3.467	0.32	9.467	0.80	15.467	0.75	21.47	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.533	0.32	9.533	0.90	15.533	0.75	21.53	0.30
3.567	0.33	9.567	0.90	15.567	0.75	21.57	0.30
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30
3.633	0.33	9.633	0.90	15.633	0.75	21.63	0.30
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30
3.733	0.33	9.733	0.90	15.733	0.75	21.73	0.30
3.767	0.32	9.767	0.90	15.767	0.75	21.77	0.30
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30
3.867	0.32	9.867	0.90	15.867	0.75	21.87	0.30
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30
3.933	0.32	9.933	0.90	15.933	0.75	21.93	0.30
3.967	0.32	9.967	0.90	15.967	0.75	21.97	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.033	0.40	10.033	1.15	16.033	0.45	22.03	0.30
4.067	0.40	10.067	1.15	16.067	0.45	22.07	0.30
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30
4.133	0.40	10.133	1.15	16.133	0.45	22.13	0.30
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30
4.233	0.40	10.233	1.15	16.233	0.45	22.23	0.30
4.267	0.40	10.267	1.15	16.267	0.45	22.27	0.30
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30
4.367	0.40	10.367	1.15	16.367	0.45	22.37	0.30
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30
4.433	0.40	10.433	1.15	16.433	0.45	22.43	0.30
4.467	0.40	10.467	1.15	16.467	0.45	22.47	0.30
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30
4.533	0.40	10.533	1.55	16.533	0.45	22.53	0.30
4.567	0.40	10.567	1.55	16.567	0.45	22.57	0.30
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30
4.633	0.40	10.633	1.55	16.633	0.45	22.63	0.30
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30
4.733	0.40	10.733	1.55	16.733	0.45	22.73	0.30
4.767	0.40	10.767	1.55	16.767	0.45	22.77	0.30
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30
4.833	0.40	10.833	1.55	16.833	0.45	22.83	0.30
4.867	0.40	10.867	1.55	16.867	0.45	22.87	0.30
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30
4.933	0.40	10.933	1.55	16.933	0.45	22.93	0.30
4.967	0.40	10.967	1.55	16.967	0.45	22.97	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.033	0.40	11.033	2.40	17.033	0.45	23.03	0.30
5.067	0.40	11.067	2.40	17.067	0.45	23.07	0.30
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30
5.133	0.40	11.133	2.40	17.133	0.45	23.13	0.30
5.167	0.40	11.167	2.40	17.167	0.45	23.17	0.30
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30
5.233	0.40	11.233	2.40	17.233	0.45	23.23	0.30

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5.267	0.40	11.267	2.40	17.267	0.45	23.27	0.30
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30
5.367	0.40	11.367	2.40	17.367	0.45	23.37	0.30
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30
5.433	0.40	11.433	2.40	17.433	0.45	23.43	0.30
5.467	0.40	11.467	2.40	17.467	0.45	23.47	0.30
5.500	0.40	11.500	2.41	17.500	0.45	23.50	0.30
5.533	0.40	11.533	10.40	17.533	0.45	23.53	0.30
5.567	0.40	11.567	10.40	17.567	0.45	23.57	0.30
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30
5.633	0.40	11.633	10.40	17.633	0.45	23.63	0.30
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30
5.733	0.40	11.733	10.40	17.733	0.45	23.73	0.30
5.767	0.40	11.767	19.02	17.767	0.45	23.77	0.30
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30
5.833	0.40	11.833	27.60	17.833	0.45	23.83	0.30
5.867	0.40	11.867	27.60	17.867	0.45	23.87	0.30
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30
5.933	0.40	11.933	27.60	17.933	0.45	23.93	0.30
5.967	0.40	11.967	27.60	17.967	0.45	23.97	0.30
6.000	0.40	12.000	27.57	18.000	0.45	24.00	0.30

Max.Eff.Inten.(mm/hr)= 27.60 5.66
over (min) 6.00 34.00
Storage Coeff. (min)= 5.62 (ii) 32.26 (ii)
Unit Hyd. Tpeak (min)= 6.00 34.00
Unit Hyd. peak (cms)= 0.20 0.03

TOTALS
PEAK FLOW (cms)= 0.13 0.05 0.147 (iii)
TIME TO PEAK (hrs)= 12.00 12.47 12.00
RUNOFF VOLUME (mm)= 23.50 6.97 10.93
TOTAL RAINFALL (mm)= 25.00 25.00 25.00
RUNOFF COEFFICIENT = 0.94 0.28 0.44

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0211)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0231):	7.45	0.147	12.00	10.93
+ ID2= 2 (0030):	39.52	0.193	12.67	4.43
ID = 3 (0211):	46.97	0.251	12.57	5.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)
IN= 2----> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0000		
1.00	100.67	0.0000		
2.00	100.33	0.0800 / 0.0350	Main Channel	
3.00	100.00	0.0350	Main Channel	
4.00	100.00	0.0350	Main Channel	
5.00	100.33	0.0350 / 0.0800	Main Channel	
6.00	100.67	0.0800		
7.00	101.00	0.0800		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.485E+01	0.0	0.34	4.39
0.09	100.09	.109E+02	0.1	0.51	2.93
0.14	100.14	.182E+02	0.1	0.64	2.34
0.19	100.19	.267E+02	0.2	0.75	2.00
0.24	100.24	.364E+02	0.3	0.85	1.77
0.28	100.28	.473E+02	0.5	0.94	1.60
0.33	100.33	.594E+02	0.7	1.02	1.47
0.39	100.39	.753E+02	1.0	1.17	1.28
0.44	100.44	.928E+02	1.3	1.30	1.16
0.50	100.50	.112E+03	1.7	1.40	1.07
0.55	100.55	.133E+03	2.2	1.49	1.01
0.61	100.61	.155E+03	2.7	1.57	0.96
0.66	100.66	.180E+03	3.3	1.63	0.92

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0.72	100.72	.205E+03	3.9	1.69	0.89
0.78	100.78	.233E+03	4.5	1.75	0.86
0.83	100.83	.262E+03	5.2	1.80	0.84
0.89	100.89	.293E+03	6.0	1.84	0.82
0.94	100.94	.326E+03	6.8	1.89	0.80
1.00	101.00	.360E+03	7.7	1.92	0.78

<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0211)	46.97	0.25	12.57	5.46	0.20
OUTFLOW: ID= 1 (0005)	46.97	0.25	12.60	5.46	0.20

CALIB	Area (ha)=	8.25
STANDHYD (0232)	Total Imp(%)=	39.00
ID= 1 DT= 3.0 min	Dir. Conn.(%)=	39.00

IMPERVIOUS		PERVIOUS (i)
Surface Area	(ha)=	3.22
Dep. Storage	(mm)=	15.00
Average Slope	(%)=	2.00
Length	(m)=	234.52
Mannings n	=	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.050	0.25	6.050	0.50	12.050	3.60	18.05	0.45
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45
0.150	0.25	6.150	0.50	12.150	3.60	18.15	0.45
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45
0.350	0.25	6.350	0.50	12.350	3.60	18.35	0.45
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45
0.450	0.25	6.450	0.50	12.450	3.60	18.45	0.45
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45
0.550	0.25	6.550	0.50	12.550	1.85	18.55	0.45
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45
0.650	0.25	6.650	0.50	12.650	1.85	18.65	0.45
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45
0.850	0.25	6.850	0.50	12.850	1.85	18.85	0.45
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45
0.950	0.25	6.950	0.50	12.950	1.85	18.95	0.45
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45
1.050	0.25	7.050	0.50	13.050	0.35	19.05	0.45
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45
1.150	0.25	7.150	0.50	13.150	0.35	19.15	0.45
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45
1.350	0.25	7.350	0.50	13.350	0.35	19.35	0.45
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45
1.450	0.25	7.450	0.50	13.450	0.35	19.45	0.45
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45
1.550	0.25	7.550	0.50	13.550	2.05	19.55	0.45
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45
1.650	0.25	7.650	0.50	13.650	2.05	19.65	0.45
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45
1.850	0.45	7.850	0.50	13.850	2.05	19.85	0.45
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45
1.950	0.45	7.950	0.50	13.950	2.05	19.95	0.45
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45
2.050	0.33	8.050	0.68	14.050	0.75	20.05	0.30
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30
2.150	0.33	8.150	0.68	14.150	0.75	20.15	0.30
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30
2.250	0.33	8.250	0.68	14.250	0.75	20.25	0.30
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30
2.350	0.32	8.350	0.67	14.350	0.75	20.35	0.30
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30
2.450	0.32	8.450	0.67	14.450	0.75	20.45	0.30
2.500	0.32	8.500	0.68	14.500	0.75	20.50	0.30
2.550	0.32	8.550	0.68	14.550	0.75	20.55	0.30
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30
2.650	0.33	8.650	0.68	14.650	0.75	20.65	0.30

HRP6.1-PR-SWM_25mm Storm.OUT											
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30				
2.750	0.33	8.750	0.68	14.750	0.75	20.75	0.30				
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30				
2.850	0.32	8.850	0.68	14.850	0.75	20.85	0.30				
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30				
2.950	0.32	8.950	0.68	14.950	0.75	20.95	0.30				
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30				
3.050	0.32	9.050	0.80	15.050	0.75	21.05	0.30				
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30				
3.150	0.32	9.150	0.80	15.150	0.75	21.15	0.30				
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30				
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30				
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30				
3.350	0.32	9.350	0.80	15.350	0.75	21.35	0.30				
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30				
3.450	0.32	9.450	0.80	15.450	0.75	21.45	0.30				
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30				
3.550	0.32	9.550	0.90	15.550	0.75	21.55	0.30				
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30				
3.650	0.33	9.650	0.90	15.650	0.75	21.65	0.30				
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30				
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30				
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30				
3.850	0.32	9.850	0.90	15.850	0.75	21.85	0.30				
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30				
3.950	0.32	9.950	0.90	15.950	0.75	21.95	0.30				
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30				
4.050	0.40	10.050	1.15	16.050	0.45	22.05	0.30				
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30				
4.150	0.40	10.150	1.15	16.150	0.45	22.15	0.30				
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30				
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30				
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30				
4.350	0.40	10.350	1.15	16.350	0.45	22.35	0.30				
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30				
4.450	0.40	10.450	1.15	16.450	0.45	22.45	0.30				
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30				
4.550	0.40	10.550	1.55	16.550	0.45	22.55	0.30				
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30				
4.650	0.40	10.650	1.55	16.650	0.45	22.65	0.30				
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30				
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30				
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30				
4.850	0.40	10.850	1.55	16.850	0.45	22.85	0.30				
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30				
4.950	0.40	10.950	1.55	16.950	0.45	22.95	0.30				
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30				
5.050	0.40	11.050	2.40	17.050	0.45	23.05	0.30				
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30				
5.150	0.40	11.150	2.40	17.150	0.45	23.15	0.30				
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30				
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30				
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30				
5.350	0.40	11.350	2.40	17.350	0.45	23.35	0.30				
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30				
5.450	0.40	11.450	2.40	17.450	0.45	23.45	0.30				
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30				
5.550	0.40	11.550	10.40	17.550	0.45	23.55	0.30				
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30				
5.650	0.40	11.650	10.40	17.650	0.45	23.65	0.30				
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30				
5.750	0.40	11.750	10.41	17.750	0.45	23.75	0.30				
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30				
5.850	0.40	11.850	27.60	17.850	0.45	23.85	0.30				
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30				
5.950	0.40	11.950	27.60	17.950	0.45	23.95	0.30				
6.000	0.40	12.000	27.59	18.000	0.45	24.00	0.30				

Max.Eff.Inten.(mm/hr)= 11.70 3.65
over (min) 9.00 36.00
Storage Coeff. (min)= 8.16 (ii) 34.76 (iii)
Unit Hyd. Tpeak (min)= 9.00 36.00
Unit Hyd. peak (cms)= 0.13 0.03

TOTALS
PEAK FLOW (cms)= 0.07 0.03 0.086 (iii)
TIME TO PEAK (hrs)= 12.10 12.50 12.10
RUNOFF VOLUME (mm)= 10.00 4.52 6.65
TOTAL RAINFALL (mm)= 25.00 25.00 25.00
RUNOFF COEFFICIENT = 0.40 0.18 0.27

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP6.1-PR-SWM_25mm Storm.OUT

ADD HYD (0007)
1 * 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0232): 8.25 0.086 12.10 6.65
+ ID2= 2 (0005): 46.97 0.250 12.60 5.46
=====

ID = 3 (0007): 55.22 0.307 12.53 5.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0022)
IN= 2--> OUT= 1 Routing time step (min)!= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0800
1.00 100.67 0.0800
2.00 100.33 0.0800 /0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 /0.0800 Main Channel
6.00 100.67 0.0800
7.00 101.00 0.0800

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .609E+01 0.0 0.34 5.51
0.09 100.09 .137E+02 0.1 0.51 3.68
0.14 100.14 .228E+02 0.1 0.64 2.94
0.19 100.19 .335E+02 0.2 0.75 2.51
0.24 100.24 .457E+02 0.3 0.85 2.22
0.28 100.28 .594E+02 0.5 0.94 2.01
0.33 100.33 .746E+02 0.7 1.02 1.85
0.39 100.39 .945E+02 1.0 1.17 1.61
0.44 100.44 .117E+03 1.3 1.30 1.45
0.50 100.50 .141E+03 1.7 1.40 1.34
0.55 100.55 .167E+03 2.2 1.49 1.26
0.61 100.61 .195E+03 2.7 1.57 1.20
0.66 100.66 .225E+03 3.3 1.63 1.15
0.72 100.72 .258E+03 3.9 1.69 1.11
0.78 100.78 .292E+03 4.5 1.75 1.08
0.83 100.83 .329E+03 5.2 1.80 1.05
0.89 100.89 .368E+03 6.0 1.84 1.02
0.94 100.94 .409E+03 6.8 1.88 1.00
1.00 101.00 .452E+03 7.7 1.92 0.98

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0007) 55.22 0.31 12.53 5.64 0.22 0.82
OUTFLOW: ID= 1 (0022) 55.22 0.31 12.57 5.64 0.22 0.81

CALIB
STANDHYD (0133)
ID= 1 DT= 3.0 min
Area (ha)= 6.79
Total Imp(%)= 47.00 Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.19 3.60
Dep. Storage (mm)= 15.00 1.50
Average Slope (%)= 2.00 2.00
Length (m)= 212.76 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.050 0.25 | 6.050 0.50 | 12.050 3.60 | 18.05 0.45
0.100 0.25 | 6.100 0.50 | 12.100 3.60 | 18.10 0.45
0.150 0.25 | 6.150 0.50 | 12.150 3.60 | 18.15 0.45
0.200 0.25 | 6.200 0.50 | 12.200 3.60 | 18.20 0.45
0.250 0.25 | 6.250 0.50 | 12.250 3.60 | 18.25 0.45
0.300 0.25 | 6.300 0.50 | 12.300 3.60 | 18.30 0.45
0.350 0.25 | 6.350 0.50 | 12.350 3.60 | 18.35 0.45
0.400 0.25 | 6.400 0.50 | 12.400 3.60 | 18.40 0.45
0.450 0.25 | 6.450 0.50 | 12.450 3.60 | 18.45 0.45

HRP6.1-PR-SWM_25mm Storm.OUT									
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45		
0.550	0.25	6.550	0.50	12.550	1.85	18.55	0.45		
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45		
0.650	0.25	6.650	0.50	12.650	1.85	18.65	0.45		
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45		
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45		
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45		
0.850	0.25	6.850	0.50	12.850	1.85	18.85	0.45		
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45		
0.950	0.25	6.950	0.50	12.950	1.85	18.95	0.45		
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45		
1.050	0.25	7.050	0.50	13.050	0.35	19.05	0.45		
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45		
1.150	0.25	7.150	0.50	13.150	0.35	19.15	0.45		
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45		
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45		
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45		
1.350	0.25	7.350	0.50	13.350	0.35	19.35	0.45		
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45		
1.450	0.25	7.450	0.50	13.450	0.35	19.45	0.45		
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45		
1.550	0.25	7.550	0.50	13.550	2.05	19.55	0.45		
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45		
1.650	0.25	7.650	0.50	13.650	2.05	19.65	0.45		
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45		
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45		
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45		
1.850	0.45	7.850	0.50	13.850	2.05	19.85	0.45		
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45		
1.950	0.45	7.950	0.50	13.950	2.05	19.95	0.45		
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45		
2.050	0.33	8.050	0.68	14.050	0.75	20.05	0.30		
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30		
2.150	0.33	8.150	0.68	14.150	0.75	20.15	0.30		
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30		
2.250	0.33	8.250	0.68	14.250	0.75	20.25	0.30		
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30		
2.350	0.32	8.350	0.67	14.350	0.75	20.35	0.30		
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30		
2.450	0.32	8.450	0.67	14.450	0.75	20.45	0.30		
2.500	0.32	8.500	0.68	14.500	0.75	20.50	0.30		
2.550	0.32	8.550	0.68	14.550	0.75	20.55	0.30		
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30		
2.650	0.33	8.650	0.68	14.650	0.75	20.65	0.30		
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30		
2.750	0.33	8.750	0.68	14.750	0.75	20.75	0.30		
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30		
2.850	0.32	8.850	0.68	14.850	0.75	20.85	0.30		
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30		
2.950	0.32	8.950	0.68	14.950	0.75	20.95	0.30		
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30		
3.050	0.32	9.050	0.80	15.050	0.75	21.05	0.30		
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30		
3.150	0.32	9.150	0.80	15.150	0.75	21.15	0.30		
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30		
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30		
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30		
3.350	0.32	9.350	0.80	15.350	0.75	21.35	0.30		
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30		
3.450	0.32	9.450	0.80	15.450	0.75	21.45	0.30		
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30		
3.550	0.32	9.550	0.90	15.550	0.75	21.55	0.30		
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30		
3.650	0.33	9.650	0.90	15.650	0.75	21.65	0.30		
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30		
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30		
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30		
3.850	0.32	9.850	0.90	15.850	0.75	21.85	0.30		
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30		
3.950	0.32	9.950	0.90	15.950	0.75	21.95	0.30		
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30		
4.050	0.40	10.050	1.15	16.050	0.45	22.05	0.30		
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30		
4.150	0.40	10.150	1.15	16.150	0.45	22.15	0.30		
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30		
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30		
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30		
4.350	0.40	10.350	1.15	16.350	0.45	22.35	0.30		
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30		
4.450	0.40	10.450	1.15	16.450	0.45	22.45	0.30		
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30		
4.550	0.40	10.550	1.55	16.550	0.45	22.55	0.30		
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30		
4.650	0.40	10.650	1.55	16.650	0.45	22.65	0.30		
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30		
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30		
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30		

HRP6.1-PR-SWM_25mm Storm.OUT									
4.850	0.40	10.850	1.55	16.850	0.45	22.85	0.30		
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30		
4.950	0.40	10.950	1.55	16.950	0.45	22.95	0.30		
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30		
5.050	0.40	11.050	2.40	17.050	0.45	23.05	0.30		
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30		
5.150	0.40	11.150	2.40	17.150	0.45	23.15	0.30		
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30		
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30		
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30		
5.350	0.40	11.350	2.40	17.350	0.45	23.35	0.30		
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30		
5.450	0.40	11.450	2.40	17.450	0.45	23.45	0.30		
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30		
5.550	0.40	11.550	10.40	17.550	0.45	23.55	0.30		
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30		
5.650	0.40	11.650	10.40	17.650	0.45	23.65	0.30		
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30		
5.750	0.40	11.750	10.41	17.750	0.45	23.75	0.30		
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30		
5.850	0.40	11.850	27.60	17.850	0.45	23.85	0.30		
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30		
5.950	0.40	11.950	27.60	17.950	0.45	23.95	0.30		
6.000	0.40	12.000	27.59	18.000	0.45	24.00	0.30		

Max.Eff.Inten.(mm/hr)=	11.70	2.12	
over (min)	9.00	42.00	
Storage Coeff. (min)=	7.70 (ii)	40.64 (ii)	
Unit Hyd. Tpeak (min)=	9.00	42.00	
Unit Hyd. peak (cms)=	0.14	0.03	
			TOTALS
PEAK FLOW (cms)=	0.07	0.01	0.079 (iii)
TIME TO PEAK (hrs)=	12.10	12.60	12.10
RUNOFF VOLUME (mm)=	10.00	3.08	6.33
TOTAL RAINFALL (mm)=	25.00	25.00	25.00
RUNOFF COEFFICIENT =	0.40	0.12	0.25

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0091)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0133):	6.79	0.079	12.10	6.33
+ ID2= 2 (0022):	55.22	0.307	12.57	5.64
=====				
ID = 3 (0091):	62.01	0.349	12.57	5.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0222)	Area	(ha)=	3.54	Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.15				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	0.25	6.083	0.50	12.083	3.60	18.08	0.45		
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45		
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45		
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45		
0.417	0.25	6.417	0.50	12.417	3.60	18.42	0.45		
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45		
0.583	0.25	6.583	0.50	12.583	1.85	18.58	0.45		
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45		
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45		
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45		
0.917	0.25	6.917	0.50	12.917	1.85	18.92	0.45		
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45		
1.083	0.25	7.083	0.50	13.083	0.35	19.08	0.45		
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45		
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45		
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45		
1.417	0.25	7.417	0.50	13.417	0.35	19.42	0.45		
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45		

HRP6.1-PR-SWM_25mm Storm.OUT

1.583	0.25	7.583	0.50	13.583	2.05	19.58	0.45
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45
1.917	0.45	7.917	0.50	13.917	2.05	19.92	0.45
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45
2.083	0.33	8.083	0.68	14.083	0.75	20.08	0.30
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30
2.250	0.33	8.250	0.67	14.250	0.75	20.25	0.30
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30
2.417	0.32	8.417	0.67	14.417	0.75	20.42	0.30
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30
2.583	0.32	8.583	0.68	14.583	0.75	20.58	0.30
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30
2.750	0.33	8.750	0.67	14.750	0.75	20.75	0.30
2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30
2.917	0.32	8.917	0.68	14.917	0.75	20.92	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.083	0.32	9.083	0.80	15.083	0.75	21.08	0.30
3.167	0.32	9.167	0.80	15.167	0.75	21.17	0.30
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30
3.417	0.32	9.417	0.80	15.417	0.75	21.42	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.583	0.32	9.583	0.90	15.583	0.75	21.58	0.30
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30
3.917	0.32	9.917	0.90	15.917	0.75	21.92	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.083	0.40	10.083	1.15	16.083	0.45	22.08	0.30
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30
4.417	0.40	10.417	1.15	16.417	0.45	22.42	0.30
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30
4.583	0.40	10.583	1.55	16.583	0.45	22.58	0.30
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30
4.833	0.40	10.833	1.55	16.833	0.45	22.83	0.30
4.917	0.40	10.917	1.55	16.917	0.45	22.92	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.083	0.40	11.083	2.40	17.083	0.45	23.08	0.30
5.167	0.40	11.167	2.40	17.167	0.45	23.17	0.30
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30
5.417	0.40	11.417	2.40	17.417	0.45	23.42	0.30
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30
5.583	0.40	11.583	10.40	17.583	0.45	23.58	0.30
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30
5.750	0.40	11.750	10.40	17.750	0.45	23.75	0.30
5.833	0.40	11.833	27.60	17.833	0.45	23.83	0.30
5.917	0.40	11.917	27.60	17.917	0.45	23.92	0.30
6.000	0.40	12.000	27.60	18.000	0.45	24.00	0.30

Unit Hyd Qpeak (cms)= 0.901

PEAK FLOW (cms)= 0.036 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 3.800
TOTAL RAINFALL (mm)= 25.000
RUNOFF COEFFICIENT = 0.152

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0221)			
ID= 1 DT= 5.0 min			

Area (ha)=	3.79		
Total Imp(%)=	27.00	Dir. Conn.(%)=	27.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	1.02	2.77	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	2.00	2.00	
Length (m)=	158.95	40.00	
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.25	6.083	0.50	12.083	3.60	18.08	0.45
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45

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0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45
0.417	0.25	6.417	0.50	12.417	3.60	18.42	0.45
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45
0.583	0.25	6.583	0.50	12.583	1.85	18.58	0.45
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45
0.917	0.25	6.917	0.50	12.917	1.85	18.92	0.45
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45
1.083	0.25	7.083	0.50	13.083	0.35	19.08	0.45
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45
1.417	0.25	7.417	0.50	13.417	0.35	19.42	0.45
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45
1.583	0.25	7.583	0.50	13.583	2.05	19.58	0.45
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45
1.917	0.45	7.917	0.50	13.917	2.05	19.92	0.45
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45
2.083	0.33	8.083	0.68	14.083	0.75	20.08	0.30
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30
2.250	0.33	8.250	0.67	14.250	0.75	20.25	0.30
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30
2.417	0.32	8.417	0.67	14.417	0.75	20.42	0.30
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30
2.583	0.32	8.583	0.68	14.583	0.75	20.58	0.30
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30
2.750	0.33	8.750	0.67	14.750	0.75	20.75	0.30
2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30
2.917	0.32	8.917	0.68	14.917	0.75	20.92	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.083	0.32	9.083	0.80	15.083	0.75	21.08	0.30
3.167	0.32	9.167	0.80	15.167	0.75	21.17	0.30
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30
3.417	0.32	9.417	0.80	15.417	0.75	21.42	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.583	0.32	9.583	0.90	15.583	0.75	21.58	0.30
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30
3.917	0.32	9.917	0.90	15.917	0.75	21.92	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.083	0.40	10.083	1.15	16.083	0.45	22.08	0.30
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30
4.417	0.40	10.417	1.15	16.417	0.45	22.42	0.30
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30
4.583	0.40	10.583	1.55	16.583	0.45	22.58	0.30
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30
4.833	0.40	10.833	1.55	16.833	0.45	22.83	0.30
4.917	0.40	10.917	1.55	16.917	0.45	22.92	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.083	0.40	11.083	2.40	17.083	0.45	23.08	0.30
5.167	0.40	11.167	2.40	17.167	0.45	23.17	0.30
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30
5.417	0.40	11.417	2.40	17.417	0.45	23.42	0.30
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30
5.583	0.40	11.583	10.40	17.583	0.45	23.58	0.30
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30
5.750	0.40	11.750	10.40	17.750	0.45	23.75	0.30
5.833	0.40	11.833	27.60	17.833	0.45	23.83	0.30
5.917	0.40	11.917	27.60	17.917	0.45	23.92	0.30
6.000	0.40	12.000	27.60	18.000	0.45	24.00	0.30

Max.Eff.Inten.(mm/hr)= 27.60 3.00
over (min)= 5.00 35.00
Storage Coeff. (min)= 4.59 (ii) 33.27 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.23 0.03

TOTALS
PEAK FLOW (cms)= 0.08 0.01 0.081 (iii)
TIME TO PEAK (hrs)= 12.00 12.50 12.00
RUNOFF VOLUME (mm)= 23.50 4.17 9.39
TOTAL RAINFALL (mm)= 25.00 25.00
RUNOFF COEFFICIENT = 0.94 0.17 0.38

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 77.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

HRP6.1-PR-SWM_25mm Storm.OUT

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0009)					
1 + 2 = 3					

ID1= 1 (0221):	3.79	0.081	12.00	9.39	
+ ID2= 2 (0222):	3.54	0.036	12.00	3.80	
=====					
ID = 3 (0009):	7.33	0.117	12.00	6.69	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0009)					
3 + 2 = 1					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 3 (0009):	7.33	0.117	12.00	6.69	
+ ID2= 2 (0091):	62.01	0.349	12.57	5.71	
=====					
ID = 1 (0009):	69.34	0.394	12.10	5.82	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0010)				
IN= 2--> OUT= 1				
DT= 4.0 min				

	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	3.2510	1.2500
	0.6750	0.7720	3.7840	1.3920
	1.6680	1.0110	4.5560	1.5300
	2.4150	1.1310	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0009)	69.340	0.394	12.10	5.82
OUTFLOW: ID= 1 (0010)	69.340	0.130	14.07	5.81

PEAK FLOW REDUCTION [Qout/qin](%)= 33.13
TIME SHIFT OF PEAK FLOW (min)=118.00
MAXIMUM STORAGE USED (ha.m.)= 0.1493

CALIB			
STANDHYD (0234)			
ID= 1 DT= 3.0 min			

	Area	(ha)=	17.56
	Total Imp(%)=	28.00	Dir. Conn.(%)= 28.00

	IMPERVIOUS	PERVIOUS (l)	
Surface Area	(ha)=	4.92	12.64
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	342.15	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.050	0.25	6.050	0.50	12.050	3.60	18.05	0.45		
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45		
0.150	0.25	6.150	0.50	12.150	3.60	18.15	0.45		
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45		
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45		
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45		
0.350	0.25	6.350	0.50	12.350	3.60	18.35	0.45		
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45		
0.450	0.25	6.450	0.50	12.450	3.60	18.45	0.45		
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45		
0.550	0.25	6.550	0.50	12.550	1.85	18.55	0.45		
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45		
0.650	0.25	6.650	0.50	12.650	1.85	18.65	0.45		
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45		
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45		
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45		
0.850	0.25	6.850	0.50	12.850	1.85	18.85	0.45		
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45		
0.950	0.25	6.950	0.50	12.950	1.85	18.95	0.45		
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45		
1.050	0.25	7.050	0.50	13.050	0.35	19.05	0.45		

1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45
1.150	0.25	7.150	0.50	13.150	0.35	19.15	0.45
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45
1.350	0.25	7.350	0.50	13.350	0.35	19.35	0.45
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45
1.450	0.25	7.450	0.50	13.450	0.35	19.45	0.45
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45
1.550	0.25	7.550	0.50	13.550	2.05	19.55	0.45
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45
1.650	0.25	7.650	0.50	13.650	2.05	19.65	0.45
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45
1.850	0.45	7.850	0.50	13.850	2.05	19.85	0.45
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45
1.950	0.45	7.950	0.50	13.950	2.05	19.95	0.45
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45
2.050	0.33	8.050	0.68	14.050	0.75	20.05	0.30
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30
2.150	0.33	8.150	0.68	14.150	0.75	20.15	0.30
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30
2.250	0.33	8.250	0.68	14.250	0.75	20.25	0.30
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30
2.350	0.32	8.350	0.67	14.350	0.75	20.35	0.30
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30
2.450	0.32	8.450	0.67	14.450	0.75	20.45	0.30
2.500	0.32	8.500	0.68	14.500	0.75	20.50	0.30
2.550	0.32	8.550	0.68	14.550	0.75	20.55	0.30
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30
2.650	0.33	8.650	0.68	14.650	0.75	20.65	0.30
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30
2.750	0.33	8.750	0.68	14.750	0.75	20.75	0.30
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30
2.850	0.32	8.850	0.68	14.850	0.75	20.85	0.30
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30
2.950	0.32	8.950	0.68	14.950	0.75	20.95	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.050	0.32	9.050	0.80	15.050	0.75	21.05	0.30
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30
3.150	0.32	9.150	0.80	15.150	0.75	21.15	0.30
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30
3.350	0.32	9.350	0.80	15.350	0.75	21.35	0.30
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30
3.450	0.32	9.450	0.80	15.450	0.75	21.45	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.550	0.32	9.550	0.90	15.550	0.75	21.55	0.30
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30
3.650	0.33	9.650	0.90	15.650	0.75	21.65	0.30
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30
3.850	0.32	9.850	0.90	15.850	0.75	21.85	0.30
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30
3.950	0.32	9.950	0.90	15.950	0.75	21.95	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.050	0.40	10.050	1.15	16.050	0.45	22.05	0.30
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30
4.150	0.40	10.150	1.15	16.150	0.45	22.15	0.30
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30
4.350	0.40	10.350	1.15	16.350	0.45	22.35	0.30
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30
4.450	0.40	10.450	1.15	16.450	0.45	22.45	0.30
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30
4.550	0.40	10.550	1.55	16.550	0.45	22.55	0.30
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30
4.650	0.40	10.650	1.55	16.650	0.45	22.65	0.30
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30
4.850	0.40	10.850	1.55	16.850	0.45	22.85	0.30
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30
4.950	0.40	10.950	1.55	16.950	0.45	22.95	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.050	0.40	11.050	2.40	17.050	0.45	23.05	0.30
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30
5.150	0.40	11.150	2.40	17.150	0.45	23.15	0.30
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30
5.350	0.40	11.350	2.40	17.350	0.45	23.35	0.30
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30

HRP6.1-PR-SWM_25mm Storm.OUT									
5.450	0.40	[11.450	2.40	[17.450	0.45		23.45	0.30	
5.500	0.40	[11.500	2.40	[17.500	0.45		23.50	0.30	
5.550	0.40	[11.550	10.40	[17.550	0.45		23.55	0.30	
5.600	0.40	[11.600	10.40	[17.600	0.45		23.60	0.30	
5.650	0.40	[11.650	10.40	[17.650	0.45		23.65	0.30	
5.700	0.40	[11.700	10.40	[17.700	0.45		23.70	0.30	
5.750	0.40	[11.750	10.41	[17.750	0.45		23.75	0.30	
5.800	0.40	[11.800	27.60	[17.800	0.45		23.80	0.30	
5.850	0.40	[11.850	27.60	[17.850	0.45		23.85	0.30	
5.900	0.40	[11.900	27.60	[17.900	0.45		23.90	0.30	
5.950	0.40	[11.950	27.60	[17.950	0.45		23.95	0.30	
6.000	0.40	[12.000	27.59	[18.000	0.45		24.00	0.30	

Max.Eff.Inten.(mm/hr)= 27.60 3.65
over (min) 6.00 36.00
Storage Coeff. (min)= 7.26 (ii) 33.80 (ii)
Unit Hyd. Tpeak (min)= 6.00 36.00
Unit Hyd. peak (cms)= 0.16 0.03

PEAK FLOW (cms)= 0.34 0.07 0.362 (iii)
TIME TO PEAK (hrs)= 12.00 12.50 12.00
RUNOFF VOLUME (mm)= 23.50 4.52 9.83
TOTAL RAINFALL (mm)= 25.00 25.00 25.00
RUNOFF COEFFICIENT = 0.94 0.18 0.30

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0011)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0010):	69.34	0.130	14.07	5.81	
+ ID2= 2 (0234):	17.56	0.362	12.00	9.83	
=====					
ID = 3 (0011):	86.90	0.388	12.00	6.63	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0015)					
IN= 2--> OUT= 1					
DT= 3.0 min					
OVERFLOW IS OFF					
	OUTFLOW	STORAGE	OUTFLOW	STORAGE	
	(cms)	(ha.m.)	(cms)	(ha.m.)	
	0.0000	0.0000	3.4620	0.6060	
	0.7430	0.2200	4.3720	0.6120	
	1.6740	0.3940	5.3540	0.6210	
	2.5260	0.4950	0.0000	0.0000	
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0011)	86.900	0.388	12.00	6.63	
OUTFLOW: ID= 1 (0015)	86.900	0.175	13.10	6.62	

PEAK FLOW REDUCTION [Qout/Qin](%)= 45.00
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.0517

CALIB					
STANDHYD (0235)					
ID= 1 DT= 2.0 min					
Area		(ha)=	4.28		
Total Imp(%)=		30.00	Dir. Conn.(%)=	30.00	
		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	1.28	3.00		
Dep. Storage	(mm)=	1.50	1.50		
Average Slope	(%)=	2.00	2.00		
Length	(m)=	168.92	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.25	6.033	0.50	12.033	3.60	18.03	0.45
0.067	0.25	6.067	0.50	12.067	3.60	18.07	0.45
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45
0.133	0.25	6.133	0.50	12.133	3.60	18.13	0.45

HRP6.1-PR-SWM_25mm Storm.OUT									
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45		
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45		
0.233	0.25	6.233	0.50	12.233	3.60	18.23	0.45		
0.267	0.25	6.267	0.50	12.267	3.60	18.27	0.45		
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45		
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45		
0.367	0.25	6.367	0.50	12.367	3.60	18.37	0.45		
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45		
0.433	0.25	6.433	0.50	12.433	3.60	18.43	0.45		
0.467	0.25	6.467	0.50	12.467	3.60	18.47	0.45		
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45		
0.533	0.25	6.533	0.50	12.533	1.85	18.53	0.45		
0.567	0.25	6.567	0.50	12.567	1.85	18.57	0.45		
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45		
0.633	0.25	6.633	0.50	12.633	1.85	18.63	0.45		
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45		
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45		
0.733	0.25	6.733	0.50	12.733	1.85	18.73	0.45		
0.767	0.25	6.767	0.50	12.767	1.85	18.77	0.45		
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45		
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45		
0.867	0.25	6.867	0.50	12.867	1.85	18.87	0.45		
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45		
0.933	0.25	6.933	0.50	12.933	1.85	18.93	0.45		
0.967	0.25	6.967	0.50	12.967	1.85	18.97	0.45		
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45		
1.033	0.25	7.033	0.50	13.033	0.35	19.03	0.45		
1.067	0.25	7.067	0.50	13.067	0.35	19.07	0.45		
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45		
1.133	0.25	7.133	0.50	13.133	0.35	19.13	0.45		
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45		
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45		
1.233	0.25	7.233	0.50	13.233	0.35	19.23	0.45		
1.267	0.25	7.267	0.50	13.267	0.35	19.27	0.45		
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45		
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45		
1.367	0.25	7.367	0.50	13.367	0.35	19.37	0.45		
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45		
1.433	0.25	7.433	0.50	13.433	0.35	19.43	0.45		
1.467	0.25	7.467	0.50	13.467	0.35	19.47	0.45		
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45		
1.533	0.25	7.533	0.50	13.533	2.05	19.53	0.45		
1.567	0.25	7.567	0.50	13.567	2.05	19.57	0.45		
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45		
1.633	0.25	7.633	0.50	13.633	2.05	19.63	0.45		
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45		
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45		
1.733	0.25	7.733	0.50	13.733	2.05	19.73	0.45		
1.767	0.35	7.767	0.50	13.767	2.05	19.77	0.45		
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45		
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45		
1.867	0.45	7.867	0.50	13.867	2.05	19.87	0.45		
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45		
1.933	0.45	7.933	0.50	13.933	2.05	19.93	0.45		
1.967	0.45	7.967	0.50	13.967	2.05	19.97	0.45		
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45		
2.033	0.33	8.033	0.67	14.033	0.75	20.03	0.30		
2.067	0.33	8.067	0.68	14.067	0.75	20.07	0.30		
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30		
2.133	0.33	8.133	0.68	14.133	0.75	20.13	0.30		
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30		
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30		
2.233	0.33	8.233	0.68	14.233	0.75	20.23	0.30		
2.267	0.32	8.267	0.68	14.267	0.75	20.27	0.30		
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30		
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30		
2.367	0.32	8.367	0.67	14.367	0.75	20.37	0.30		
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30		
2.433	0.32	8.433	0.67	14.433	0.75	20.43	0.30		
2.467	0.32	8.467	0.67	14.467	0.75	20.47	0.30		
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30		
2.533	0.32	8.533	0.68	14.533	0.75	20.53	0.30		
2.567	0.33	8.567	0.68	14.567	0.75	20.57	0.30		
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30		
2.633	0.33	8.633	0.68	14.633	0.75	20.63	0.30		
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30		
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30		
2.733	0.33	8.733	0.68	14.733	0.75	20.73	0.30		
2.767	0.32	8.767	0.68	14.767	0.75	20.77	0.30		
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30		
2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30		
2.867	0.32	8.867	0.68	14.867	0.75	20.87	0.30		
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30		
2.933	0.32	8.933	0.68	14.933	0.75	20.93	0.30		
2.967	0.32	8.967	0.68	14.967	0.75	20.97	0.30		
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30		
3.033	0.32	9.033	0.80	15.033	0.75	21.03	0.30		

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3.067	0.32	9.067	0.80	15.067	0.75	21.07	0.30
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30
3.133	0.32	9.133	0.80	15.133	0.75	21.13	0.30
3.167	0.32	9.167	0.80	15.167	0.75	21.17	0.30
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30
3.233	0.32	9.233	0.80	15.233	0.75	21.23	0.30
3.267	0.32	9.267	0.80	15.267	0.75	21.27	0.30
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30
3.367	0.32	9.367	0.80	15.367	0.75	21.37	0.30
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30
3.433	0.32	9.433	0.80	15.433	0.75	21.43	0.30
3.467	0.32	9.467	0.80	15.467	0.75	21.47	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.533	0.32	9.533	0.90	15.533	0.75	21.53	0.30
3.567	0.33	9.567	0.90	15.567	0.75	21.57	0.30
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30
3.633	0.33	9.633	0.90	15.633	0.75	21.63	0.30
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30
3.733	0.33	9.733	0.90	15.733	0.75	21.73	0.30
3.767	0.32	9.767	0.90	15.767	0.75	21.77	0.30
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30
3.867	0.32	9.867	0.90	15.867	0.75	21.87	0.30
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30
3.933	0.32	9.933	0.90	15.933	0.75	21.93	0.30
3.967	0.32	9.967	0.90	15.967	0.75	21.97	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.033	0.40	10.033	1.15	16.033	0.45	22.03	0.30
4.067	0.40	10.067	1.15	16.067	0.45	22.07	0.30
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30
4.133	0.40	10.133	1.15	16.133	0.45	22.13	0.30
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30
4.233	0.40	10.233	1.15	16.233	0.45	22.23	0.30
4.267	0.40	10.267	1.15	16.267	0.45	22.27	0.30
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30
4.367	0.40	10.367	1.15	16.367	0.45	22.37	0.30
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30
4.433	0.40	10.433	1.15	16.433	0.45	22.43	0.30
4.467	0.40	10.467	1.15	16.467	0.45	22.47	0.30
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30
4.533	0.40	10.533	1.55	16.533	0.45	22.53	0.30
4.567	0.40	10.567	1.55	16.567	0.45	22.57	0.30
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30
4.633	0.40	10.633	1.55	16.633	0.45	22.63	0.30
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30
4.733	0.40	10.733	1.55	16.733	0.45	22.73	0.30
4.767	0.40	10.767	1.55	16.767	0.45	22.77	0.30
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30
4.833	0.40	10.833	1.55	16.833	0.45	22.83	0.30
4.867	0.40	10.867	1.55	16.867	0.45	22.87	0.30
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30
4.933	0.40	10.933	1.55	16.933	0.45	22.93	0.30
4.967	0.40	10.967	1.55	16.967	0.45	22.97	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.033	0.40	11.033	2.40	17.033	0.45	23.03	0.30
5.067	0.40	11.067	2.40	17.067	0.45	23.07	0.30
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30
5.133	0.40	11.133	2.40	17.133	0.45	23.13	0.30
5.167	0.40	11.167	2.40	17.167	0.45	23.17	0.30
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30
5.233	0.40	11.233	2.40	17.233	0.45	23.23	0.30
5.267	0.40	11.267	2.40	17.267	0.45	23.27	0.30
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30
5.367	0.40	11.367	2.40	17.367	0.45	23.37	0.30
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30
5.433	0.40	11.433	2.40	17.433	0.45	23.43	0.30
5.467	0.40	11.467	2.40	17.467	0.45	23.47	0.30
5.500	0.40	11.500	2.41	17.500	0.45	23.50	0.30
5.533	0.40	11.533	10.40	17.533	0.45	23.53	0.30
5.567	0.40	11.567	10.40	17.567	0.45	23.57	0.30
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30
5.633	0.40	11.633	10.40	17.633	0.45	23.63	0.30
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30
5.733	0.40	11.733	10.40	17.733	0.45	23.73	0.30
5.767	0.40	11.767	19.02	17.767	0.45	23.77	0.30
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30
5.833	0.40	11.833	27.60	17.833	0.45	23.83	0.30
5.867	0.40	11.867	27.60	17.867	0.45	23.87	0.30
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30
5.933	0.40	11.933	27.60	17.933	0.45	23.93	0.30

HRP6.1-PR-SWM_25mm Storm.OUT

5.967	0.40	11.967	27.60	17.967	0.45	23.97	0.30
6.000	0.40	12.000	27.57	18.000	0.45	24.00	0.30

Max.Eff.Inten.(mm/hr)= 27.60 over 3.56
Storage Coeff. (min)= 4.76 (ii) 31.55 (iii)
Unit Hyd. Tpeak (min)= 4.00 32.00
Unit Hyd. peak (cms)= 0.25 0.04

TOTALS
PEAK FLOW (cms)= 0.09 0.02 0.102 (iii)
TIME TO PEAK (hrs)= 12.00 12.43 12.00
RUNOFF VOLUME (mm)= 23.50 4.52 10.21
TOTAL RAINFALL (mm)= 25.00 25.00 25.00
RUNOFF COEFFICIENT = 0.94 0.18 0.41

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0012) |
1 + 2 = 3
ID1= 1 (0015): 86.90 0.175 13.10 6.62
+ ID2= 2 (0235): 4.28 0.102 12.00 10.21

ID = 3 (0012): 91.18 0.214 12.03 6.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0040) |
IN= 2--> OUT= 1
Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->
Distance Elevation Manning
0.00 101.00 0.0000
1.00 100.67 0.0000
2.00 100.33 0.0000 / 0.0350 Main Channel
3.00 100.00 0.0350 Main Channel
4.00 100.00 0.0350 Main Channel
5.00 100.33 0.0350 / 0.0000 Main Channel
6.00 100.67 0.0000
7.00 101.00 0.0000

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 100.05 .590E+02 0.0 0.34 53.30
0.09 100.09 .133E+03 0.1 0.51 35.70
0.14 100.14 .221E+03 0.1 0.64 28.48
0.19 100.19 .324E+03 0.2 0.75 24.33
0.24 100.24 .442E+03 0.3 0.85 21.55
0.28 100.28 .575E+03 0.5 0.94 19.51
0.33 100.33 .723E+03 0.7 1.02 17.94
0.39 100.39 .916E+03 1.0 1.17 15.58
0.44 100.44 .113E+04 1.3 1.30 14.08
0.50 100.50 .136E+04 1.7 1.40 13.03
0.55 100.55 .162E+04 2.2 1.49 12.25
0.61 100.61 .189E+04 2.7 1.57 11.65
0.66 100.66 .218E+04 3.3 1.63 11.17
0.72 100.72 .250E+04 3.9 1.69 10.77
0.78 100.78 .283E+04 4.5 1.75 10.45
0.83 100.83 .319E+04 5.2 1.80 10.17
0.89 100.89 .357E+04 6.0 1.84 9.92
0.94 100.94 .396E+04 6.8 1.88 9.71
1.00 101.00 .438E+04 7.7 1.92 9.52

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0012) 91.18 0.21 12.03 6.79 0.18 0.74
OUTFLOW: ID= 1 (0040) 91.18 0.19 13.07 6.79 0.17 0.70

| CALIB |
| STANDHYD (0121) |
ID= 1 DT= 3.0 min
Area (ha)= 1.62
Total Imp(%)= 28.00 Dir. Conn.(%)= 28.00

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30

inten. (mm/hr)=	27.60	3.65
over (min)	6.00	33.00
coeff. (min)	3.55 (ii)	30.09 (ii)
Tpeak (min)	6.00	33.00
peak (cms)=	0.25	0.04
(cms)=	0.03	0.01
EAK (hrs)=	12.00	12.45
LUME (mm)=	23.50	4.52
INFALL (mm)=	25.00	25.00
EFFICIENT =	0.94	0.18

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.25	6.050	0.50	12.050	3.60	18.05	0.45
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45

HRP6.1-PR-SWM_25mm Storm.OUT

0.150	0.25	6.150	0.50	12.150	3.60	18.15	0.45
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45
0.350	0.25	6.350	0.50	12.350	3.60	18.35	0.45
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45
0.450	0.25	6.450	0.50	12.450	3.60	18.45	0.45
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45
0.550	0.25	6.550	0.50	12.550	1.85	18.55	0.45
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45
0.650	0.25	6.650	0.50	12.650	1.85	18.65	0.45
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45
0.850	0.25	6.850	0.50	12.850	1.85	18.85	0.45
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45
0.950	0.25	6.950	0.50	12.950	1.85	18.95	0.45
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45
1.050	0.25	7.050	0.50	13.050	0.35	19.05	0.45
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45
1.150	0.25	7.150	0.50	13.150	0.35	19.15	0.45
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45
1.350	0.25	7.350	0.50	13.350	0.35	19.35	0.45
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45
1.450	0.25	7.450	0.50	13.450	0.35	19.45	0.45
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45
1.550	0.25	7.550	0.50	13.550	2.05	19.55	0.45
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45
1.650	0.25	7.650	0.50	13.650	2.05	19.65	0.45
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45
1.850	0.45	7.850	0.50	13.850	2.05	19.85	0.45
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45
1.950	0.45	7.950	0.50	13.950	2.05	19.95	0.45
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45
2.050	0.33	8.050	0.68	14.050	0.75	20.05	0.30
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30
2.150	0.33	8.150	0.68	14.150	0.75	20.15	0.30
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30
2.250	0.33	8.250	0.68	14.250	0.75	20.25	0.30
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30
2.350	0.32	8.350	0.67	14.350	0.75	20.35	0.30
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30
2.450	0.32	8.450	0.67	14.450	0.75	20.45	0.30
2.500	0.32	8.500	0.68	14.500	0.75	20.50	0.30
2.550	0.32	8.550	0.68	14.550	0.75	20.55	0.30
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30
2.650	0.33	8.650	0.68	14.650	0.75	20.65	0.30
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30
2.750	0.33	8.750	0.68	14.750	0.75	20.75	0.30
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30
2.850	0.32	8.850	0.68	14.850	0.75	20.85	0.30
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30
2.950	0.32	8.950	0.68	14.950	0.75	20.95	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.050	0.32	9.050	0.80	15.050	0.75	21.05	0.30
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30
3.150	0.32	9.150	0.80	15.150	0.75	21.15	0.30
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30
3.350	0.32	9.350	0.80	15.350	0.75	21.35	0.30
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30
3.450	0.32	9.450	0.80	15.450	0.75	21.45	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.550	0.32	9.550	0.90	15.550	0.75	21.55	0.30
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30
3.650	0.33	9.650	0.90	15.650	0.75	21.65	0.30
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30
3.850	0.32	9.850	0.90	15.850	0.75	21.85	0.30
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30
3.950	0.32	9.950	0.90	15.950	0.75	21.95	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.050	0.40	10.050	1.15	16.050	0.45	22.05	0.30
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30
4.150	0.40	10.150	1.15	16.150	0.45	22.15	0.30
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30
4.350	0.40	10.350	1.15	16.350	0.45	22.35	0.30
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30
4.450	0.40	10.450	1.15	16.450	0.45	22.45	0.30

HRP6.1-PR-SWM_25mm Storm.OUT

4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30
4.550	0.40	10.550	1.55	16.550	0.45	22.55	0.30
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30
4.650	0.40	10.650	1.55	16.650	0.45	22.65	0.30
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30
4.850	0.40	10.850	1.55	16.850	0.45	22.85	0.30
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30
4.950	0.40	10.950	1.55	16.950	0.45	22.95	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.050	0.40	11.050	2.40	17.050	0.45	23.05	0.30
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30
5.150	0.40	11.150	2.40	17.150	0.45	23.15	0.30
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30
5.350	0.40	11.350	2.40	17.350	0.45	23.35	0.30
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30
5.450	0.40	11.450	2.40	17.450	0.45	23.45	0.30
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30
5.550	0.40	11.550	10.40	17.550	0.45	23.55	0.30
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30
5.650	0.40	11.650	10.40	17.650	0.45	23.65	0.30
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30
5.750	0.40	11.750	10.41	17.750	0.45	23.75	0.30
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30
5.850	0.40	11.850	27.60	17.850	0.45	23.85	0.30
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30
5.950	0.40	11.950	27.60	17.950	0.45	23.95	0.30
6.000	0.40	12.000	27.59	18.000	0.45	24.00	0.30

Max.Eff.Inten.(mm/hr)=	27.60	3.65	
over (min)	6.00	36.00	
Storage Coeff. (min)=	6.66 (ii)	33.19 (ii)	
Unit Hyd. Tpeak (min)=	6.00	36.00	
Unit Hyd. peak (cms)=	0.17	0.03	
PEAK FLOW (cms)=	0.40	0.04	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.50	0.418 (iii)
RUNOFF VOLUME (mm)=	23.50	4.52	12.00
TOTAL RAINFALL (mm)=	25.00	25.00	12.87
RUNOFF COEFFICIENT =	0.94	0.18	25.00

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0019) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0121): 1.62 0.037 12.00 9.82
+ ID2= 2 (0122): 13.12 0.418 12.00 12.87
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0020) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0019): 14.74 0.455 12.00 12.53
+ ID2= 2 (0040): 91.18 0.186 13.07 6.79
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH
=====

HRP7-PR-SWM_25mm Storm.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLL
000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y M M O O
O O T T H H Y Y M M O O
000 T T H H Y Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\W02\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\29f626cf-80c3-447d-b8ca-7e66083c634c\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMH5\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\29f626cf-80c3-447d-b8ca-7e66083c634c\scenar

DATE: 04/17/2023 TIME: 04:11:51

USER:

COMMENTS: _____

** SIMULATION : Run 07

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\05f3f3de-182e-4224-bcda-995816e1f4f9\159001f7
Ptotal= 25.00 mm Comments: Mass 24-Hour SCS Type II Design Storm
Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.25	6.25	0.50	12.25	3.60	18.25	0.45	
0.50	0.25	6.50	0.50	12.50	3.60	18.50	0.45	
0.75	0.25	6.75	0.50	12.75	1.85	18.75	0.45	
1.00	0.25	7.00	0.50	13.00	1.85	19.00	0.45	
1.25	0.25	7.25	0.50	13.25	0.35	19.25	0.45	
1.50	0.25	7.50	0.50	13.50	0.35	19.50	0.45	
1.75	0.25	7.75	0.50	13.75	2.05	19.75	0.45	
2.00	0.45	8.00	0.50	14.00	2.05	20.00	0.45	
2.25	0.33	8.25	0.68	14.25	0.75	20.25	0.30	
2.50	0.32	8.50	0.67	14.50	0.75	20.50	0.30	
2.75	0.33	8.75	0.68	14.75	0.75	20.75	0.30	
3.00	0.32	9.00	0.68	15.00	0.75	21.00	0.30	
3.25	0.32	9.25	0.60	15.25	0.75	21.25	0.30	
3.50	0.32	9.50	0.60	15.50	0.75	21.50	0.30	
3.75	0.33	9.75	0.90	15.75	0.75	21.75	0.30	
4.00	0.32	10.00	0.90	16.00	0.75	22.00	0.30	
4.25	0.40	10.25	1.15	16.25	0.45	22.25	0.30	
4.50	0.40	10.50	1.15	16.50	0.45	22.50	0.30	
4.75	0.40	10.75	1.55	16.75	0.45	22.75	0.30	
5.00	0.40	11.00	1.55	17.00	0.45	23.00	0.30	
5.25	0.40	11.25	2.40	17.25	0.45	23.25	0.30	
5.50	0.40	11.50	2.40	17.50	0.45	23.50	0.30	
5.75	0.40	11.75	10.40	17.75	0.45	23.75	0.30	
6.00	0.40	12.00	27.60	18.00	0.45	24.00	0.30	

CALIB
NASHYD (1040) Area (ha)= 10.35 Curve Number (CN)= 75.0
ID= 1 DT= 5.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.35

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	0.25	6.083	0.50	12.083	3.60	18.08	0.45	
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45	
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45	
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45	
0.417	0.25	6.417	0.50	12.417	3.60	18.42	0.45	
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45	
0.583	0.25	6.583	0.50	12.583	1.85	18.58	0.45	
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45	
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45	
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45	
0.917	0.25	6.917	0.50	12.917	1.85	18.92	0.45	
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45	
1.083	0.25	7.083	0.50	13.083	0.35	19.08	0.45	
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45	
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45	
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45	
1.417	0.25	7.417	0.50	13.417	0.35	19.42	0.45	
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45	
1.583	0.25	7.583	0.50	13.583	2.05	19.58	0.45	
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45	
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45	
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45	
1.917	0.45	7.917	0.50	13.917	2.05	19.92	0.45	
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45	
2.083	0.33	8.083	0.68	14.083	0.75	20.08	0.30	
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30	
2.250	0.33	8.250	0.67	14.250	0.75	20.25	0.30	
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30	
2.417	0.32	8.417	0.67	14.417	0.75	20.42	0.30	
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30	
2.583	0.32	8.583	0.68	14.583	0.75	20.58	0.30	
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30	
2.750	0.33	8.750	0.67	14.750	0.75	20.75	0.30	
2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30	
2.917	0.32	8.917	0.68	14.917	0.75	20.92	0.30	
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30	
3.083	0.32	9.083	0.60	15.083	0.75	21.08	0.30	
3.167	0.32	9.167	0.60	15.167	0.75	21.17	0.30	
3.250	0.32	9.250	0.60	15.250	0.75	21.25	0.30	
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30	
3.417	0.32	9.417	0.80	15.417	0.75	21.42	0.30	
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30	
3.583	0.32	9.583	0.90	15.583	0.75	21.58	0.30	
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30	
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30	
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30	
3.917	0.32	9.917	0.90	15.917	0.75	21.92	0.30	
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30	
4.083	0.40	10.083	1.15	16.083	0.45	22.08	0.30	
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30	
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30	
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30	
4.417	0.40	10.417	1.15	16.417	0.45	22.42	0.30	
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30	
4.583	0.40	10.583	1.55	16.583	0.45	22.58	0.30	
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30	
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30	
4.833	0.40	10.833	1.55	16.833	0.45	22.83	0.30	
4.917	0.40	10.917	1.55	16.917	0.45	22.92	0.30	
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30	
5.083	0.40	11.083	2.40	17.083	0.45	23.08	0.30	
5.167	0.40	11.167	2.40	17.167	0.45	23.17	0.30	
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30	
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30	
5.417	0.40	11.417	2.40	17.417	0.45	23.42	0.30	
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30	
5.583	0.40	11.583	10.40	17.583	0.45	23.58	0.30	
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30	
5.750	0.40	11.750	10.40	17.750	0.45	23.75	0.30	
5.833	0.40	11.833	27.60	17.833	0.45	23.83	0.30	
5.917	0.40	11.917	27.60	17.917	0.45	23.92	0.30	
6.000	0.40	12.000	27.60	18.000	0.45	24.00	0.30	

Unit Hyd Qpeak (cms)= 1.123

PEAK FLOW (cms)= 0.060 (1)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 3.621
TOTAL RAINFALL (mm)= 25.000
RUNOFF COEFFICIENT = 0.153

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

HRP7-PR-SWM_25mm Storm.OUT

STANDHYD (0240) | Area (ha)= 20.08
ID= 1 DT= 3.0 min | Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

IMPERVIOUS PERVIOUS (I)
Surface Area (ha)= 11.65
Dep. Storage (mm)= 1.50
Average Slope (%)= 2.00
Length (m)= 365.88
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.050	0.25	6.050	0.50	12.050	3.60	18.05	0.45
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45
0.150	0.25	6.150	0.50	12.150	3.60	18.15	0.45
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45
0.350	0.25	6.350	0.50	12.350	3.60	18.35	0.45
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45
0.450	0.25	6.450	0.50	12.450	3.60	18.45	0.45
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45
0.550	0.25	6.550	0.50	12.550	1.85	18.55	0.45
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45
0.650	0.25	6.650	0.50	12.650	1.85	18.65	0.45
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45
0.850	0.25	6.850	0.50	12.850	1.85	18.85	0.45
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45
0.950	0.25	6.950	0.50	12.950	1.85	18.95	0.45
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45
1.050	0.25	7.050	0.50	13.050	0.35	19.05	0.45
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45
1.150	0.25	7.150	0.50	13.150	0.35	19.15	0.45
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45
1.350	0.25	7.350	0.50	13.350	0.35	19.35	0.45
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45
1.450	0.25	7.450	0.50	13.450	0.35	19.45	0.45
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45
1.550	0.25	7.550	0.50	13.550	2.05	19.55	0.45
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45
1.650	0.25	7.650	0.50	13.650	2.05	19.65	0.45
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45
1.850	0.45	7.850	0.50	13.850	2.05	19.85	0.45
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45
1.950	0.45	7.950	0.50	13.950	2.05	19.95	0.45
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45
2.050	0.33	8.050	0.68	14.050	0.75	20.05	0.30
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30
2.150	0.33	8.150	0.68	14.150	0.75	20.15	0.30
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30
2.250	0.33	8.250	0.68	14.250	0.75	20.25	0.30
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30
2.350	0.32	8.350	0.67	14.350	0.75	20.35	0.30
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30
2.450	0.32	8.450	0.67	14.450	0.75	20.45	0.30
2.500	0.32	8.500	0.68	14.500	0.75	20.50	0.30
2.550	0.32	8.550	0.68	14.550	0.75	20.55	0.30
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30
2.650	0.33	8.650	0.68	14.650	0.75	20.65	0.30
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30
2.750	0.33	8.750	0.68	14.750	0.75	20.75	0.30
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30
2.850	0.32	8.850	0.68	14.850	0.75	20.85	0.30
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30
2.950	0.32	8.950	0.68	14.950	0.75	20.95	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.050	0.32	9.050	0.80	15.050	0.75	21.05	0.30
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30
3.150	0.32	9.150	0.80	15.150	0.75	21.15	0.30
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30
3.350	0.32	9.350	0.80	15.350	0.75	21.35	0.30
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30
3.450	0.32	9.450	0.80	15.450	0.75	21.45	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.550	0.32	9.550	0.90	15.550	0.75	21.55	0.30

HRP7-PR-SWM_25mm Storm.OUT

3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30
3.650	0.33	9.650	0.90	15.650	0.75	21.65	0.30
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30
3.850	0.32	9.850	0.90	15.850	0.75	21.85	0.30
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30
3.950	0.32	9.950	0.90	15.950	0.75	21.95	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.050	0.40	10.050	1.15	16.050	0.45	22.05	0.30
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30
4.150	0.40	10.150	1.15	16.150	0.45	22.15	0.30
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30
4.350	0.40	10.350	1.15	16.350	0.45	22.35	0.30
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30
4.450	0.40	10.450	1.15	16.450	0.45	22.45	0.30
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30
4.550	0.40	10.550	1.55	16.550	0.45	22.55	0.30
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30
4.650	0.40	10.650	1.55	16.650	0.45	22.65	0.30
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30
4.850	0.40	10.850	1.55	16.850	0.45	22.85	0.30
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30
4.950	0.40	10.950	1.55	16.950	0.45	22.95	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.050	0.40	11.050	2.40	17.050	0.45	23.05	0.30
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30
5.150	0.40	11.150	2.40	17.150	0.45	23.15	0.30
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30
5.350	0.40	11.350	2.40	17.350	0.45	23.35	0.30
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30
5.450	0.40	11.450	2.40	17.450	0.45	23.45	0.30
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30
5.550	0.40	11.550	10.40	17.550	0.45	23.55	0.30
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30
5.650	0.40	11.650	10.40	17.650	0.45	23.65	0.30
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30
5.750	0.40	11.750	10.41	17.750	0.45	23.75	0.30
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30
5.850	0.40	11.850	27.60	17.850	0.45	23.85	0.30
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30
5.950	0.40	11.950	27.60	17.950	0.45	23.95	0.30
6.000	0.40	12.000	27.59	18.000	0.45	24.00	0.30

Max.Eff.Inten.(mm/hr)= 27.60 2.96
over (min) 9.00 60.00
Storage Coeff. (min)= 7.56 (ii) 57.59 (ii)
Unit Hyd. Tpeak (min)= 9.00 60.00
Unit Hyd. peak (cms)= 0.14 0.02

TOTALS

PEAK FLOW (cms)= 0.55 0.05 0.562 (iii)
TIME TO PEAK (hrs)= 12.00 12.90 12.00
RUNOFF VOLUME (mm)= 23.50 5.56 13.09
TOTAL RAINFALL (mm)= 25.00 25.00 25.00
RUNOFF COEFFICIENT = 0.94 0.22 0.52

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0038) |
1 + 2 = 3
ID1= 1 (1040): 10.35 0.060 12.25 3.82
+ ID2= 2 (0240): 20.08 0.562 12.00 13.09
=====
ID = 3 (0038): 30.43 0.599 12.00 9.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0029) |
| IN= 2--> OUT= 1 | Routing time step (min)'= 2.00

<----- DATA FOR SECTION (1.1) ----->

HRP7-PR-SWM_25mm Storm.OUT

Distance	Elevation	Manning
0.00	101.00	0.0500
1.00	100.67	0.0500
2.00	100.33	0.0500 / 0.0300
3.00	100.00	0.0300
4.00	100.00	0.0300
5.00	100.33	0.0300 / 0.0500
6.00	100.67	0.0500
7.00	101.00	0.0500

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.321E+02	0.0	0.28	35.15
0.09	100.09	.721E+02	0.1	0.42	23.51
0.14	100.14	.120E+03	0.1	0.53	18.76
0.19	100.19	.176E+03	0.2	0.62	16.03
0.24	100.24	.240E+03	0.3	0.70	14.19
0.28	100.28	.313E+03	0.4	0.77	12.85
0.33	100.33	.393E+03	0.6	0.84	11.81
0.39	100.39	.498E+03	0.8	0.97	10.26
0.44	100.44	.614E+03	1.1	1.07	9.26
0.50	100.50	.741E+03	1.4	1.16	8.55
0.55	100.55	.879E+03	1.8	1.24	8.01
0.61	100.61	.103E+04	2.3	1.31	7.60
0.66	100.66	.119E+04	2.7	1.37	7.26
0.72	100.72	.136E+04	3.2	1.42	6.98
0.78	100.78	.154E+04	3.8	1.47	6.74
0.83	100.83	.173E+04	4.4	1.52	6.53
0.89	100.89	.194E+04	5.1	1.56	6.35
0.94	100.94	.215E+04	5.8	1.60	6.19
1.00	101.00	.238E+04	6.6	1.64	6.05

<---- hydrograph ----> <-pipe / channel->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0038)	30.43	0.60	12.00	9.94	0.34	0.86
OUTFLOW: ID= 1 (0029)	30.43	0.46	12.10	9.93	0.30	0.80

HRP7-PR-SWM_25mm Storm.OUT

2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30
2.917	0.32	8.917	0.68	14.917	0.75	20.92	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.083	0.32	9.083	0.80	15.083	0.75	21.08	0.30
3.167	0.32	9.167	0.80	15.167	0.75	21.17	0.30
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30
3.417	0.32	9.417	0.80	15.417	0.75	21.42	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.583	0.32	9.583	0.90	15.583	0.75	21.58	0.30
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30
3.917	0.32	9.917	0.90	15.917	0.75	21.92	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.083	0.40	10.083	1.15	16.083	0.45	22.08	0.30
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30
4.417	0.40	10.417	1.15	16.417	0.45	22.42	0.30
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30
4.583	0.40	10.583	1.55	16.583	0.45	22.58	0.30
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30
4.833	0.40	10.833	1.55	16.833	0.45	22.83	0.30
4.917	0.40	10.917	1.55	16.917	0.45	22.92	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.083	0.40	11.083	2.40	17.083	0.45	23.08	0.30
5.167	0.40	11.167	2.40	17.167	0.45	23.17	0.30
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30
5.417	0.40	11.417	2.40	17.417	0.45	23.42	0.30
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30
5.583	0.40	11.583	10.40	17.583	0.45	23.58	0.30
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30
5.750	0.40	11.750	10.40	17.750	0.45	23.75	0.30
5.833	0.40	11.833	27.60	17.833	0.45	23.83	0.30
5.917	0.40	11.917	27.60	17.917	0.45	23.92	0.30
6.000	0.40	12.000	27.60	18.000	0.45	24.00	0.30

Unit Hyd Qpeak (cms)= 1.654

PEAK FLOW	(cms)=	0.088 (i)
TIME TO PEAK	(hrs)=	12.167
RUNOFF VOLUME	(mm)=	4.169
TOTAL RAINFALL	(mm)=	25.000
RUNOFF COEFFICIENT	=	0.167

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0018)

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1041):	11.30	0.088	12.17	4.17
+ ID2= 2 (0029):	30.43	0.461	12.10	9.93
ID = 3 (0018):	41.73	0.548	12.10	8.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0241)

ID= 1 DT= 2.0 min

	IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)= 8.97	3.32
Dep. Storage	(mm)= 1.50	1.50
Average Slope	(%)= 2.00	2.00
Length	(m)= 286.24	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.003	0.25	6.083	0.50	12.083	3.60
0.167	0.25	6.167	0.50	12.167	3.60
0.250	0.25	6.250	0.50	12.250	3.60
0.333	0.25	6.333	0.50	12.333	3.60
0.417	0.25	6.417	0.50	12.417	3.60
0.500	0.25	6.500	0.50	12.500	3.60
0.583	0.25	6.583	0.50	12.583	1.85
0.667	0.25	6.667	0.50	12.667	1.85
0.750	0.25	6.750	0.50	12.750	1.85
0.833	0.25	6.833	0.50	12.833	1.85
0.917	0.25	6.917	0.50	12.917	1.85
1.000	0.25	7.000	0.50	13.000	1.85
1.083	0.25	7.083	0.50	13.083	0.35
1.167	0.25	7.167	0.50	13.167	0.35
1.250	0.25	7.250	0.50	13.250	0.35
1.333	0.25	7.333	0.50	13.333	0.35
1.417	0.25	7.417	0.50	13.417	0.35
1.500	0.25	7.500	0.50	13.500	0.35
1.583	0.25	7.583	0.50	13.583	2.05
1.667	0.25	7.667	0.50	13.667	2.05
1.750	0.25	7.750	0.50	13.750	2.05
1.833	0.45	7.833	0.50	13.833	2.05
1.917	0.45	7.917	0.50	13.917	2.05
2.000	0.45	8.000	0.50	14.000	2.05
2.083	0.33	8.083	0.68	14.083	0.75
2.167	0.33	8.167	0.68	14.167	0.75
2.250	0.33	8.250	0.67	14.250	0.75
2.333	0.32	8.333	0.67	14.333	0.75
2.417	0.32	8.417	0.67	14.417	0.75
2.500	0.32	8.500	0.67	14.500	0.75
2.583	0.32	8.583	0.68	14.583	0.75
2.667	0.33	8.667	0.68	14.667	0.75
2.750	0.33	8.750	0.67	14.750	0.75

TRANSFORMED HYETOGRAPH

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.25	6.033	0.50	12.033	3.60	18.03	0.45
0.067	0.25	6.067	0.50	12.067	3.60	18.07	0.45
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45
0.133	0.25	6.133	0.50	12.133	3.60	18.13	0.45
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45

HRP7-PR-SWM_25mm Storm.OUT											
0.233	0.25	6.233	0.50	12.233	3.60	18.23	0.45				
0.267	0.25	6.267	0.50	12.267	3.60	18.27	0.45				
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45				
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45				
0.367	0.25	6.367	0.50	12.367	3.60	18.37	0.45				
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45				
0.433	0.25	6.433	0.50	12.433	3.60	18.43	0.45				
0.467	0.25	6.467	0.50	12.467	3.60	18.47	0.45				
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45				
0.533	0.25	6.533	0.50	12.533	1.85	18.53	0.45				
0.567	0.25	6.567	0.50	12.567	1.85	18.57	0.45				
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45				
0.633	0.25	6.633	0.50	12.633	1.85	18.63	0.45				
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45				
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45				
0.733	0.25	6.733	0.50	12.733	1.85	18.73	0.45				
0.767	0.25	6.767	0.50	12.767	1.85	18.77	0.45				
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45				
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45				
0.867	0.25	6.867	0.50	12.867	1.85	18.87	0.45				
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45				
0.933	0.25	6.933	0.50	12.933	1.85	18.93	0.45				
0.967	0.25	6.967	0.50	12.967	1.85	18.97	0.45				
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45				
1.033	0.25	7.033	0.50	13.033	0.35	19.03	0.45				
1.067	0.25	7.067	0.50	13.067	0.35	19.07	0.45				
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45				
1.133	0.25	7.133	0.50	13.133	0.35	19.13	0.45				
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45				
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45				
1.233	0.25	7.233	0.50	13.233	0.35	19.23	0.45				
1.267	0.25	7.267	0.50	13.267	0.35	19.27	0.45				
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45				
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45				
1.367	0.25	7.367	0.50	13.367	0.35	19.37	0.45				
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45				
1.433	0.25	7.433	0.50	13.433	0.35	19.43	0.45				
1.467	0.25	7.467	0.50	13.467	0.35	19.47	0.45				
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45				
1.533	0.25	7.533	0.50	13.533	2.05	19.53	0.45				
1.567	0.25	7.567	0.50	13.567	2.05	19.57	0.45				
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45				
1.633	0.25	7.633	0.50	13.633	2.05	19.63	0.45				
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45				
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45				
1.733	0.25	7.733	0.50	13.733	2.05	19.73	0.45				
1.767	0.25	7.767	0.50	13.767	2.05	19.77	0.45				
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45				
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45				
1.867	0.45	7.867	0.50	13.867	2.05	19.87	0.45				
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45				
1.933	0.45	7.933	0.50	13.933	2.05	19.93	0.45				
1.967	0.45	7.967	0.50	13.967	2.05	19.97	0.45				
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45				
2.033	0.33	8.033	0.67	14.033	0.75	20.03	0.30				
2.067	0.33	8.067	0.68	14.067	0.75	20.07	0.30				
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30				
2.133	0.33	8.133	0.68	14.133	0.75	20.13	0.30				
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30				
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30				
2.233	0.33	8.233	0.68	14.233	0.75	20.23	0.30				
2.267	0.32	8.267	0.68	14.267	0.75	20.27	0.30				
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30				
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30				
2.367	0.32	8.367	0.67	14.367	0.75	20.37	0.30				
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30				
2.433	0.32	8.433	0.67	14.433	0.75	20.43	0.30				
2.467	0.32	8.467	0.67	14.467	0.75	20.47	0.30				
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30				
2.533	0.32	8.533	0.68	14.533	0.75	20.53	0.30				
2.567	0.33	8.567	0.68	14.567	0.75	20.57	0.30				
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30				
2.633	0.33	8.633	0.68	14.633	0.75	20.63	0.30				
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30				
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30				
2.733	0.33	8.733	0.68	14.733	0.75	20.73	0.30				
2.767	0.32	8.767	0.68	14.767	0.75	20.77	0.30				
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30				
2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30				
2.867	0.32	8.867	0.68	14.867	0.75	20.87	0.30				
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30				
2.933	0.32	8.933	0.68	14.933	0.75	20.93	0.30				
2.967	0.32	8.967	0.68	14.967	0.75	20.97	0.30				
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30				
3.033	0.32	9.033	0.80	15.033	0.75	21.03	0.30				
3.067	0.32	9.067	0.80	15.067	0.75	21.07	0.30				
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30				

HRP7-PR-SWM_25mm Storm.OUT											
3.133	0.32	9.133	0.80	15.133	0.75	21.13	0.30				
3.167	0.32	9.167	0.80	15.167	0.75	21.17	0.30				
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30				
3.233	0.32	9.233	0.80	15.233	0.75	21.23	0.30				
3.267	0.32	9.267	0.80	15.267	0.75	21.27	0.30				
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30				
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30				
3.367	0.32	9.367	0.80	15.367	0.75	21.37	0.30				
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30				
3.433	0.32	9.433	0.80	15.433	0.75	21.43	0.30				
3.467	0.32	9.467	0.80	15.467	0.75	21.47	0.30				
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30				
3.533	0.32	9.533	0.90	15.533	0.75	21.53	0.30				
3.567	0.32	9.567	0.90	15.567	0.75	21.57	0.30				
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30				
3.633	0.33	9.633	0.90	15.633	0.75	21.63	0.30				
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30				
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30				
3.733	0.33	9.733	0.90	15.733	0.75	21.73	0.30				
3.767	0.32	9.767	0.90	15.767	0.75	21.77	0.30				
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30				
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30				
3.867	0.32	9.867	0.90	15.867	0.75	21.87	0.30				
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30				
3.933	0.32	9.933	0.90	15.933	0.75	21.93	0.30				
3.967	0.32	9.967	0.90	15.967	0.75	21.97	0.30				
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30				
4.033	0.40	10.033	1.15	16.033	0.45	22.03	0.30				
4.067	0.40	10.067	1.15	16.067	0.45	22.07	0.30				
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30				
4.133	0.40	10.133	1.15	16.133	0.45	22.13	0.30				
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30				
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30				
4.233	0.40	10.233	1.15	16.233	0.45	22.23	0.30				
4.267	0.40	10.267	1.15	16.267	0.45	22.27	0.30				
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30				
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30				
4.367	0.40	10.367	1.15	1							

HRP7-PR-SWM_25mm Storm.OUT

Max.Eff.Inten.(mm/hr)=	27.60	8.07
over (min)	6.00	16.00
Storage Coeff. (min)=	6.53 (11)	14.46 (11)
Unit Hyd. Tpeak (min)=	6.00	16.00
Unit Hyd. peak (cms)=	0.18	0.08
PEAK FLOW (cms)=	0.62	0.04
TIME TO PEAK (hrs)=	12.00	12.17
RUNOFF VOLUME (mm)=	23.50	6.07
TOTAL RAINFALL (mm)=	25.00	25.00
RUNOFF COEFFICIENT =	0.94	0.24
		TOTALS
		0.652 (111)

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0021)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0018):	41.73	0.548	12.10	8.37
+ ID2= 2 (0241):	12.29	0.652	12.00	18.79
ID = 3 (0021):	54.02	0.667	9.00	9.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0211)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 3.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	4.2170	0.5750
	0.8310	0.4090	5.0100	0.6210
	2.1110	0.5050	5.8210	0.6600
	3.3030	0.5320	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0021)	54.020	0.667	9.00	9.67
OUTFLOW: ID= 1 (0211)	54.020	0.230	12.75	9.67

PEAK FLOW REDUCTION [qout/Qin](%)= 34.48
TIME SHIFT OF PEAK FLOW (min)=225.00
MAXIMUM STORAGE USED (ha.m.)= 0.1144

CALIB			
STANDHYD (0142)	Area (ha)=	10.92	
ID= 1 DT= 3.0 min	Total Imp(%)=	53.00	Dir. Conn.(%)= 53.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.79	5.13
Dep. Storage (mm)=	1.50	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	269.81	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.050	0.25	6.050	0.50	12.050	3.60	18.05	0.45
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45
0.150	0.25	6.150	0.50	12.150	3.60	18.15	0.45
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45
0.350	0.25	6.350	0.50	12.350	3.60	18.35	0.45
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45
0.450	0.25	6.450	0.50	12.450	3.60	18.45	0.45
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45
0.550	0.25	6.550	0.50	12.550	1.85	18.55	0.45
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45
0.650	0.25	6.650	0.50	12.650	1.85	18.65	0.45
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45

0.850	0.25	6.850	0.50	12.850	1.85	18.85	0.45
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45
0.950	0.25	6.950	0.50	12.950	1.85	18.95	0.45
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45
1.050	0.25	7.050	0.50	13.050	0.35	19.05	0.45
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45
1.150	0.25	7.150	0.50	13.150	0.35	19.15	0.45
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45
1.350	0.25	7.350	0.50	13.350	0.35	19.35	0.45
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45
1.450	0.25	7.450	0.50	13.450	0.35	19.45	0.45
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45
1.550	0.25	7.550	0.50	13.550	2.05	19.55	0.45
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45
1.650	0.25	7.650	0.50	13.650	2.05	19.65	0.45
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45
1.850	0.45	7.850	0.50	13.850	2.05	19.85	0.45
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45
1.950	0.45	7.950	0.50	13.950	2.05	19.95	0.45
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45
2.050	0.33	8.050	0.68	14.050	0.75	20.05	0.30
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30
2.150	0.33	8.150	0.68	14.150	0.75	20.15	0.30
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30
2.250	0.33	8.250	0.68	14.250	0.75	20.25	0.30
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30
2.350	0.32	8.350	0.67	14.350	0.75	20.35	0.30
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30
2.450	0.32	8.450	0.67	14.450	0.75	20.45	0.30
2.500	0.32	8.500	0.68	14.500	0.75	20.50	0.30
2.550	0.32	8.550	0.68	14.550	0.75	20.55	0.30
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30
2.650	0.33	8.650	0.68	14.650	0.75	20.65	0.30
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30
2.750	0.33	8.750	0.68	14.750	0.75	20.75	0.30
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30
2.850	0.32	8.850	0.68	14.850	0.75	20.85	0.30
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30
2.950	0.32	8.950	0.68	14.950	0.75	20.95	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.050	0.32	9.050	0.80	15.050	0.75	21.05	0.30
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30
3.150	0.32	9.150	0.80	15.150	0.75	21.15	0.30
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30
3.350	0.32	9.350	0.80	15.350	0.75	21.35	0.30
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30
3.450	0.32	9.450	0.80	15.450	0.75	21.45	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.550	0.32	9.550	0.90	15.550	0.75	21.55	0.30
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30
3.650	0.33	9.650	0.90	15.650	0.75	21.65	0.30
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30
3.850	0.32	9.850	0.90	15.850	0.75	21.85	0.30
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30
3.950	0.32	9.950	0.90	15.950	0.75	21.95	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.050	0.40	10.050	1.15	16.050	0.45	22.05	0.30
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30
4.150	0.40	10.150	1.15	16.150	0.45	22.15	0.30
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30
4.350	0.40	10.350	1.15	16.350	0.45	22.35	0.30
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30
4.450	0.40	10.450	1.15	16.450	0.45	22.45	0.30
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30
4.550	0.40	10.550	1.55	16.550	0.45	22.55	0.30
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30
4.650	0.40	10.650	1.55	16.650	0.45	22.65	0.30
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30
4.850	0.40	10.850	1.55	16.850	0.45	22.85	0.30
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30
4.950	0.40	10.950	1.55	16.950	0.45	22.95	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.050	0.40	11.050	2.40	17.050	0.45	23.05	0.30
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30
5.150	0.40	11.150	2.40	17.150	0.45	23.15	0.30

HRP7-PR-SWM_25mm Storm.OUT

5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30
5.350	0.40	11.350	2.40	17.350	0.45	23.35	0.30
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30
5.450	0.40	11.450	2.40	17.450	0.45	23.45	0.30
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30
5.550	0.40	11.550	10.40	17.550	0.45	23.55	0.30
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30
5.650	0.40	11.650	10.40	17.650	0.45	23.65	0.30
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30
5.750	0.40	11.750	10.41	17.750	0.45	23.75	0.30
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30
5.850	0.40	11.850	27.60	17.850	0.45	23.85	0.30
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30
5.950	0.40	11.950	27.60	17.950	0.45	23.95	0.30
6.000	0.40	12.000	27.59	18.000	0.45	24.00	0.30

Max.Eff.Inten.(mm/hr)=	27.60	2.12	
over (min)	6.00	42.00	
Storage Coeff. (min)=	6.30 (ii)	39.24 (iii)	
Unit Hyd. Tpeak (min)=	6.00	42.00	
Unit Hyd. peak (cms)=	0.18	0.83	
			TOTALS
PEAK FLOW (cms)=	0.41	0.02	0.413 (iii)
TIME TO PEAK (hrs)=	12.00	12.60	12.00
RUNOFF VOLUME (mm)=	23.50	3.08	13.90
TOTAL RAINFALL (mm)=	25.00	25.00	25.00
RUNOFF COEFFICIENT =	0.94	0.12	0.56

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0023)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0142):	10.92	0.413	12.00	13.90
+ ID2= 2 (0211):	54.02	0.230	12.75	9.67
ID = 3 (0023):	64.94	0.534	12.00	10.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0024)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 3.0 min	
	OUTFLOW STORAGE
	(cms) (ha.m.)
	0.0000 0.0000
	0.0370 0.1125
	0.0530 0.2275
	0.0650 0.3450
	0.0750 0.4630

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0023)	64.940	0.534	12.00	10.38
OUTFLOW: ID= 1 (0024)	64.940	0.070	17.35	10.02
	PEAK FLOW REDUCTION [Qout/Qin](%)= 13.02			
	TIME SHIFT OF PEAK FLOW (min)=321.00			
	MAXIMUM STORAGE USED (ha.m.)= 0.3985			

CALIB			
STANDHYD (0143)	Area (ha)= 0.84		
ID= 1 DT= 1.0 min	Total Imp(%)= 55.00	Dir. Conn.(%)= 55.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.46	0.38	
Dep. Storage (mm)=	1.50	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	74.83	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

HRP7-PR-SWM_25mm Storm.OUT

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	0.25	6.017	0.50	12.017	3.62	18.02	0.45
0.033	0.25	6.033	0.50	12.033	3.60	18.03	0.45
0.050	0.25	6.050	0.50	12.050	3.60	18.05	0.45
0.067	0.25	6.067	0.50	12.067	3.60	18.07	0.45
0.083	0.25	6.083	0.50	12.083	3.60	18.08	0.45
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45
0.117	0.25	6.117	0.50	12.117	3.60	18.12	0.45
0.133	0.25	6.133	0.50	12.133	3.60	18.13	0.45
0.150	0.25	6.150	0.50	12.150	3.60	18.15	0.45
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45
0.183	0.25	6.183	0.50	12.183	3.60	18.18	0.45
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45
0.217	0.25	6.217	0.50	12.217	3.60	18.22	0.45
0.233	0.25	6.233	0.50	12.233	3.60	18.23	0.45
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45
0.267	0.25	6.267	0.50	12.267	3.60	18.27	0.45
0.283	0.25	6.283	0.50	12.283	3.60	18.28	0.45
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45
0.317	0.25	6.317	0.50	12.317	3.60	18.32	0.45
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45
0.350	0.25	6.350	0.50	12.350	3.60	18.35	0.45
0.367	0.25	6.367	0.50	12.367	3.60	18.37	0.45
0.383	0.25	6.383	0.50	12.383	3.60	18.38	0.45
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45
0.417	0.25	6.417	0.50	12.417	3.60	18.42	0.45
0.433	0.25	6.433	0.50	12.433	3.60	18.43	0.45
0.450	0.25	6.450	0.50	12.450	3.60	18.45	0.45
0.467	0.25	6.467	0.50	12.467	3.60	18.47	0.45
0.483	0.25	6.483	0.50	12.483	3.60	18.48	0.45
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45
0.517	0.25	6.517	0.50	12.517	1.85	18.52	0.45
0.533	0.25	6.533	0.50	12.533	1.85	18.53	0.45
0.550	0.25	6.550	0.50	12.550	1.85	18.55	0.45
0.567	0.25	6.567	0.50	12.567	1.85	18.57	0.45
0.583	0.25	6.583	0.50	12.583	1.85	18.58	0.45
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45
0.617	0.25	6.617	0.50	12.617	1.85	18.62	0.45
0.633	0.25	6.633	0.50	12.633	1.85	18.63	0.45
0.650	0.25	6.650	0.50	12.650	1.85	18.65	0.45
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45
0.683	0.25	6.683	0.50	12.683	1.85	18.68	0.45
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45
0.717	0.25	6.717	0.50	12.717	1.85	18.72	0.45
0.733	0.25	6.733	0.50	12.733	1.85	18.73	0.45
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45
0.767	0.25	6.767	0.50	12.767	1.85	18.77	0.45
0.783	0.25	6.783	0.50	12.783	1.85	18.78	0.45
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45
0.817	0.25	6.817	0.50	12.817	1.85	18.82	0.45
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45
0.850	0.25	6.850	0.50	12.850	1.85	18.85	0.45
0.867	0.25	6.867	0.50	12.867	1.85	18.87	0.45
0.883	0.25	6.883	0.50	12.883	1.85	18.88	0.45
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45
0.917	0.25	6.917	0.50	12.917	1.85	18.92	0.45
0.933	0.25	6.933	0.50	12.933	1.85	18.93	0.45
0.950	0.25	6.950	0.50	12.950	1.85	18.95	0.45
0.967	0.25	6.967	0.50	12.967	1.85	18.97	0.45
0.983	0.25	6.983	0.50	12.983	1.85	18.98	0.45
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45
1.017	0.25	7.017	0.50	13.017	0.35	19.02	0.45
1.033	0.25	7.033	0.50	13.033	0.35	19.03	0.45
1.050	0.25	7.050	0.50	13.050	0.35	19.05	0.45
1.067	0.25	7.067	0.50	13.067	0.35	19.07	0.45
1.083	0.25	7.083	0.50	13.083	0.35	19.08	0.45
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45
1.117	0.25	7.117	0.50	13.117	0.35	19.12	0.45
1.133	0.25	7.133	0.50	13.133	0.35	19.13	0.45
1.150	0.25	7.150	0.50	13.150	0.35	19.15	0.45
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45
1.183	0.25	7.183	0.50	13.183	0.35	19.18	0.45
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45
1.217	0.25	7.217	0.50	13.217	0.35	19.22	0.45
1.233	0.25	7.233	0.50	13.233	0.35	19.23	0.45
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45
1.267	0.25	7.267	0.50	13.267	0.35	19.27	0.45
1.283	0.25	7.283	0.50	13.283	0.35	19.28	0.45
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45
1.317	0.25	7.317	0.50	13.317	0.35	19.32	0.45
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45
1.350	0.25	7.350	0.50	13.350	0.35	19.35	0.45
1.367	0.25	7.367	0.50	13.367	0.35	19.37	0.45
1.383	0.25	7.383	0.50	13.383	0.35	19.38	0.45
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45
1.417	0.25	7.417	0.50	13.417	0.35	19.42	0.45

HRP7-PR-SWM_25mm Storm.OUT									
1.433	0.25	7.433	0.50	13.433	0.35	19.43	0.45		
1.450	0.25	7.450	0.50	13.450	0.35	19.45	0.45		
1.467	0.25	7.467	0.50	13.467	0.35	19.47	0.45		
1.483	0.25	7.483	0.50	13.483	0.35	19.48	0.45		
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45		
1.517	0.25	7.517	0.50	13.517	2.05	19.52	0.45		
1.533	0.25	7.533	0.50	13.533	2.05	19.53	0.45		
1.550	0.25	7.550	0.50	13.550	2.05	19.55	0.45		
1.567	0.25	7.567	0.50	13.567	2.05	19.57	0.45		
1.583	0.25	7.583	0.50	13.583	2.05	19.58	0.45		
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45		
1.617	0.25	7.617	0.50	13.617	2.05	19.62	0.45		
1.633	0.25	7.633	0.50	13.633	2.05	19.63	0.45		
1.650	0.25	7.650	0.50	13.650	2.05	19.65	0.45		
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45		
1.683	0.25	7.683	0.50	13.683	2.05	19.68	0.45		
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45		
1.717	0.25	7.717	0.50	13.717	2.05	19.72	0.45		
1.733	0.25	7.733	0.50	13.733	2.05	19.73	0.45		
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45		
1.767	0.25	7.767	0.50	13.767	2.05	19.77	0.45		
1.783	0.45	7.783	0.50	13.783	2.05	19.78	0.45		
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45		
1.817	0.45	7.817	0.50	13.817	2.05	19.82	0.45		
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45		
1.850	0.45	7.850	0.50	13.850	2.05	19.85	0.45		
1.867	0.45	7.867	0.50	13.867	2.05	19.87	0.45		
1.883	0.45	7.883	0.50	13.883	2.05	19.88	0.45		
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45		
1.917	0.45	7.917	0.50	13.917	2.05	19.92	0.45		
1.933	0.45	7.933	0.50	13.933	2.05	19.93	0.45		
1.950	0.45	7.950	0.50	13.950	2.05	19.95	0.45		
1.967	0.45	7.967	0.50	13.967	2.05	19.97	0.45		
1.983	0.45	7.983	0.50	13.983	2.05	19.98	0.45		
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45		
2.017	0.33	8.017	0.68	14.017	0.75	20.02	0.30		
2.033	0.33	8.033	0.68	14.033	0.75	20.03	0.30		
2.050	0.33	8.050	0.68	14.050	0.75	20.05	0.30		
2.067	0.33	8.067	0.68	14.067	0.75	20.07	0.30		
2.083	0.33	8.083	0.68	14.083	0.75	20.08	0.30		
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30		
2.117	0.33	8.117	0.68	14.117	0.75	20.12	0.30		
2.133	0.33	8.133	0.68	14.133	0.75	20.13	0.30		
2.150	0.33	8.150	0.68	14.150	0.75	20.15	0.30		
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30		
2.183	0.33	8.183	0.68	14.183	0.75	20.18	0.30		
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30		
2.217	0.33	8.217	0.68	14.217	0.75	20.22	0.30		
2.233	0.33	8.233	0.68	14.233	0.75	20.23	0.30		
2.250	0.33	8.250	0.67	14.250	0.75	20.25	0.30		
2.267	0.32	8.267	0.67	14.267	0.75	20.27	0.30		
2.283	0.32	8.283	0.67	14.283	0.75	20.28	0.30		
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30		
2.317	0.32	8.317	0.67	14.317	0.75	20.32	0.30		
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30		
2.350	0.32	8.350	0.67	14.350	0.75	20.35	0.30		
2.367	0.32	8.367	0.67	14.367	0.75	20.37	0.30		
2.383	0.32	8.383	0.67	14.383	0.75	20.38	0.30		
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30		
2.417	0.32	8.417	0.67	14.417	0.75	20.42	0.30		
2.433	0.32	8.433	0.67	14.433	0.75	20.43	0.30		
2.450	0.32	8.450	0.67	14.450	0.75	20.45	0.30		
2.467	0.32	8.467	0.67	14.467	0.75	20.47	0.30		
2.483	0.32	8.483	0.67	14.483	0.75	20.48	0.30		
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30		
2.517	0.32	8.517	0.68	14.517	0.75	20.52	0.30		
2.533	0.33	8.533	0.68	14.533	0.75	20.53	0.30		
2.550	0.33	8.550	0.68	14.550	0.75	20.55	0.30		
2.567	0.33	8.567	0.68	14.567	0.75	20.57	0.30		
2.583	0.33	8.583	0.68	14.583	0.75	20.58	0.30		
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30		
2.617	0.33	8.617	0.68	14.617	0.75	20.62	0.30		
2.633	0.33	8.633	0.68	14.633	0.75	20.63	0.30		
2.650	0.33	8.650	0.68	14.650	0.75	20.65	0.30		
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30		
2.683	0.33	8.683	0.68	14.683	0.75	20.68	0.30		
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30		
2.717	0.33	8.717	0.68	14.717	0.75	20.72	0.30		
2.733	0.33	8.733	0.68	14.733	0.75	20.73	0.30		
2.750	0.33	8.750	0.67	14.750	0.75	20.75	0.30		
2.767	0.32	8.767	0.68	14.767	0.75	20.77	0.30		
2.783	0.32	8.783	0.68	14.783	0.75	20.78	0.30		
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30		
2.817	0.32	8.817	0.68	14.817	0.75	20.82	0.30		
2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30		
2.850	0.32	8.850	0.68	14.850	0.75	20.85	0.30		
2.867	0.32	8.867	0.68	14.867	0.75	20.87	0.30		

HRP7-PR-SWM_25mm Storm.OUT							
2.883	0.32	8.883	0.68	14.883	0.75	20.88	0.30
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30
2.917	0.32	8.917	0.68	14.917	0.75	20.92	0.30
2.933	0.32	8.933	0.68	14.933	0.75	20.93	0.30
2.950	0.32	8.950	0.68	14.950	0.75	20.95	0.30
2.967	0.32	8.967	0.68	14.967	0.75	20.97	0.30
2.983	0.32	8.983	0.68	14.983	0.75	20.98	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.017	0.32	9.017	0.80	15.017	0.75	21.02	0.30
3.033	0.32	9.033	0.80	15.033	0.75	21.03	0.30
3.050	0.32	9.050	0.80	15.050	0.75	21.05	0.30
3.067	0.32	9.067	0.80	15.067	0.75	21.07	0.30
3.083	0.32	9.083	0.80	15.083	0.75	21.08	0.30
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30
3.117	0.32	9.117	0.80	15.117	0.75	21.12	0.30
3.133	0.32	9.133	0.80	15.133	0.75	21.13	0.30
3.150	0.32	9.150	0.80	15.150	0.75	21.15	0.30
3.167	0.32	9.167	0.80	15.167	0.75	21.17	0.30
3.183	0.32	9.183	0.80	15.183	0.75	21.18	0.30
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30
3.217	0.32	9.217	0.80	15.217	0.75	21.22	0.30
3.233	0.32	9.233	0.80	15.233	0.75	21.23	0.30
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30
3.267	0.32	9.267	0.80	15.267	0.75	21.27	0.30
3.283	0.32	9.283	0.80	15.283	0.75	21.28	0.30
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30
3.317	0.32	9.317	0.80	15.317	0.75	21.32	0.30
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30
3.350	0.32	9.350	0.80	15.350	0.75	21.35	0.30
3.367	0.32	9.367	0.80	15.367	0.75	21.37	0.30
3.383	0.32	9.383	0.80	15.383	0.75	21.38	0.30
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30
3.417	0.32	9.417	0.80	15.417	0.75	21.42	0.30
3.433	0.32	9.433	0.80	15.433	0.75	21.43	0.30
3.450	0.32	9.450	0.80	15.450	0.75	21.45	0.30
3.467	0.32	9.467	0.80	15.467	0.75	21.47	0.30
3.483	0.32	9.483	0.80	15.483	0.75	21.48	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.517	0.32	9.517	0.90	15.517	0.75	21.52	0.30
3.533	0.33	9.533	0.90	15.533	0.75	21.53	0.30
3.550	0.33	9.550	0.90	15.550	0.75	21.55	0.30
3.567	0.33	9.567	0.90	15.567	0.75	21.57	0.30
3.583	0.33	9.583	0.90	15.583	0.75	21.58	0.30
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30
3.617	0.33	9.617	0.90	15.617	0.75	21.62	0.30
3.633	0.33	9.633	0.90	15.633	0.75	21.63	0.30
3.650	0.33	9.650	0.90	15.650	0.75	21.65	0.30
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30
3.683	0.33	9.683	0.90	15.683	0.75	21.68	0.30
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30
3.717	0.33	9.717	0.90	15.717	0.75	21.72	0.30
3.733	0.33	9.733	0.90	15.733	0.75	21.73	0.30
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30
3.767	0.33	9.767	0.90	15.767	0.75	21.77	0.30
3.783	0.32	9.783	0.90	15.783	0.75	21.78	0.30
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30
3.817	0.32	9.817	0.90	15.817	0.75	21.82	0.30
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30
3.850	0.32	9.850	0.90	15.850	0.75	21.85	0.30
3.867	0.32	9.867	0.90	15.867	0.75	21.87	0.30
3.883	0.32	9.883	0.90	15.883	0.75	21.88	0.30
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30
3.917	0.32	9.917	0.90	15.917	0.75	21.92	0.30
3.933	0.32	9.933	0.90	15.933	0.75	21.93	0.30
3.950	0.32	9.950	0.90	15.950	0.75	21.95	0.30
3.967	0.32	9.967	0.90	15.967	0.75	21.97	0.30
3.983	0.32	9.983	0.90	15.983	0.75	21.98	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.017	0.32	10.017	1.15	16.017	0.45	22.01	0.30
4.033	0.40	10.033	1.15	16.033	0.45	22.03	0.30
4.050	0.40	10.050	1.15	16.050	0.45	22.05	0.30
4.067	0.40	10.067	1.15	16.067	0.45	22.07	0.30
4.083	0.40	10.083	1.15	16.083	0.45	22.08	0.30
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30
4.117	0.40	10.117	1.15	16.117	0.45	22.12	0.30
4.133	0.40	10.133	1.15	16.133	0.45	22.13	0.30
4.150	0.40	10.150	1.15	16.150	0.45	22.15	0.30
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30
4.183	0.40	10.183	1.15	16.183	0.45	22.18	0.30
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30
4.217	0.40	10.217	1.15	16.217	0.45	22.22	0.30
4.233	0.40	10.233	1.15	16.233	0.45	22.23	0.30
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30
4.267	0.40	10.267	1.15	16.267	0.45	22.27	0.30
4.283	0.40	10.283	1.15	16.283	0.45	22.28	0.30
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30
4.317	0.40	10.317	1.15	16.317	0.45	22.32	0.30

HRP7-PR-SWM_25mm Storm.OUT									
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30		
4.350	0.40	10.350	1.15	16.350	0.45	22.35	0.30		
4.367	0.40	10.367	1.15	16.367	0.45	22.37	0.30		
4.383	0.40	10.383	1.15	16.383	0.45	22.38	0.30		
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30		
4.417	0.40	10.417	1.15	16.417	0.45	22.42	0.30		
4.433	0.40	10.433	1.15	16.433	0.45	22.43	0.30		
4.450	0.40	10.450	1.15	16.450	0.45	22.45	0.30		
4.467	0.40	10.467	1.15	16.467	0.45	22.47	0.30		
4.483	0.40	10.483	1.15	16.483	0.45	22.48	0.30		
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30		
4.517	0.40	10.517	1.55	16.517	0.45	22.52	0.30		
4.533	0.40	10.533	1.55	16.533	0.45	22.53	0.30		
4.550	0.40	10.550	1.55	16.550	0.45	22.55	0.30		
4.567	0.40	10.567	1.55	16.567	0.45	22.57	0.30		
4.583	0.40	10.583	1.55	16.583	0.45	22.58	0.30		
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30		
4.617	0.40	10.617	1.55	16.617	0.45	22.62	0.30		
4.633	0.40	10.633	1.55	16.633	0.45	22.63	0.30		
4.650	0.40	10.650	1.55	16.650	0.45	22.65	0.30		
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30		
4.683	0.40	10.683	1.55	16.683	0.45	22.68	0.30		
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30		
4.717	0.40	10.717	1.55	16.717	0.45	22.72	0.30		
4.733	0.40	10.733	1.55	16.733	0.45	22.73	0.30		
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30		
4.767	0.40	10.767	1.55	16.767	0.45	22.77	0.30		
4.783	0.40	10.783	1.55	16.783	0.45	22.78	0.30		
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30		
4.817	0.40	10.817	1.55	16.817	0.45	22.82	0.30		
4.833	0.40	10.833	1.55	16.833	0.45	22.83	0.30		
4.850	0.40	10.850	1.55	16.850	0.45	22.85	0.30		
4.867	0.40	10.867	1.55	16.867	0.45	22.87	0.30		
4.883	0.40	10.883	1.55	16.883	0.45	22.88	0.30		
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30		
4.917	0.40	10.917	1.55	16.917	0.45	22.92	0.30		
4.933	0.40	10.933	1.55	16.933	0.45	22.93	0.30		
4.950	0.40	10.950	1.55	16.950	0.45	22.95	0.30		
4.967	0.40	10.967	1.55	16.967	0.45	22.97	0.30		
4.983	0.40	10.983	1.55	16.983	0.45	22.98	0.30		
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30		
5.017	0.40	11.017	2.40	17.017	0.45	23.02	0.30		
5.033	0.40	11.033	2.40	17.033	0.45	23.03	0.30		
5.050	0.40	11.050	2.40	17.050	0.45	23.05	0.30		
5.067	0.40	11.067	2.40	17.067	0.45	23.07	0.30		
5.083	0.40	11.083	2.40	17.083	0.45	23.08	0.30		
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30		
5.117	0.40	11.117	2.40	17.117	0.45	23.12	0.30		
5.133	0.40	11.133	2.40	17.133	0.45	23.13	0.30		
5.150	0.40	11.150	2.40	17.150	0.45	23.15	0.30		
5.167	0.40	11.167	2.40	17.167	0.45	23.17	0.30		
5.183	0.40	11.183	2.40	17.183	0.45	23.18	0.30		
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30		
5.217	0.40	11.217	2.40	17.217	0.45	23.22	0.30		
5.233	0.40	11.233	2.40	17.233	0.45	23.23	0.30		
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30		
5.267	0.40	11.267	2.40	17.267	0.45	23.27	0.30		
5.283	0.40	11.283	2.40	17.283	0.45	23.28	0.30		
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30		
5.317	0.40	11.317	2.40	17.317	0.45	23.32	0.30		
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30		
5.350	0.40	11.350	2.40	17.350	0.45	23.35	0.30		
5.367	0.40	11.367	2.40	17.367	0.45	23.37	0.30		
5.383	0.40	11.383	2.40	17.383	0.45	23.38	0.30		
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30		
5.417	0.40	11.417	2.40	17.417	0.45	23.42	0.30		
5.433	0.40	11.433	2.40	17.433	0.45	23.43	0.30		
5.450	0.40	11.450	2.40	17.450	0.45	23.45	0.30		
5.467	0.40	11.467	2.40	17.467	0.45	23.47	0.30		
5.483	0.40	11.483	2.40	17.483	0.45	23.48	0.30		
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30		
5.517	0.40	11.517	10.40	17.517	0.45	23.52	0.30		
5.533	0.40	11.533	10.40	17.533	0.45	23.53	0.30		
5.550	0.40	11.550	10.40	17.550	0.45	23.55	0.30		
5.567	0.40	11.567	10.40	17.567	0.45	23.57	0.30		
5.583	0.40	11.583	10.40	17.583	0.45	23.58	0.30		
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30		
5.617	0.40	11.617	10.40	17.617	0.45	23.62	0.30		
5.633	0.40	11.633	10.40	17.633	0.45	23.63	0.30		
5.650	0.40	11.650	10.40	17.650	0.45	23.65	0.30		
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30		
5.683	0.40	11.683	10.40	17.683	0.45	23.68	0.30		
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30		
5.717	0.40	11.717	10.40	17.717	0.45	23.72	0.30		
5.733	0.40	11.733	10.40	17.733	0.45	23.73	0.30		
5.750	0.40	11.750	10.40	17.750	0.45	23.75	0.30		
5.767	0.40	11.767	27.59	17.767	0.45	23.77	0.30		

HRP7-PR-SWM_25mm Storm.OUT									
5.783	0.40	11.783	27.60	17.783	0.45	23.78	0.30		
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30		
5.817	0.40	11.817	27.60	17.817	0.45	23.82	0.30		
5.833	0.40	11.833	27.60	17.833	0.45	23.83	0.30		
5.850	0.40	11.850	27.60	17.850	0.45	23.85	0.30		
5.867	0.40	11.867	27.60	17.867	0.45	23.87	0.30		
5.883	0.40	11.883	27.60	17.883	0.45	23.88	0.30		
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30		
5.917	0.40	11.917	27.60	17.917	0.45	23.92	0.30		
5.933	0.40	11.933	27.60	17.933	0.45	23.93	0.30		
5.950	0.40	11.950	27.60	17.950	0.45	23.95	0.30		
5.967	0.40	11.967	27.60	17.967	0.45	23.97	0.30		
5.983	0.40	11.983	27.60	17.983	0.45	23.98	0.30		
6.000	0.40	12.000	27.60	18.000	0.45	24.00	0.30		

Max.Eff.Inten.(mm/hr)=	27.60	3.65
over (min)	5.00	30.00
Storage Coeff. (min)=	2.92 (ii)	29.45 (ii)
Unit Hyd. Tpeak (min)=	5.00	30.00
Unit Hyd. peak (cms)=	0.31	0.04

PEAK FLOW (cms)=	0.04	0.00	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.40	0.030 (iii)
RUNOFF VOLUME (mm)=	23.50	4.51	14.93
TOTAL RAINFALL (mm)=	25.00	25.00	25.00
RUNOFF COEFFICIENT =	0.94	0.18	0.60

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0026)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0143):	0.84	0.036	12.00	14.93
+ ID2= 2 (0024):	64.94	0.070	17.35	10.02
=====				
ID = 3 (0026):	65.78	0.105	12.00	6.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0244)				
ID= 1 DT= 4.0 min				
Area	(ha)=	6.58		
Total Imp(%)=		45.00	Dir. Conn.(%)=	45.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.96	3.62
Dep. Storage	(mm)=	1.50	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	209.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 4.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.067	0.25	6.067	0.50	12.067	3.60	18.07	0.45		
0.133	0.25	6.133	0.50	12.133	3.60	18.13	0.45		
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45		
0.267	0.25	6.267	0.50	12.267	3.60	18.27	0.45		
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45		
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45		
0.467	0.25	6.467	0.50	12.467	3.60	18.47	0.45		
0.533	0.25	6.533	0.50	12.533	2.73	18.53	0.45		
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45		
0.667		6.667	0.50	12.667	1.85	18.67	0.45		
0.733	0.25	6.733	0.50	12.733	1.85	18.73	0.45		
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45		
0.867	0.25	6.867	0.50	12.867	1.85	18.87	0.45		
0.933	0.25	6.933	0.50	12.933	1.85	18.93	0.45		
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45		
1.067	0.25	7.067	0.50	13.067	0.35	19.07	0.45		
1.133	0.25	7.133	0.50	13.133	0.35	19.13	0.45		
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45		
1.267	0.25	7.267	0.50	13.267	0.35	19.27	0.45		
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45		
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45		
1.467	0.25	7.467	0.50	13.467	0.35	19.47	0.45		

HRP7-PR-SWM_25mm Storm.OUT											
1.533	0.25		7.533	0.50		13.533	1.20		19.53	0.45	
1.600	0.25		7.600	0.50		13.600	2.05		19.60	0.45	
1.667	0.25		7.667	0.50		13.667	2.05		19.67	0.45	
1.733	0.25		7.733	0.50		13.733	2.05		19.73	0.45	
1.800	0.40		7.800	0.50		13.800	2.05		19.80	0.45	
1.867	0.45		7.867	0.50		13.867	2.05		19.87	0.45	
1.933	0.45		7.933	0.50		13.933	2.05		19.93	0.45	
2.000	0.45		8.000	0.50		14.000	2.05		20.00	0.45	
2.067	0.33		8.067	0.67		14.067	0.75		20.07	0.30	
2.133	0.33		8.133	0.68		14.133	0.75		20.13	0.30	
2.200	0.33		8.200	0.68		14.200	0.75		20.20	0.30	
2.267	0.32		8.267	0.67		14.267	0.75		20.27	0.30	
2.333	0.32		8.333	0.67		14.333	0.75		20.33	0.30	
2.400	0.32		8.400	0.67		14.400	0.75		20.40	0.30	
2.467	0.32		8.467	0.67		14.467	0.75		20.47	0.30	
2.533	0.32		8.533	0.67		14.533	0.75		20.53	0.30	
2.600	0.33		8.600	0.68		14.600	0.75		20.60	0.30	
2.667	0.33		8.667	0.68		14.667	0.75		20.67	0.30	
2.733	0.33		8.733	0.68		14.733	0.75		20.73	0.30	
2.800	0.32		8.800	0.67		14.800	0.75		20.80	0.30	
2.867	0.32		8.867	0.68		14.867	0.75		20.87	0.30	
2.933	0.32		8.933	0.68		14.933	0.75		20.93	0.30	
3.000	0.32		9.000	0.68		15.000	0.75		21.00	0.30	
3.067	0.32		9.067	0.80		15.067	0.75		21.07	0.30	
3.133	0.32		9.133	0.80		15.133	0.75		21.13	0.30	
3.200	0.32		9.200	0.80		15.200	0.75		21.20	0.30	
3.267	0.32		9.267	0.80		15.267	0.75		21.27	0.30	
3.333	0.32		9.333	0.80		15.333	0.75		21.33	0.30	
3.400	0.32		9.400	0.80		15.400	0.75		21.40	0.30	
3.467	0.32		9.467	0.80		15.467	0.75		21.47	0.30	
3.533	0.32		9.533	0.85		15.533	0.75		21.53	0.30	
3.600	0.33		9.600	0.90		15.600	0.75		21.60	0.30	
3.667	0.33		9.667	0.90		15.667	0.75		21.67	0.30	
3.733	0.33		9.733	0.90		15.733	0.75		21.73	0.30	
3.800	0.32		9.800	0.90		15.800	0.75		21.80	0.30	
3.867	0.32		9.867	0.90		15.867	0.75		21.87	0.30	
3.933	0.32		9.933	0.90		15.933	0.75		21.93	0.30	
4.000	0.32		10.000	0.90		16.000	0.75		22.00	0.30	
4.067	0.40		10.067	1.15		16.067	0.45		22.07	0.30	
4.133	0.40		10.133	1.15		16.133	0.45		22.13	0.30	
4.200	0.40		10.200	1.15		16.200	0.45		22.20	0.30	
4.267	0.40		10.267	1.15		16.267	0.45		22.27	0.30	
4.333	0.40		10.333	1.15		16.333	0.45		22.33	0.30	
4.400	0.40		10.400	1.15		16.400	0.45		22.40	0.30	
4.467	0.40		10.467	1.15		16.467	0.45		22.47	0.30	
4.533	0.40		10.533	1.35		16.533	0.45		22.53	0.30	
4.600	0.40		10.600	1.55		16.600	0.45		22.60	0.30	
4.667	0.40		10.667	1.55		16.667	0.45		22.67	0.30	
4.733	0.40		10.733	1.55		16.733	0.45		22.73	0.30	
4.800	0.40		10.800	1.55		16.800	0.45		22.80	0.30	
4.867	0.40		10.867	1.55		16.867	0.45		22.87	0.30	
4.933	0.40		10.933	1.55		16.933	0.45		22.93	0.30	
5.000	0.40		11.000	1.55		17.000	0.45		23.00	0.30	
5.067	0.40		11.067	2.40		17.067	0.45		23.07	0.30	
5.133	0.40		11.133	2.40		17.133	0.45		23.13	0.30	
5.200	0.40		11.200	2.40		17.200	0.45		23.20	0.30	
5.267	0.40		11.267	2.40		17.267	0.45		23.27	0.30	
5.333	0.40		11.333	2.40		17.333	0.45		23.33	0.30	
5.400	0.40		11.400	2.40		17.400	0.45		23.40	0.30	
5.467	0.40		11.467	2.40		17.467	0.45		23.47	0.30	
5.533	0.40		11.533	6.40		17.533	0.45		23.53	0.30	
5.600	0.40		11.600	10.40		17.600	0.45		23.60	0.30	
5.667	0.40		11.667	10.40		17.667	0.45		23.67	0.30	
5.733	0.40		11.733	10.40		17.733	0.45		23.73	0.30	
5.800	0.40		11.800	23.30		17.800	0.45		23.80	0.30	
5.867	0.40		11.867	27.60		17.867	0.45		23.87	0.30	
5.933	0.40		11.933	27.60		17.933	0.45		23.93	0.30	
6.000	0.40		12.000	27.60		18.000	0.45		24.00	0.30	

Max.Eff.Inten.(mm/hr)= 27.60 3.56
over (min) 5.00 36.00
Storage Coeff. (min)= 5.41 (ii) 32.21 (iii)
Unit Hyd. Tpeak (min)= 4.00 36.00
Unit Hyd. peak (cms)= 0.22 0.03

TOTALS
PEAK FLOW (cms)= 0.22 0.02 0.225 (iii)
TIME TO PEAK (hrs)= 12.00 12.47 12.00
RUNOFF VOLUME (mm)= 23.50 4.52 13.06
TOTAL RAINFALL (mm)= 25.00 25.00 25.00
RUNOFF COEFFICIENT = 0.94 0.18 0.52

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

HRP7-PR-SWM_25mm Storm.OUT

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-----
| ADD HYD ( 0028) |
| 1 + 2 = 3 |
-----
| AREA QPEAK TPEAK R.V. |
| (ha) (cms) (hrs) (mm) |
ID1= 1 ( 0244): 6.58 0.225 12.00 13.06
+ ID2= 2 ( 0026): 65.78 0.105 12.00 6.78
=====
ID = 3 ( 0028): 72.36 0.331 12.00 7.35
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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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FINISH

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HRP8-PR-SWM_25mm Storm.OUT

V V I SSSS U U A L (v 6.1.2002)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSS UUUU A A LLLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T T H H Y Y M M O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voain.dat
Output filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\46a4ab55-56a2-4c67-8104-c295ce2626e3\scenar
Summary filename: C:\Users\AbirA\AppData\Local\Civica\VMS\10b4af95-7c1b-43ad-8aec-1bb40ca06caf\46a4ab55-56a2-4c67-8104-c295ce2626e3\scenar

DATE: 04/17/2023 TIME: 04:14:27

USER:

COMMENTS: _____

** SIMULATION : Run 07

MASS STORM File: C:\Users\AbirA\AppData\Local\Temp\8479b6ab-65e1-49d3-aa3a-095f501a92fb\159001f7
Ptotal= 25.00 mm Comments: Mass 24-Hour SCS Type II Design Storm

Duration of storm = 24.00 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	0.25	6.25	0.50	12.25	3.60	18.25	0.45	
0.50	0.25	6.50	0.50	12.50	3.60	18.50	0.45	
0.75	0.25	6.75	0.50	12.75	1.85	18.75	0.45	
1.00	0.25	7.00	0.50	13.00	1.85	19.00	0.45	
1.25	0.25	7.25	0.50	13.25	0.35	19.25	0.45	
1.50	0.25	7.50	0.50	13.50	0.35	19.50	0.45	
1.75	0.25	7.75	0.50	13.75	2.05	19.75	0.45	
2.00	0.45	8.00	0.50	14.00	2.05	20.00	0.45	
2.25	0.33	8.25	0.68	14.25	0.75	20.25	0.30	
2.50	0.32	8.50	0.67	14.50	0.75	20.50	0.30	
2.75	0.33	8.75	0.68	14.75	0.75	20.75	0.30	
3.00	0.32	9.00	0.68	15.00	0.75	21.00	0.30	
3.25	0.32	9.25	0.68	15.25	0.75	21.25	0.30	
3.50	0.32	9.50	0.68	15.50	0.75	21.50	0.30	
3.75	0.33	9.75	0.90	15.75	0.75	21.75	0.30	
4.00	0.32	10.00	0.90	16.00	0.75	22.00	0.30	
4.25	0.40	10.25	1.15	16.25	0.45	22.25	0.30	
4.50	0.40	10.50	1.15	16.50	0.45	22.50	0.30	
4.75	0.40	10.75	1.55	16.75	0.45	22.75	0.30	
5.00	0.40	11.00	1.55	17.00	0.45	23.00	0.30	
5.25	0.40	11.25	2.40	17.25	0.45	23.25	0.30	
5.50	0.40	11.50	2.40	17.50	0.45	23.50	0.30	
5.75	0.40	11.75	10.40	17.75	0.45	23.75	0.30	
6.00	0.40	12.00	27.60	18.00	0.45	24.00	0.30	

CALIB NASHYD (1050) Area (ha)= 4.49 Curve Number (CN)= 77.0
ID= 1 DT= 2.0 min Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	0.25	6.033	0.50	12.033	3.60	18.03	0.45	
0.067	0.25	6.067	0.50	12.067	3.60	18.07	0.45	
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45	
0.133	0.25	6.133	0.50	12.133	3.60	18.13	0.45	
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45	
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45	
0.233	0.25	6.233	0.50	12.233	3.60	18.23	0.45	
0.267	0.25	6.267	0.50	12.267	3.60	18.27	0.45	
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45	
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45	
0.367	0.25	6.367	0.50	12.367	3.60	18.37	0.45	
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45	
0.433	0.25	6.433	0.50	12.433	3.60	18.43	0.45	
0.467	0.25	6.467	0.50	12.467	3.60	18.47	0.45	
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45	
0.533	0.25	6.533	0.50	12.533	1.85	18.53	0.45	
0.567	0.25	6.567	0.50	12.567	1.85	18.57	0.45	
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45	
0.633	0.25	6.633	0.50	12.633	1.85	18.63	0.45	
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45	
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45	
0.733	0.25	6.733	0.50	12.733	1.85	18.73	0.45	
0.767	0.25	6.767	0.50	12.767	1.85	18.77	0.45	
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45	
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45	
0.867	0.25	6.867	0.50	12.867	1.85	18.87	0.45	
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45	
0.933	0.25	6.933	0.50	12.933	1.85	18.93	0.45	
0.967	0.25	6.967	0.50	12.967	1.85	18.97	0.45	
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45	
1.033	0.25	7.033	0.50	13.033	0.35	19.03	0.45	
1.067	0.25	7.067	0.50	13.067	0.35	19.07	0.45	
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45	
1.133	0.25	7.133	0.50	13.133	0.35	19.13	0.45	
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45	
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45	
1.233	0.25	7.233	0.50	13.233	0.35	19.23	0.45	
1.267	0.25	7.267	0.50	13.267	0.35	19.27	0.45	
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45	
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45	
1.367	0.25	7.367	0.50	13.367	0.35	19.37	0.45	
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45	
1.433	0.25	7.433	0.50	13.433	0.35	19.43	0.45	
1.467	0.25	7.467	0.50	13.467	0.35	19.47	0.45	
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45	
1.533	0.25	7.533	0.50	13.533	2.05	19.53	0.45	
1.567	0.25	7.567	0.50	13.567	2.05	19.57	0.45	
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45	
1.633	0.25	7.633	0.50	13.633	2.05	19.63	0.45	
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45	
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45	
1.733	0.25	7.733	0.50	13.733	2.05	19.73	0.45	
1.767	0.35	7.767	0.50	13.767	2.05	19.77	0.45	
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45	
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45	
1.867	0.45	7.867	0.50	13.867	2.05	19.87	0.45	
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45	
1.933	0.45	7.933	0.50	13.933	2.05	19.93	0.45	
1.967	0.45	7.967	0.50	13.967	2.05	19.97	0.45	
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45	
2.033	0.33	8.033	0.67	14.033	0.75	20.03	0.30	
2.067	0.33	8.067	0.68	14.067	0.75	20.07	0.30	
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30	
2.133	0.33	8.133	0.68	14.133	0.75	20.13	0.30	
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30	
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30	
2.233	0.33	8.233	0.68	14.233	0.75	20.23	0.30	
2.267	0.32	8.267	0.68	14.267	0.75	20.27	0.30	
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30	
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30	
2.367	0.32	8.367	0.67	14.367	0.75	20.37	0.30	
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30	
2.433	0.32	8.433	0.67	14.433	0.75	20.43	0.30	
2.467	0.32	8.467	0.67	14.467	0.75	20.47	0.30	
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30	
2.533	0.32	8.533	0.68	14.533	0.75	20.53	0.30	
2.567	0.33	8.567	0.68	14.567	0.75	20.57	0.30	
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30	
2.633	0.33	8.633	0.68	14.633	0.75	20.63	0.30	
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30	
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30	
2.733	0.33	8.733	0.68	14.733	0.75	20.73	0.30	
2.767	0.32	8.767	0.68	14.767	0.75	20.77	0.30	
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30	
2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30	
2.867	0.32	8.867	0.68	14.867	0.75	20.87	0.30	

HRPB-PR-SWM_25mm Storm.OUT									
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30		
2.933	0.32	8.933	0.68	14.933	0.75	20.93	0.30		
2.967	0.32	8.967	0.68	14.967	0.75	20.97	0.30		
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30		
3.033	0.32	9.033	0.68	15.033	0.75	21.03	0.30		
3.067	0.32	9.067	0.68	15.067	0.75	21.07	0.30		
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30		
3.133	0.32	9.133	0.80	15.133	0.75	21.13	0.30		
3.167	0.32	9.167	0.80	15.167	0.75	21.17	0.30		
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30		
3.233	0.32	9.233	0.80	15.233	0.75	21.23	0.30		
3.267	0.32	9.267	0.80	15.267	0.75	21.27	0.30		
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30		
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30		
3.367	0.32	9.367	0.80	15.367	0.75	21.37	0.30		
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30		
3.433	0.32	9.433	0.80	15.433	0.75	21.43	0.30		
3.467	0.32	9.467	0.80	15.467	0.75	21.47	0.30		
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30		
3.533	0.32	9.533	0.90	15.533	0.75	21.53	0.30		
3.567	0.32	9.567	0.90	15.567	0.75	21.57	0.30		
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30		
3.633	0.33	9.633	0.90	15.633	0.75	21.63	0.30		
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30		
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30		
3.733	0.33	9.733	0.90	15.733	0.75	21.73	0.30		
3.767	0.32	9.767	0.90	15.767	0.75	21.77	0.30		
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30		
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30		
3.867	0.32	9.867	0.90	15.867	0.75	21.87	0.30		
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30		
3.933	0.32	9.933	0.90	15.933	0.75	21.93	0.30		
3.967	0.32	9.967	0.90	15.967	0.75	21.97	0.30		
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30		
4.033	0.40	10.033	1.15	16.033	0.45	22.03	0.30		
4.067	0.40	10.067	1.15	16.067	0.45	22.07	0.30		
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30		
4.133	0.40	10.133	1.15	16.133	0.45	22.13	0.30		
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30		
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30		
4.233	0.40	10.233	1.15	16.233	0.45	22.23	0.30		
4.267	0.40	10.267	1.15	16.267	0.45	22.27	0.30		
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30		
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30		
4.367	0.40	10.367	1.15	16.367	0.45	22.37	0.30		
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30		
4.433	0.40	10.433	1.15	16.433	0.45	22.43	0.30		
4.467	0.40	10.467	1.15	16.467	0.45	22.47	0.30		
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30		
4.533	0.40	10.533	1.55	16.533	0.45	22.53	0.30		
4.567	0.40	10.567	1.55	16.567	0.45	22.57	0.30		
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30		
4.633	0.40	10.633	1.55	16.633	0.45	22.63	0.30		
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30		
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30		
4.733	0.40	10.733	1.55	16.733	0.45	22.73	0.30		
4.767	0.40	10.767	1.55	16.767	0.45	22.77	0.30		
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30		
4.833	0.40	10.833	1.55	16.833	0.45	22.83	0.30		
4.867	0.40	10.867	1.55	16.867	0.45	22.87	0.30		
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30		
4.933	0.40	10.933	1.55	16.933	0.45	22.93	0.30		
4.967	0.40	10.967	1.55	16.967	0.45	22.97	0.30		
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30		
5.033	0.40	11.033	2.40	17.033	0.45	23.03	0.30		
5.067	0.40	11.067	2.40	17.067	0.45	23.07	0.30		
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30		
5.133	0.40	11.133	2.40	17.133	0.45	23.13	0.30		
5.167	0.40	11.167	2.40	17.167	0.45	23.17	0.30		
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30		
5.233	0.40	11.233	2.40	17.233	0.45	23.23	0.30		
5.267	0.40	11.267	2.40	17.267	0.45	23.27	0.30		
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30		
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30		
5.367	0.40	11.367	2.40	17.367	0.45	23.37	0.30		
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30		
5.433	0.40	11.433	2.40	17.433	0.45	23.43	0.30		
5.467	0.40	11.467	2.40	17.467	0.45	23.47	0.30		
5.500	0.40	11.500	2.41	17.500	0.45	23.50	0.30		
5.533	0.40	11.533	10.40	17.533	0.45	23.53	0.30		
5.567	0.40	11.567	10.40	17.567	0.45	23.57	0.30		
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30		
5.633	0.40	11.633	10.40	17.633	0.45	23.63	0.30		
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30		
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30		
5.733	0.40	11.733	10.40	17.733	0.45	23.73	0.30		
5.767	0.40	11.767	19.02	17.767	0.45	23.77	0.30		

HRPB-PR-SWM_25mm Storm.OUT									
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30		
5.833	0.40	11.833	27.60	17.833	0.45	23.83	0.30		
5.867	0.40	11.867	27.60	17.867	0.45	23.87	0.30		
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30		
5.933	0.40	11.933	27.60	17.933	0.45	23.93	0.30		
5.967	0.40	11.967	27.60	17.967	0.45	23.97	0.30		
6.000	0.40	12.000	27.57	18.000	0.45	24.00	0.30		

Unit Hyd Qpeak (cms)= 1.015

PEAK FLOW (cms)= 0.047 (1)
TIME TO PEAK (hrs)= 12.067
RUNOFF VOLUME (mm)= 4.172
TOTAL RAINFALL (mm)= 25.000
RUNOFF COEFFICIENT = 0.167

(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				Area (ha)= 4.37			
STANDHYD (0250)				Total Imp(%)= 46.00 Dir. Conn.(%)= 46.00			
ID= 1 DT= 2.0 min							
				IMPERVIOUS			
				PERVIOUS (1)			
Surface Area (ha)=				2.01			
Dep. Storage (mm)=				1.50			
Average Slope (%)=				2.00			
Length (m)=				178.68			
Mannings n				= 0.013			

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.25	6.833	0.50	12.033	3.60	18.03	0.45		
0.067	0.25	6.867	0.50	12.067	3.60	18.07	0.45		
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45		
0.133	0.25	6.133	0.50	12.133	3.60	18.13	0.45		
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45		
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45		
0.233	0.25	6.233	0.50	12.233	3.60	18.23	0.45		
0.267	0.25	6.267	0.50	12.267	3.60	18.27	0.45		
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45		
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45		
0.367	0.25	6.367	0.50	12.367	3.60	18.37	0.45		
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45		
0.433	0.25	6.433	0.50	12.433	3.60	18.43	0.45		
0.467	0.25	6.467	0.50	12.467	3.60	18.47	0.45		
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45		
0.533	0.25	6.533	0.50	12.533	1.85	18.53	0.45		
0.567	0.25	6.567	0.50	12.567	1.85	18.57	0.45		
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45		
0.633	0.25	6.633	0.50	12.633	1.85	18.63	0.45		
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45		
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45		
0.733	0.25	6.733	0.50	12.733	1.85	18.73	0.45		
0.767	0.25	6.767	0.50	12.767	1.85	18.77	0.45		
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45		
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45		
0.867	0.25	6.867	0.50	12.867	1.85	18.87	0.45		
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45		
0.933	0.25	6.933	0.50	12.933	1.85	18.93	0.45		
0.967	0.25	6.967	0.50	12.967	1.85	18.97	0.45		
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45		
1.033	0.25	7.033	0.50	13.033	0.35	19.03	0.45		
1.067	0.25	7.067	0.50	13.067	0.35	19.07	0.45		
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45		
1.133	0.25	7.133	0.50	13.133	0.35	19.13	0.45		
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45		
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45		
1.233	0.25	7.233	0.50	13.233	0.35	19.23	0.45		
1.267	0.25	7.267	0.50	13.267	0.35	19.27	0.45		
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45		
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45		
1.367	0.25	7.367	0.50	13.367	0.35	19.37	0.45		
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45		
1.433	0.25	7.433	0.50	13.433	0.35	19.43	0.45		
1.467	0.25	7.467	0.50	13.467	0.35	19.47	0.45		
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45		
1.533	0.25	7.533	0.50	13.533	2.05	19.53	0.45		
1.567	0.25	7.567	0.50	13.567	2.05	19.57	0.45		
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45		
1.633	0.25	7.633	0.50	13.633	2.05	19.63	0.45		
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45		

HRPB-PR-SWM_25mm Storm.OUT									
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45		
1.733	0.25	7.733	0.50	13.733	2.05	19.73	0.45		
1.767	0.35	7.767	0.50	13.767	2.05	19.77	0.45		
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45		
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45		
1.867	0.45	7.867	0.50	13.867	2.05	19.87	0.45		
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45		
1.933	0.45	7.933	0.50	13.933	2.05	19.93	0.45		
1.967	0.45	7.967	0.50	13.967	2.05	19.97	0.45		
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45		
2.033	0.33	8.033	0.67	14.033	0.75	20.03	0.30		
2.067	0.33	8.067	0.68	14.067	0.75	20.07	0.30		
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30		
2.133	0.33	8.133	0.68	14.133	0.75	20.13	0.30		
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30		
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30		
2.233	0.33	8.233	0.68	14.233	0.75	20.23	0.30		
2.267	0.32	8.267	0.68	14.267	0.75	20.27	0.30		
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30		
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30		
2.367	0.32	8.367	0.67	14.367	0.75	20.37	0.30		
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30		
2.433	0.32	8.433	0.67	14.433	0.75	20.43	0.30		
2.467	0.32	8.467	0.67	14.467	0.75	20.47	0.30		
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30		
2.533	0.32	8.533	0.68	14.533	0.75	20.53	0.30		
2.567	0.33	8.567	0.68	14.567	0.75	20.57	0.30		
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30		
2.633	0.33	8.633	0.68	14.633	0.75	20.63	0.30		
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30		
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30		
2.733	0.33	8.733	0.68	14.733	0.75	20.73	0.30		
2.767	0.32	8.767	0.68	14.767	0.75	20.77	0.30		
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30		
2.833	0.32	8.833	0.68	14.833	0.75	20.83	0.30		
2.867	0.32	8.867	0.68	14.867	0.75	20.87	0.30		
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30		
2.933	0.32	8.933	0.68	14.933	0.75	20.93	0.30		
2.967	0.32	8.967	0.68	14.967	0.75	20.97	0.30		
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30		
3.033	0.32	9.033	0.80	15.033	0.75	21.03	0.30		
3.067	0.32	9.067	0.80	15.067	0.75	21.07	0.30		
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30		
3.133	0.32	9.133	0.80	15.133	0.75	21.13	0.30		
3.167	0.32	9.167	0.80	15.167	0.75	21.17	0.30		
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30		
3.233	0.32	9.233	0.80	15.233	0.75	21.23	0.30		
3.267	0.32	9.267	0.80	15.267	0.75	21.27	0.30		
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30		
3.333	0.32	9.333	0.80	15.333	0.75	21.33	0.30		
3.367	0.32	9.367	0.80	15.367	0.75	21.37	0.30		
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30		
3.433	0.32	9.433	0.80	15.433	0.75	21.43	0.30		
3.467	0.32	9.467	0.80	15.467	0.75	21.47	0.30		
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30		
3.533	0.32	9.533	0.90	15.533	0.75	21.53	0.30		
3.567	0.33	9.567	0.90	15.567	0.75	21.57	0.30		
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30		
3.633	0.33	9.633	0.90	15.633	0.75	21.63	0.30		
3.667	0.33	9.667	0.90	15.667	0.75	21.67	0.30		
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30		
3.733	0.33	9.733	0.90	15.733	0.75	21.73	0.30		
3.767	0.32	9.767	0.90	15.767	0.75	21.77	0.30		
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30		
3.833	0.32	9.833	0.90	15.833	0.75	21.83	0.30		
3.867	0.32	9.867	0.90	15.867	0.75	21.87	0.30		
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30		
3.933	0.32	9.933	0.90	15.933	0.75	21.93	0.30		
3.967	0.32	9.967	0.90	15.967	0.75	21.97	0.30		
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30		
4.033	0.40	10.033	1.15	16.033	0.45	22.03	0.30		
4.067	0.40	10.067	1.15	16.067	0.45	22.07	0.30		
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30		
4.133	0.40	10.133	1.15	16.133	0.45	22.13	0.30		
4.167	0.40	10.167	1.15	16.167	0.45	22.17	0.30		
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30		
4.233	0.40	10.233	1.15	16.233	0.45	22.23	0.30		
4.267	0.40	10.267	1.15	16.267	0.45	22.27	0.30		
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30		
4.333	0.40	10.333	1.15	16.333	0.45	22.33	0.30		
4.367	0.40	10.367	1.15	16.367	0.45	22.37	0.30		
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30		
4.433	0.40	10.433	1.15	16.433	0.45	22.43	0.30		
4.467	0.40	10.467	1.15	16.467	0.45	22.47	0.30		
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30		
4.533	0.40	10.533	1.55	16.533	0.45	22.53	0.30		
4.567	0.40	10.567	1.55	16.567	0.45	22.57	0.30		

HRPB-PR-SWM_25mm Storm.OUT							
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30
4.633	0.40	10.633	1.55	16.633	0.45	22.63	0.30
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30
4.733	0.40	10.733	1.55	16.733	0.45	22.73	0.30
4.767	0.40	10.767	1.55	16.767	0.45	22.77	0.30
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30
4.833	0.40	10.833	1.55	16.833	0.45	22.83	0.30
4.867	0.40	10.867	1.55	16.867	0.45	22.87	0.30
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30
4.933	0.40	10.933	1.55	16.933	0.45	22.93	0.30
4.967	0.40	10.967	1.55	16.967	0.45	22.97	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.033	0.40	11.033	2.40	17.033	0.45	23.03	0.30
5.067	0.40	11.067	2.40	17.067	0.45	23.07	0.30
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30
5.133	0.40	11.133	2.40	17.133	0.45	23.13	0.30
5.167	0.40	11.167	2.40	17.167	0.45	23.17	0.30
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30
5.233	0.40	11.233	2.40	17.233	0.45	23.23	0.30
5.267	0.40	11.267	2.40	17.267	0.45	23.27	0.30
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30
5.333	0.40	11.333	2.40	17.333	0.45	23.33	0.30
5.367	0.40	11.367	2.40	17.367	0.45	23.37	0.30
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30
5.433	0.40	11.433	2.40	17.433	0.45	23.43	0.30
5.467	0.40	11.467	2.40	17.467	0.45	23.47	0.30
5.500	0.40	11.500	2.41	17.500	0.45	23.50	0.30
5.533	0.40	11.533	10.40	17.533	0.45	23.53	0.30
5.567	0.40	11.567	10.40	17.567	0.45	23.57	0.30
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30
5.633	0.40	11.633	10.40	17.633	0.45	23.63	0.30
5.667	0.40	11.667	10.40	17.667	0.45	23.67	0.30
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30
5.733	0.40	11.733	10.40	17.733	0.45	23.73	0.30
5.767	0.40	11.767	19.02	17.767	0.45	23.77	0.30
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30
5.833	0.40	11.833	27.60	17.833	0.45	23.83	0.30
5.867	0.40	11.867	27.60	17.867	0.45	23.87	0.30
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30
5.933	0.40	11.933	27.60	17.933	0.45	23.93	0.30
5.967	0.40	11.967	27.60	17.967	0.45	23.97	0.30
6.000	0.40	12.000	27.57	18.000	0.45	24.00	0.30
Max.Eff.Inten.(mm/hr)=			27.60	5.40			
over (min)=			5.00	28.00			
Storage Coeff. (min)=			4.79 (ii)	27.46 (ii)			
Unit Hyd. Tpeak (min)=			4.00	28.00			
Unit Hyd. peak (cms)=			0.25	0.04			
					TOTALS		
PEAK FLOW (cms)=			0.15	0.02	0.158 (iii)		
TIME TO PEAK (hrs)=			12.00	12.37	12.00		
RUNOFF VOLUME (mm)=			23.50	6.07	14.08		
TOTAL RAINFALL (mm)=			25.00	25.00	25.00		
RUNOFF COEFFICIENT =			0.94	0.24	0.56		
 (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES: CN* = 79.0 Ia = Dep. Storage (Above) (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT. (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.							
ADD HYD (0018)							
1 + 2 = 3							
ID1= 1 (1050):		4.49	0.047	12.07	4.17		
+ ID2= 2 (0250):		4.37	0.158	12.00	14.08		
ID = 3 (0018):		8.86	0.198	12.00	9.06		
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.							
ROUTE CHN(0037)							
IN= 2---> OUT= 1							
Routing time step (min)'= 2.00							
<----- DATA FOR SECTION (1.1) ----->							
Distance		Elevation		Manning			
0.00		151.00		0.0500			
0.00		100.67		0.0500			
2.00		100.33		0.0500 / 0.0300		Main Channel	
3.00		100.00		0.0300		Main Channel	
4.00		100.00		0.0300		Main Channel	

HRP8-PR-SWM_25mm Storm.OUT
Main Channel
5.00 100.33 0.0300 /0.0500
6.00 100.67 0.0500
7.00 101.00 0.0500

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	100.05	.636E+02	0.0	0.33	58.96
0.09	100.09	.143E+03	0.1	0.50	39.44
0.14	100.14	.239E+03	0.1	0.63	31.47
0.19	100.19	.350E+03	0.2	0.73	26.89
0.24	100.24	.477E+03	0.3	0.83	23.81
0.28	100.28	.620E+03	0.5	0.91	21.56
0.33	100.33	.779E+03	0.7	0.99	19.82
0.39	100.39	.988E+03	1.0	1.14	17.21
0.44	100.44	.122E+04	1.3	1.27	15.53
0.50	100.50	.147E+04	1.7	1.37	14.34
0.55	100.55	.174E+04	2.2	1.46	13.44
0.61	100.61	.204E+04	2.7	1.54	12.74
0.66	100.66	.236E+04	3.2	1.62	12.17
0.72	100.72	.269E+04	3.8	1.68	11.70
0.78	100.78	.306E+04	4.5	1.74	11.30
0.83	100.83	.344E+04	5.2	1.80	10.96
0.89	100.89	.385E+04	6.0	1.85	10.65
0.94	100.94	.427E+04	6.9	1.90	10.38
1.00	101.00	.472E+04	7.8	1.94	10.14

<---- hydrograph ----> <-pipe / channel->					
INFLOW : ID= 2 (0018)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (m)	MAX DEPTH (m/s)
OUTFLOW: ID= 1 (0037)	8.86	0.20	12.00	9.06	0.18 0.71
	8.86	0.09	12.10	9.02	0.12 0.55

CALIB (1051)
NASHYD (1051)
ID= 1 DT= 8.0 min
Area (ha)= 50.34
Ia (mm)= 5.00
U.H. Tp(hrs)= 0.63
Curve Number (CN)= 82.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 8.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	'	hrs	mm/hr
0.133	0.25	6.133	0.50	12.133	3.60	18.13	0.45		
0.267	0.25	6.267	0.50	12.267	3.60	18.27	0.45		
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45		
0.533	0.25	6.533	0.50	12.533	3.16	18.53	0.45		
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45		
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45		
0.933	0.25	6.933	0.50	12.933	1.85	18.93	0.45		
1.067	0.25	7.067	0.50	13.067	1.10	19.07	0.45		
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45		
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45		
1.467	0.25	7.467	0.50	13.467	0.35	19.47	0.45		
1.600	0.25	7.600	0.50	13.600	1.62	19.60	0.45		
1.733	0.25	7.733	0.50	13.733	2.05	19.73	0.45		
1.867	0.42	7.867	0.50	13.867	2.05	19.87	0.45		
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45		
2.133	0.33	8.133	0.67	14.133	0.75	20.13	0.30		
2.267	0.33	8.267	0.68	14.267	0.75	20.27	0.30		
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30		
2.533	0.33	8.533	0.67	14.533	0.75	20.53	0.30		
2.667	0.33	8.667	0.68	14.667	0.75	20.67	0.30		
2.800	0.33	8.800	0.67	14.800	0.75	20.80	0.30		
2.933	0.32	8.933	0.68	14.933	0.75	20.93	0.30		
3.067	0.33	9.067	0.74	15.067	0.75	21.07	0.30		
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30		
3.333	0.33	9.333	0.80	15.333	0.75	21.33	0.30		
3.467	0.32	9.467	0.80	15.467	0.75	21.47	0.30		
3.600	0.33	9.600	0.87	15.600	0.75	21.60	0.30		
3.733	0.33	9.733	0.90	15.733	0.75	21.73	0.30		
3.867	0.33	9.867	0.90	15.867	0.75	21.87	0.30		
4.000	0.33	10.000	0.90	16.000	0.75	22.00	0.30		
4.133	0.40	10.133	1.15	16.133	0.45	22.13	0.30		
4.267	0.40	10.267	1.15	16.267	0.45	22.27	0.30		
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30		
4.533	0.40	10.533	1.25	16.533	0.45	22.53	0.30		
4.667	0.40	10.667	1.55	16.667	0.45	22.67	0.30		
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30		
4.933	0.40	10.933	1.55	16.933	0.45	22.93	0.30		
5.067	0.40	11.067	1.97	17.067	0.45	23.07	0.30		
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30		

HRP8-PR-SWM_25mm Storm.OUT					
5.333	0.40	11.333	2.40	17.333	0.45
5.467	0.40	11.467	2.40	17.467	0.45
5.600	0.40	11.600	8.40	17.600	0.45
5.733	0.40	11.733	10.40	17.733	0.45
5.867	0.40	11.867	25.45	17.867	0.45
6.000	0.40	12.000	27.60	18.000	0.45

Unit Hyd Qpeak (cms)= 3.062

PEAK FLOW (cms)= 0.272 (i)
TIME TO PEAK (hrs)= 12.533
RUNOFF VOLUME (mm)= 5.279
TOTAL RAINFALL (mm)= 25.000
RUNOFF COEFFICIENT = 0.211

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)					
1 + 2 = 3					
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (1051):	50.34	0.272	12.53	5.28	
+ ID2= 2 (0037):	8.86	0.091	12.10	9.02	
=====					
ID = 3 (0029):	59.20	0.341	12.53	5.84	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0251)			
ID= 1 DT= 3.0 min	Area (ha)= 10.65	Total Imp(%)= 37.00	
		Dir. Conn.(%)= 37.00	

IMPERVIOUS			
Surface Area (ha)=	3.94	PERVIOUS (i)	
Dep. Storage (mm)=	1.50		
Average Slope (%)=	2.00		
Length (m)=	266.46	220.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 3.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	'	hrs	mm/hr
0.050	0.25	6.050	0.50	12.050	3.60	18.05	0.45		
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45		
0.150	0.25	6.150	0.50	12.150	3.60	18.15	0.45		
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45		
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45		
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45		
0.350	0.25	6.350	0.50	12.350	3.60	18.35	0.45		
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45		
0.450	0.25	6.450	0.50	12.450	3.60	18.45	0.45		
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45		
0.550	0.25	6.550	0.50	12.550	1.85	18.55	0.45		
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45		
0.650	0.25	6.650	0.50	12.650	1.85	18.65	0.45		
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45		
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45		
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45		
0.850	0.25	6.850	0.50	12.850	1.85	18.85	0.45		
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45		
0.950	0.25	6.950	0.50	12.950	1.85	18.95	0.45		
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45		
1.050	0.25	7.050	0.50	13.050	0.35	19.05	0.45		
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45		
1.150	0.25	7.150	0.50	13.150	0.35	19.15	0.45		
1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45		
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45		
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45		
1.350	0.25	7.350	0.50	13.350	0.35	19.35	0.45		
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45		
1.450	0.25	7.450	0.50	13.450	0.35	19.45	0.45		
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45		
1.550	0.25	7.550	0.50	13.550	2.05	19.55	0.45		
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45		
1.650	0.25	7.650	0.50	13.650	2.05	19.65	0.45		
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45		
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45		
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45		
1.850	0.45	7.850	0.50	13.850	2.05	19.85	0.45		
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45		
1.950	0.45	7.950	0.50	13.950	2.05	19.95	0.45		

HRPB-PR-SWM_25mm Storm.OUT

2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45
2.050	0.33	8.050	0.68	14.050	0.75	20.05	0.30
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30
2.150	0.33	8.150	0.68	14.150	0.75	20.15	0.30
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30
2.250	0.33	8.250	0.68	14.250	0.75	20.25	0.30
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30
2.350	0.32	8.350	0.67	14.350	0.75	20.35	0.30
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30
2.450	0.32	8.450	0.67	14.450	0.75	20.45	0.30
2.500	0.32	8.500	0.68	14.500	0.75	20.50	0.30
2.550	0.32	8.550	0.68	14.550	0.75	20.55	0.30
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30
2.650	0.33	8.650	0.68	14.650	0.75	20.65	0.30
2.700	0.33	8.700	0.68	14.700	0.75	20.70	0.30
2.750	0.33	8.750	0.68	14.750	0.75	20.75	0.30
2.800	0.32	8.800	0.68	14.800	0.75	20.80	0.30
2.850	0.32	8.850	0.68	14.850	0.75	20.85	0.30
2.900	0.32	8.900	0.68	14.900	0.75	20.90	0.30
2.950	0.32	8.950	0.68	14.950	0.75	20.95	0.30
3.000	0.32	9.000	0.68	15.000	0.75	21.00	0.30
3.050	0.32	9.050	0.80	15.050	0.75	21.05	0.30
3.100	0.32	9.100	0.80	15.100	0.75	21.10	0.30
3.150	0.32	9.150	0.80	15.150	0.75	21.15	0.30
3.200	0.32	9.200	0.80	15.200	0.75	21.20	0.30
3.250	0.32	9.250	0.80	15.250	0.75	21.25	0.30
3.300	0.32	9.300	0.80	15.300	0.75	21.30	0.30
3.350	0.32	9.350	0.80	15.350	0.75	21.35	0.30
3.400	0.32	9.400	0.80	15.400	0.75	21.40	0.30
3.450	0.32	9.450	0.80	15.450	0.75	21.45	0.30
3.500	0.32	9.500	0.80	15.500	0.75	21.50	0.30
3.550	0.32	9.550	0.90	15.550	0.75	21.55	0.30
3.600	0.33	9.600	0.90	15.600	0.75	21.60	0.30
3.650	0.33	9.650	0.90	15.650	0.75	21.65	0.30
3.700	0.33	9.700	0.90	15.700	0.75	21.70	0.30
3.750	0.33	9.750	0.90	15.750	0.75	21.75	0.30
3.800	0.32	9.800	0.90	15.800	0.75	21.80	0.30
3.850	0.32	9.850	0.90	15.850	0.75	21.85	0.30
3.900	0.32	9.900	0.90	15.900	0.75	21.90	0.30
3.950	0.32	9.950	0.90	15.950	0.75	21.95	0.30
4.000	0.32	10.000	0.90	16.000	0.75	22.00	0.30
4.050	0.40	10.050	1.15	16.050	0.45	22.05	0.30
4.100	0.40	10.100	1.15	16.100	0.45	22.10	0.30
4.150	0.40	10.150	1.15	16.150	0.45	22.15	0.30
4.200	0.40	10.200	1.15	16.200	0.45	22.20	0.30
4.250	0.40	10.250	1.15	16.250	0.45	22.25	0.30
4.300	0.40	10.300	1.15	16.300	0.45	22.30	0.30
4.350	0.40	10.350	1.15	16.350	0.45	22.35	0.30
4.400	0.40	10.400	1.15	16.400	0.45	22.40	0.30
4.450	0.40	10.450	1.15	16.450	0.45	22.45	0.30
4.500	0.40	10.500	1.15	16.500	0.45	22.50	0.30
4.550	0.40	10.550	1.55	16.550	0.45	22.55	0.30
4.600	0.40	10.600	1.55	16.600	0.45	22.60	0.30
4.650	0.40	10.650	1.55	16.650	0.45	22.65	0.30
4.700	0.40	10.700	1.55	16.700	0.45	22.70	0.30
4.750	0.40	10.750	1.55	16.750	0.45	22.75	0.30
4.800	0.40	10.800	1.55	16.800	0.45	22.80	0.30
4.850	0.40	10.850	1.55	16.850	0.45	22.85	0.30
4.900	0.40	10.900	1.55	16.900	0.45	22.90	0.30
4.950	0.40	10.950	1.55	16.950	0.45	22.95	0.30
5.000	0.40	11.000	1.55	17.000	0.45	23.00	0.30
5.050	0.40	11.050	2.40	17.050	0.45	23.05	0.30
5.100	0.40	11.100	2.40	17.100	0.45	23.10	0.30
5.150	0.40	11.150	2.40	17.150	0.45	23.15	0.30
5.200	0.40	11.200	2.40	17.200	0.45	23.20	0.30
5.250	0.40	11.250	2.40	17.250	0.45	23.25	0.30
5.300	0.40	11.300	2.40	17.300	0.45	23.30	0.30
5.350	0.40	11.350	2.40	17.350	0.45	23.35	0.30
5.400	0.40	11.400	2.40	17.400	0.45	23.40	0.30
5.450	0.40	11.450	2.40	17.450	0.45	23.45	0.30
5.500	0.40	11.500	2.40	17.500	0.45	23.50	0.30
5.550	0.40	11.550	10.40	17.550	0.45	23.55	0.30
5.600	0.40	11.600	10.40	17.600	0.45	23.60	0.30
5.650	0.40	11.650	10.40	17.650	0.45	23.65	0.30
5.700	0.40	11.700	10.40	17.700	0.45	23.70	0.30
5.750	0.40	11.750	10.41	17.750	0.45	23.75	0.30
5.800	0.40	11.800	27.60	17.800	0.45	23.80	0.30
5.850	0.40	11.850	27.60	17.850	0.45	23.85	0.30
5.900	0.40	11.900	27.60	17.900	0.45	23.90	0.30
5.950	0.40	11.950	27.60	17.950	0.45	23.95	0.30
6.000	0.40	12.000	27.59	18.000	0.45	24.00	0.30

Max.Eff.Inten.(mm/hr)= 27.60 2.16
over (min) 6.00 99.00
Storage Coeff. (min)= 6.25 (ii) 97.19 (ii)
Unit Hyd. Tpeak (min)= 6.00 99.00
Unit Hyd. peak (cms)= 0.18 0.01

HRPB-PR-SWM_25mm Storm.OUT

TOTALS

PEAK FLOW (cms)=	0.28	0.02	0.281 (iii)
TIME TO PEAK (hrs)=	12.00	13.55	12.00
RUNOFF VOLUME (mm)=	23.50	4.52	11.53
TOTAL RAINFALL (mm)=	25.00	25.00	25.00
RUNOFF COEFFICIENT =	0.94	0.18	0.46

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0031)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0251):	10.65	0.281	12.00	11.53
+ ID2= 2 (0029):	59.20	0.341	12.53	5.84
=====				
ID = 3 (0031):	69.85	0.468	12.03	6.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0039)	Routing time step (min)'= 2.00			
IN= 2 ---> OUT= 1				
<----- DATA FOR SECTION (1.1) ----->				
Distance	Elevation	Manning		
0.00	101.00	0.0500		
1.00	100.67	0.0500		
2.00	100.33	0.0500 / 0.0300	Main Channel	
3.00	100.00	0.0300	Main Channel	
4.00	100.00	0.0300	Main Channel	
5.00	100.33	0.0300 / 0.0500	Main Channel	
6.00	100.67	0.0500		
7.00	101.00	0.0500		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	100.05	.266E+02	0.0	0.18	46.14
0.09	100.09	.509E+02	0.0	0.27	30.87
0.14	100.14	.908E+02	0.1	0.33	24.63
0.19	100.19	.146E+03	0.1	0.39	21.04
0.24	100.24	.200E+03	0.2	0.44	18.63
0.28	100.28	.259E+03	0.3	0.49	16.87
0.33	100.33	.326E+03	0.4	0.53	15.51
0.39	100.39	.413E+03	0.5	0.61	13.47
0.44	100.44	.510E+03	0.7	0.68	12.15
0.50	100.50	.615E+03	0.9	0.73	11.22
0.55	100.55	.729E+03	1.2	0.78	10.52
0.61	100.61	.853E+03	1.4	0.83	9.97
0.66	100.66	.985E+03	1.7	0.86	9.53
0.72	100.72	.113E+04	2.1	0.90	9.16
0.78	100.78	.128E+04	2.4	0.93	8.84
0.83	100.83	.144E+04	2.8	0.96	8.57
0.89	100.89	.161E+04	3.2	0.99	8.34
0.94	100.94	.179E+04	3.7	1.01	8.13
1.00	101.00	.198E+04	4.1	1.04	7.94

<---- hydrograph ---->						<-pipe / channel->	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)		
INFLOW : ID= 2 (0031)	69.85	0.47	12.03	6.71	0.37	0.59	
OUTFLOW: ID= 1 (0039)	69.85	0.38	12.57	6.71	0.34	0.54	

CALIB	Area (ha)=	15.48			
STANDHYD (0252)	Total Imp(%)=	45.00	Dir. Conn.(%)=	45.00	
ID= 1 DT= 5.0 min					

Surface Area (ha)=	IMPERVIOUS	6.97	PERVIOUS (i)	8.51	
Dep. Storage (mm)=		1.50		1.50	
Average Slope (%)=		2.00		2.00	
Length (m)=		321.25		100.00	
Mannings n =		0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

HRP8-PR-SWM_25mm Storm.OUT

25.00
0.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY

PEAK FLOW REDUCTION $[Q_{out}/Q_{in}](\%) = 15.83$

PEAK FLOW	(cms)=	0.49	0.03	0.499 (iii)
TIME TO PEAK	(hrs)=	12.00	13.08	12.00
RUNOFF VOLUME	(mm)=	23.50	4.01	12.78

HRP8-PR-SWM_25mm Storm.OUT

TIME SHIFT OF PEAK FLOW (min)=238.00
MAXIMUM STORAGE USED (ha.m.)= 0.3757

| CALIB |
| NASHYD (0253) | Area (ha)= 1.51 Curve Number (CN)= 75.0
| ID= 1 DT= 1.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----|
| U.H. Tp(hrs)= 0.11

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.017	0.25	6.017	0.50	12.017	3.62	18.02	0.45
0.033	0.25	6.033	0.50	12.033	3.60	18.03	0.45
0.050	0.25	6.050	0.50	12.050	3.60	18.05	0.45
0.067	0.25	6.067	0.50	12.067	3.60	18.07	0.45
0.083	0.25	6.083	0.50	12.083	3.60	18.08	0.45
0.100	0.25	6.100	0.50	12.100	3.60	18.10	0.45
0.117	0.25	6.117	0.50	12.117	3.60	18.12	0.45
0.133	0.25	6.133	0.50	12.133	3.60	18.13	0.45
0.150	0.25	6.150	0.50	12.150	3.60	18.15	0.45
0.167	0.25	6.167	0.50	12.167	3.60	18.17	0.45
0.183	0.25	6.183	0.50	12.183	3.60	18.18	0.45
0.200	0.25	6.200	0.50	12.200	3.60	18.20	0.45
0.217	0.25	6.217	0.50	12.217	3.60	18.22	0.45
0.233	0.25	6.233	0.50	12.233	3.60	18.23	0.45
0.250	0.25	6.250	0.50	12.250	3.60	18.25	0.45
0.267	0.25	6.267	0.50	12.267	3.60	18.27	0.45
0.283	0.25	6.283	0.50	12.283	3.60	18.28	0.45
0.300	0.25	6.300	0.50	12.300	3.60	18.30	0.45
0.317	0.25	6.317	0.50	12.317	3.60	18.32	0.45
0.333	0.25	6.333	0.50	12.333	3.60	18.33	0.45
0.350	0.25	6.350	0.50	12.350	3.60	18.35	0.45
0.367	0.25	6.367	0.50	12.367	3.60	18.37	0.45
0.383	0.25	6.383	0.50	12.383	3.60	18.38	0.45
0.400	0.25	6.400	0.50	12.400	3.60	18.40	0.45
0.417	0.25	6.417	0.50	12.417	3.60	18.42	0.45
0.433	0.25	6.433	0.50	12.433	3.60	18.43	0.45
0.450	0.25	6.450	0.50	12.450	3.60	18.45	0.45
0.467	0.25	6.467	0.50	12.467	3.60	18.47	0.45
0.483	0.25	6.483	0.50	12.483	3.60	18.48	0.45
0.500	0.25	6.500	0.50	12.500	3.60	18.50	0.45
0.517	0.25	6.517	0.50	12.517	1.85	18.52	0.45
0.533	0.25	6.533	0.50	12.533	1.85	18.53	0.45
0.550	0.25	6.550	0.50	12.550	1.85	18.55	0.45
0.567	0.25	6.567	0.50	12.567	1.85	18.57	0.45
0.583	0.25	6.583	0.50	12.583	1.85	18.58	0.45
0.600	0.25	6.600	0.50	12.600	1.85	18.60	0.45
0.617	0.25	6.617	0.50	12.617	1.85	18.62	0.45
0.633	0.25	6.633	0.50	12.633	1.85	18.63	0.45
0.650	0.25	6.650	0.50	12.650	1.85	18.65	0.45
0.667	0.25	6.667	0.50	12.667	1.85	18.67	0.45
0.683	0.25	6.683	0.50	12.683	1.85	18.68	0.45
0.700	0.25	6.700	0.50	12.700	1.85	18.70	0.45
0.717	0.25	6.717	0.50	12.717	1.85	18.72	0.45
0.733	0.25	6.733	0.50	12.733	1.85	18.73	0.45
0.750	0.25	6.750	0.50	12.750	1.85	18.75	0.45
0.767	0.25	6.767	0.50	12.767	1.85	18.77	0.45
0.783	0.25	6.783	0.50	12.783	1.85	18.78	0.45
0.800	0.25	6.800	0.50	12.800	1.85	18.80	0.45
0.817	0.25	6.817	0.50	12.817	1.85	18.82	0.45
0.833	0.25	6.833	0.50	12.833	1.85	18.83	0.45
0.850	0.25	6.850	0.50	12.850	1.85	18.85	0.45
0.867	0.25	6.867	0.50	12.867	1.85	18.87	0.45
0.883	0.25	6.883	0.50	12.883	1.85	18.88	0.45
0.900	0.25	6.900	0.50	12.900	1.85	18.90	0.45
0.917	0.25	6.917	0.50	12.917	1.85	18.92	0.45
0.933	0.25	6.933	0.50	12.933	1.85	18.93	0.45
0.950	0.25	6.950	0.50	12.950	1.85	18.95	0.45
0.967	0.25	6.967	0.50	12.967	1.85	18.97	0.45
0.983	0.25	6.983	0.50	12.983	1.85	18.98	0.45
1.000	0.25	7.000	0.50	13.000	1.85	19.00	0.45
1.017	0.25	7.017	0.50	13.017	0.35	19.02	0.45
1.033	0.25	7.033	0.50	13.033	0.35	19.03	0.45
1.050	0.25	7.050	0.50	13.050	0.35	19.05	0.45
1.067	0.25	7.067	0.50	13.067	0.35	19.07	0.45
1.083	0.25	7.083	0.50	13.083	0.35	19.08	0.45
1.100	0.25	7.100	0.50	13.100	0.35	19.10	0.45
1.117	0.25	7.117	0.50	13.117	0.35	19.12	0.45
1.133	0.25	7.133	0.50	13.133	0.35	19.13	0.45
1.150	0.25	7.150	0.50	13.150	0.35	19.15	0.45
1.167	0.25	7.167	0.50	13.167	0.35	19.17	0.45
1.183	0.25	7.183	0.50	13.183	0.35	19.18	0.45

HRP8-PR-SWM_25mm Storm.OUT

1.200	0.25	7.200	0.50	13.200	0.35	19.20	0.45
1.217	0.25	7.217	0.50	13.217	0.35	19.22	0.45
1.233	0.25	7.233	0.50	13.233	0.35	19.23	0.45
1.250	0.25	7.250	0.50	13.250	0.35	19.25	0.45
1.267	0.25	7.267	0.50	13.267	0.35	19.27	0.45
1.283	0.25	7.283	0.50	13.283	0.35	19.28	0.45
1.300	0.25	7.300	0.50	13.300	0.35	19.30	0.45
1.317	0.25	7.317	0.50	13.317	0.35	19.32	0.45
1.333	0.25	7.333	0.50	13.333	0.35	19.33	0.45
1.350	0.25	7.350	0.50	13.350	0.35	19.35	0.45
1.367	0.25	7.367	0.50	13.367	0.35	19.37	0.45
1.383	0.25	7.383	0.50	13.383	0.35	19.38	0.45
1.400	0.25	7.400	0.50	13.400	0.35	19.40	0.45
1.417	0.25	7.417	0.50	13.417	0.35	19.42	0.45
1.433	0.25	7.433	0.50	13.433	0.35	19.43	0.45
1.450	0.25	7.450	0.50	13.450	0.35	19.45	0.45
1.467	0.25	7.467	0.50	13.467	0.35	19.47	0.45
1.483	0.25	7.483	0.50	13.483	0.35	19.48	0.45
1.500	0.25	7.500	0.50	13.500	0.35	19.50	0.45
1.517	0.25	7.517	0.50	13.517	2.05	19.52	0.45
1.533	0.25	7.533	0.50	13.533	2.05	19.53	0.45
1.550	0.25	7.550	0.50	13.550	2.05	19.55	0.45
1.567	0.25	7.567	0.50	13.567	2.05	19.57	0.45
1.583	0.25	7.583	0.50	13.583	2.05	19.58	0.45
1.600	0.25	7.600	0.50	13.600	2.05	19.60	0.45
1.617	0.25	7.617	0.50	13.617	2.05	19.62	0.45
1.633	0.25	7.633	0.50	13.633	2.05	19.63	0.45
1.650	0.25	7.650	0.50	13.650	2.05	19.65	0.45
1.667	0.25	7.667	0.50	13.667	2.05	19.67	0.45
1.683	0.25	7.683	0.50	13.683	2.05	19.68	0.45
1.700	0.25	7.700	0.50	13.700	2.05	19.70	0.45
1.717	0.25	7.717	0.50	13.717	2.05	19.72	0.45
1.733	0.25	7.733	0.50	13.733	2.05	19.73	0.45
1.750	0.25	7.750	0.50	13.750	2.05	19.75	0.45
1.767	0.45	7.767	0.50	13.767	2.05	19.77	0.45
1.783	0.45	7.783	0.50	13.783	2.05	19.78	0.45
1.800	0.45	7.800	0.50	13.800	2.05	19.80	0.45
1.817	0.45	7.817	0.50	13.817	2.05	19.82	0.45
1.833	0.45	7.833	0.50	13.833	2.05	19.83	0.45
1.850	0.45	7.850	0.50	13.850	2.05	19.85	0.45
1.867	0.45	7.867	0.50	13.867	2.05	19.87	0.45
1.883	0.45	7.883	0.50	13.883	2.05	19.88	0.45
1.900	0.45	7.900	0.50	13.900	2.05	19.90	0.45
1.917	0.45	7.917	0.50	13.917	2.05	19.92	0.45
1.933	0.45	7.933	0.50	13.933	2.05	19.93	0.45
1.950	0.45	7.950	0.50	13.950	2.05	19.95	0.45
1.967	0.45	7.967	0.50	13.967	2.05	19.97	0.45
1.983	0.45	7.983	0.50	13.983	2.05	19.98	0.45
2.000	0.45	8.000	0.50	14.000	2.05	20.00	0.45
2.017	0.33	8.017	0.68	14.017	0.75	20.02	0.30
2.033	0.33	8.033	0.68	14.033	0.75	20.03	0.30
2.050	0.33	8.050	0.68	14.050	0.75	20.05	0.30
2.067	0.33	8.067	0.68	14.067	0.75	20.07	0.30
2.083	0.33	8.083	0.68	14.083	0.75	20.08	0.30
2.100	0.33	8.100	0.68	14.100	0.75	20.10	0.30
2.117	0.33	8.117	0.68	14.117	0.75	20.12	0.30
2.133	0.33	8.133	0.68	14.133	0.75	20.13	0.30
2.150	0.33	8.150	0.68	14.150	0.75	20.15	0.30
2.167	0.33	8.167	0.68	14.167	0.75	20.17	0.30
2.183	0.33	8.183	0.68	14.183	0.75	20.18	0.30
2.200	0.33	8.200	0.68	14.200	0.75	20.20	0.30
2.217	0.33	8.217	0.68	14.217	0.75	20.22	0.30
2.233	0.33	8.233	0.68	14.233	0.75	20.23	0.30
2.250	0.33	8.250	0.67	14.250	0.75	20.25	0.30
2.267	0.32	8.267	0.67	14.267	0.75	20.27	0.30
2.283	0.32	8.283	0.67	14.283	0.75	20.28	0.30
2.300	0.32	8.300	0.67	14.300	0.75	20.30	0.30
2.317	0.32	8.317	0.67	14.317	0.75	20.32	0.30
2.333	0.32	8.333	0.67	14.333	0.75	20.33	0.30
2.350	0.32	8.350	0.67	14.350	0.75	20.35	0.30
2.367	0.32	8.367	0.67	14.367	0.75	20.37	0.30
2.383	0.32	8.383	0.67	14.383	0.75	20.38	0.30
2.400	0.32	8.400	0.67	14.400	0.75	20.40	0.30
2.417	0.32	8.417	0.67	14.417	0.75	20.42	0.30
2.433	0.32	8.433	0.67	14.433	0.75	20.43	0.30
2.450	0.32	8.450	0.67	14.450	0.75	20.45	0.30
2.467	0.32	8.467	0.67	14.467	0.75	20.47	0.30
2.483	0.32	8.483	0.67	14.483	0.75	20.48	0.30
2.500	0.32	8.500	0.67	14.500	0.75	20.50	0.30
2.517	0.32	8.517	0.68	14.517	0.75	20.52	0.30
2.533	0.33	8.533	0.68	14.533	0.75	20.53	0.30
2.550	0.33	8.550	0.68	14.550	0.75	20.55	0.30
2.567	0.33	8.567	0.68	14.567	0.75	20.57	0.30
2.583	0.33	8.583	0.68	14.583	0.75	20.58	0.30
2.600	0.33	8.600	0.68	14.600	0.75	20.60	0.30
2.617	0.33	8.617	0.68	14.617	0.75	20.62	0.30
2.633	0.33	8.633	0.68	14.633	0.75	20.63	0.30

HRPB-PR-SWM_25mm Storm.OUT									
2.650	0.33		8.650	0.68		14.650	0.75		20.65
2.667	0.33		8.667	0.68		14.667	0.75		20.67
2.683	0.33		8.683	0.68		14.683	0.75		20.68
2.700	0.33		8.700	0.68		14.700	0.75		20.70
2.717	0.33		8.717	0.68		14.717	0.75		20.72
2.733	0.33		8.733	0.68		14.733	0.75		20.73
2.750	0.33		8.750	0.67		14.750	0.75		20.75
2.767	0.32		8.767	0.68		14.767	0.75		20.77
2.783	0.32		8.783	0.68		14.783	0.75		20.78
2.800	0.32		8.800	0.68		14.800	0.75		20.80
2.817	0.32		8.817	0.68		14.817	0.75		20.82
2.833	0.32		8.833	0.68		14.833	0.75		20.83
2.850	0.32		8.850	0.68		14.850	0.75		20.85
2.867	0.32		8.867	0.68		14.867	0.75		20.87
2.883	0.32		8.883	0.68		14.883	0.75		20.88
2.900	0.32		8.900	0.68		14.900	0.75		20.90
2.917	0.32		8.917	0.68		14.917	0.75		20.92
2.933	0.32		8.933	0.68		14.933	0.75		20.93
2.950	0.32		8.950	0.68		14.950	0.75		20.95
2.967	0.32		8.967	0.68		14.967	0.75		20.97
2.983	0.32		8.983	0.68		14.983	0.75		20.98
3.000	0.32		9.000	0.68		15.000	0.75		21.00
3.017	0.32		9.017	0.80		15.017	0.75		21.02
3.033	0.32		9.033	0.80		15.033	0.75		21.03
3.050	0.32		9.050	0.80		15.050	0.75		21.05
3.067	0.32		9.067	0.80		15.067	0.75		21.07
3.083	0.32		9.083	0.80		15.083	0.75		21.08
3.100	0.32		9.100	0.80		15.100	0.75		21.10
3.117	0.32		9.117	0.80		15.117	0.75		21.12
3.133	0.32		9.133	0.80		15.133	0.75		21.13
3.150	0.32		9.150	0.80		15.150	0.75		21.15
3.167	0.32		9.167	0.80		15.167	0.75		21.17
3.183	0.32		9.183	0.80		15.183	0.75		21.18
3.200	0.32		9.200	0.80		15.200	0.75		21.20
3.217	0.32		9.217	0.80		15.217	0.75		21.22
3.233	0.32		9.233	0.80		15.233	0.75		21.23
3.250	0.32		9.250	0.80		15.250	0.75		21.25
3.267	0.32		9.267	0.80		15.267	0.75		21.27
3.283	0.32		9.283	0.80		15.283	0.75		21.28
3.300	0.32		9.300	0.80		15.300	0.75		21.30
3.317	0.32		9.317	0.80		15.317	0.75		21.32
3.333	0.32		9.333	0.80		15.333	0.75		21.33
3.350	0.32		9.350	0.80		15.350	0.75		21.35
3.367	0.32		9.367	0.80		15.367	0.75		21.37
3.383	0.32		9.383	0.80		15.383	0.75		21.38
3.400	0.32		9.400	0.80		15.400	0.75		21.40
3.417	0.32		9.417	0.80		15.417	0.75		21.42
3.433	0.32		9.433	0.80		15.433	0.75		21.43
3.450	0.32		9.450	0.80		15.450	0.75		21.45
3.467	0.32		9.467	0.80		15.467	0.75		21.47
3.483	0.32		9.483	0.80		15.483	0.75		21.48
3.500	0.32		9.500	0.80		15.500	0.75		21.50
3.517	0.32		9.517	0.90		15.517	0.75		21.52
3.533	0.33		9.533	0.90		15.533	0.75		21.53
3.550	0.33		9.550	0.90		15.550	0.75		21.55
3.567	0.33		9.567	0.90		15.567	0.75		21.57
3.583	0.33		9.583	0.90		15.583	0.75		21.58
3.600	0.33		9.600	0.90		15.600	0.75		21.60
3.617	0.33		9.617	0.90		15.617	0.75		21.62
3.633	0.33		9.633	0.90		15.633	0.75		21.63
3.650	0.33		9.650	0.90		15.650	0.75		21.65
3.667	0.33		9.667	0.90		15.667	0.75		21.67
3.683	0.33		9.683	0.90		15.683	0.75		21.68
3.700	0.33		9.700	0.90		15.700	0.75		21.70
3.717	0.33		9.717	0.90		15.717	0.75		21.72
3.733	0.33		9.733	0.90		15.733	0.75		21.73
3.750	0.33		9.750	0.90		15.750	0.75		21.75
3.767	0.32		9.767	0.90		15.767	0.75		21.77
3.783	0.32		9.783	0.90		15.783	0.75		21.78
3.800	0.32		9.800	0.90		15.800	0.75		21.80
3.817	0.32		9.817	0.90		15.817	0.75		21.82
3.833	0.32		9.833	0.90		15.833	0.75		21.83
3.850	0.32		9.850	0.90		15.850	0.75		21.85
3.867	0.32		9.867	0.90		15.867	0.75		21.87
3.883	0.32		9.883	0.90		15.883	0.75		21.88
3.900	0.32		9.900	0.90		15.900	0.75		21.90
3.917	0.32		9.917	0.90		15.917	0.75		21.92
3.933	0.32		9.933	0.90		15.933	0.75		21.93
3.950	0.32		9.950	0.90		15.950	0.75		21.95
3.967	0.32		9.967	0.90		15.967	0.75		21.97
3.983	0.32		9.983	0.90		15.983	0.75		21.98
4.000	0.32		10.000	0.90		16.000	0.75		22.00
4.017	0.40		10.017	1.15		16.017	0.45		22.02
4.033	0.40		10.033	1.15		16.033	0.45		22.03
4.050	0.40		10.050	1.15		16.050	0.45		22.05
4.067	0.40		10.067	1.15		16.067	0.45		22.07
4.083	0.40		10.083	1.15		16.083	0.45		22.08

HRPB-PR-SWM_25mm Storm.OUT									
4.100	0.40		10.100	1.15		16.100	0.45		22.10
4.117	0.40		10.117	1.15		16.117	0.45		22.12
4.133	0.40		10.133	1.15		16.133	0.45		22.13
4.150	0.40		10.150	1.15		16.150	0.45		22.15
4.167	0.40		10.167	1.15		16.167	0.45		22.17
4.183	0.40		10.183	1.15		16.183	0.45		22.18
4.200	0.40		10.200	1.15		16.200	0.45		22.20
4.217	0.40		10.217	1.15		16.217	0.45		22.22
4.233	0.40		10.233	1.15		16.233	0.45		22.23
4.250	0.40		10.250	1.15		16.250	0.45		22.25
4.267	0.40		10.267	1.15		16.267	0.45		22.27
4.283	0.40		10.283	1.15		16.283	0.45		22.28
4.300	0.40		10.300	1.15		16.300	0.45		22.30
4.317	0.40		10.317	1.15		16.317	0.45		22.32
4.333	0.40		10.333	1.15		16.333	0.45		22.33
4.350	0.40		10.350	1.15		16.350	0.45		22.35
4.367	0.40		10.367	1.15		16.367	0.45		22.37
4.383	0.40		10.383	1.15		16.383	0.45		22.38
4.400	0.40		10.400	1.15		16.400	0.45		22.40
4.417	0.40		10.417	1.15		16.417	0.45		22.42
4.433	0.40		10.433	1.15		16.433	0.45		22.43
4.450	0.40		10.450	1.15		16.450	0.45		22.45
4.467	0.40		10.467	1.15		16.467	0.45		22.47
4.483	0.40		10.483	1.15		16.483	0.45		22.48
4.500	0.40		10.500	1.15		16.500	0.45		22.50
4.517	0.40		10.517	1.55		16.517	0.45		22.52
4.533	0.40		10.533	1.55		16.533	0.45		22.53
4.550	0.40		10.550	1.55		16.550	0.45		22.55
4.567	0.40		10.567	1.55		16.567	0.45		22.57
4.583	0.40		10.583	1.55		16.583	0.45		22.58
4.600	0.40		10.600	1.55		16.600	0.45		22.60
4.617	0.40		10.617	1.55		16.617	0.45		22.62
4.633	0.40		10.633	1.55		16.633	0.45		22.63
4.650	0.40		10.650	1.55		16.650	0.45		22.65
4.667	0.40		10.667	1.55		16.667	0.45		22.67
4.683	0.40		10.683	1.55		16.683	0.45		22.68
4.700	0.40		10.700	1.55		16.700	0.45		22.70
4.717	0.40		10.717	1.55		16.717	0.45		22.72
4.733	0.40		10.733	1.55		16.733	0.45		22.73
4.750	0.40		10.750	1.55		16.750	0.45		22.75
4.767	0.40		10.767	1.55		16.767	0.45		22.77
4.783	0.40		10.783	1.55		16.783	0.45		22.78
4.800	0.40		10.800	1.55		16.800	0.45		22.80
4.817	0.40		10.817	1.55		16.817	0.45		22.82
4.833	0.40		10.833	1.55		16.833	0.45		22.83
4.850	0.40		10.850	1.55		16.850	0.45		22.85
4.867	0.40		10.867	1.55		16.867	0.45		22.87
4.883	0.40		10.883	1.55		16.883	0.45		22.88
4.900	0.40		10.900	1.55		16.900	0.45		22.90
4.917	0.40		10.917	1.55		16.917	0.45		22.92
4.933	0.40		10.933	1.55		16.933	0.45		22.93
4.950	0.40		10.950	1.55		1			

HRPB-PR-SWM_25mm Storm.OUT											
5.550	0.40	11.550	10.40	17.550	0.45		23.55	0.30			
5.567	0.40	11.567	10.40	17.567	0.45		23.57	0.30			
5.583	0.40	11.583	10.40	17.583	0.45		23.58	0.30			
5.600	0.40	11.600	10.40	17.600	0.45		23.60	0.30			
5.617	0.40	11.617	10.40	17.617	0.45		23.62	0.30			
5.633	0.40	11.633	10.40	17.633	0.45		23.63	0.30			
5.650	0.40	11.650	10.40	17.650	0.45		23.65	0.30			
5.667	0.40	11.667	10.40	17.667	0.45		23.67	0.30			
5.683	0.40	11.683	10.40	17.683	0.45		23.68	0.30			
5.700	0.40	11.700	10.40	17.700	0.45		23.70	0.30			
5.717	0.40	11.717	10.40	17.717	0.45		23.72	0.30			
5.733	0.40	11.733	10.40	17.733	0.45		23.73	0.30			
5.750	0.40	11.750	10.40	17.750	0.45		23.75	0.30			
5.767	0.40	11.767	27.60	17.767	0.45		23.77	0.30			
5.783	0.40	11.783	27.60	17.783	0.45		23.78	0.30			
5.800	0.40	11.800	27.60	17.800	0.45		23.80	0.30			
5.817	0.40	11.817	27.60	17.817	0.45		23.82	0.30			
5.833	0.40	11.833	27.60	17.833	0.45		23.83	0.30			
5.850	0.40	11.850	27.60	17.850	0.45		23.85	0.30			
5.867	0.40	11.867	27.60	17.867	0.45		23.87	0.30			
5.883	0.40	11.883	27.60	17.883	0.45		23.88	0.30			
5.900	0.40	11.900	27.60	17.900	0.45		23.90	0.30			
5.917	0.40	11.917	27.60	17.917	0.45		23.92	0.30			
5.933	0.40	11.933	27.60	17.933	0.45		23.93	0.30			
5.950	0.40	11.950	27.60	17.950	0.45		23.95	0.30			
5.967	0.40	11.967	27.60	17.967	0.45		23.97	0.30			
5.983	0.40	11.983	27.60	17.983	0.45		23.98	0.30			
6.000	0.40	12.000	27.60	18.000	0.45		24.00	0.30			

Unit Hyd Qpeak (cms)= 0.515

PEAK FLOW (cms)= 0.018 (i)
TIME TO PEAK (hrs)= 12.033
RUNOFF VOLUME (mm)= 2.909
TOTAL RAINFALL (mm)= 25.000
RUNOFF COEFFICIENT = 0.116

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0035)							
1 + 2 = 3							

				AREA	QPEAK	TPEAK	R.V.
				(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0253):				1.51	0.018	12.03	2.91
+ ID2= 2 (0036):				85.33	0.102	16.00	7.68
=====							
ID = 3 (0035):				86.84	0.103	16.00	5.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH
=====

F

Hydraulics – Sixteen Mile Creek HEC-RAS Output

- F.1 Existing Condition
- F.2 Proposed Condition
- F.3 Future Condition – IDF 2096



F.1 Existing Condition



HEC-RAS Plan: Existing Locations: User Defined

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
RIVER-1	Reach-1	68	Regional-PF 1	122.13	200.05	202.21	202.21	203.29	0.009241	4.59	26.59	107.30	1.00
RIVER-1	Reach-1	68	100-yr - PF 2	31.83	200.05	200.93	200.93	201.37	0.012448	2.93	10.85	52.89	1.00
RIVER-1	Reach-1	68	50-yr-PF 3	28.52	200.05	200.87	200.87	201.28	0.012856	2.83	10.06	49.94	1.00
RIVER-1	Reach-1	68	Check2019	41.40	200.05	201.10	201.10	201.62	0.011960	3.22	12.86	60.40	1.01
RIVER-1	Reach-1	67	Regional-PF 1	122.13	199.53	201.17	200.37	201.22	0.000820	0.91	135.89	118.10	0.27
RIVER-1	Reach-1	67	100-yr - PF 2	31.83	199.53	200.30	200.01	200.32	0.001533	0.71	44.91	89.60	0.32
RIVER-1	Reach-1	67	50-yr-PF 3	28.52	199.53	200.26	199.99	200.28	0.001555	0.69	41.65	88.41	0.32
RIVER-1	Reach-1	67	Check2019	41.40	199.53	200.40	200.06	200.43	0.001465	0.77	54.07	92.87	0.32
RIVER-1	Reach-1	66	Regional-PF 1	122.13	198.65	201.01		201.06	0.000570	0.98	136.56	105.93	0.24
RIVER-1	Reach-1	66	100-yr - PF 2	31.83	198.65	199.49		199.62	0.008791	1.59	20.02	43.76	0.75
RIVER-1	Reach-1	66	50-yr-PF 3	28.52	198.65	199.45		199.57	0.008747	1.54	18.48	42.05	0.74
RIVER-1	Reach-1	66	Check2019	41.40	198.65	199.57		199.72	0.009509	1.75	23.67	47.55	0.79
RIVER-1	Reach-1	65	Regional-PF 1	122.13	197.99	201.01		201.02	0.000086	0.43	295.40	162.17	0.10
RIVER-1	Reach-1	65	100-yr - PF 2	31.83	197.99	199.06		199.09	0.001451	0.74	42.85	75.97	0.32
RIVER-1	Reach-1	65	50-yr-PF 3	28.52	197.99	199.01		199.04	0.001501	0.73	38.97	72.46	0.32
RIVER-1	Reach-1	65	Check2019	41.40	197.99	199.25		199.28	0.001077	0.71	58.35	88.62	0.28
RIVER-1	Reach-1	64	Regional-PF 1	122.13	197.42	200.99		201.00	0.000103	0.65	352.18	182.35	0.11
RIVER-1	Reach-1	64	100-yr - PF 2	31.83	197.42	198.77		198.84	0.001943	1.37	37.66	70.69	0.41
RIVER-1	Reach-1	64	50-yr-PF 3	28.52	197.42	198.65		198.74	0.002567	1.47	30.08	62.25	0.46
RIVER-1	Reach-1	64	Check2019	41.40	197.42	199.07		199.11	0.001038	1.17	62.44	93.08	0.31
RIVER-1	Reach-1	63.167	Regional-PF 1	122.13	197.24	200.99		200.99	0.000017	0.27	507.96	190.25	0.05
RIVER-1	Reach-1	63.167	100-yr - PF 2	31.83	197.24	198.79		198.79	0.000044	0.21	153.97	138.79	0.06
RIVER-1	Reach-1	63.167	50-yr-PF 3	28.52	197.24	198.68		198.68	0.000049	0.21	139.19	137.13	0.06
RIVER-1	Reach-1	63.167	Check2019	41.40	197.24	199.08		199.08	0.000035	0.22	195.02	143.33	0.06
RIVER-1	Reach-1	63	Regional-PF 1	122.13	197.24	200.99	198.02	200.99	0.000013	0.23	558.67	193.30	0.04
RIVER-1	Reach-1	63	100-yr - PF 2	31.83	197.24	198.79	197.69	198.79	0.000032	0.18	179.03	157.67	0.05
RIVER-1	Reach-1	63	50-yr-PF 3	28.52	197.24	198.68	197.67	198.68	0.000035	0.18	162.18	156.49	0.05
RIVER-1	Reach-1	63	Check2019	41.40	197.24	199.08	197.74	199.08	0.000026	0.19	225.43	160.88	0.05
RIVER-1	Reach-1	61.5		Culvert									
RIVER-1	Reach-1	60.500	Regional-PF 1	122.13	196.66	198.00		198.10	0.002239	1.48	86.70	84.90	0.44
RIVER-1	Reach-1	60.500	100-yr - PF 2	31.83	196.66	197.43		197.46	0.001532	0.78	41.47	75.24	0.33
RIVER-1	Reach-1	60.500	50-yr-PF 3	28.52	196.66	197.40		197.43	0.001499	0.74	38.97	74.68	0.32
RIVER-1	Reach-1	60.500	Check2019	41.40	196.66	197.52		197.56	0.001592	0.88	48.32	76.79	0.34
RIVER-1	Reach-1	60	Regional-PF 1	122.13	196.50	197.58	197.58	197.86	0.014966	2.38	51.36	91.49	1.01
RIVER-1	Reach-1	60	100-yr - PF 2	31.83	196.50	197.11	197.11	197.28	0.017788	1.81	17.57	53.62	1.01

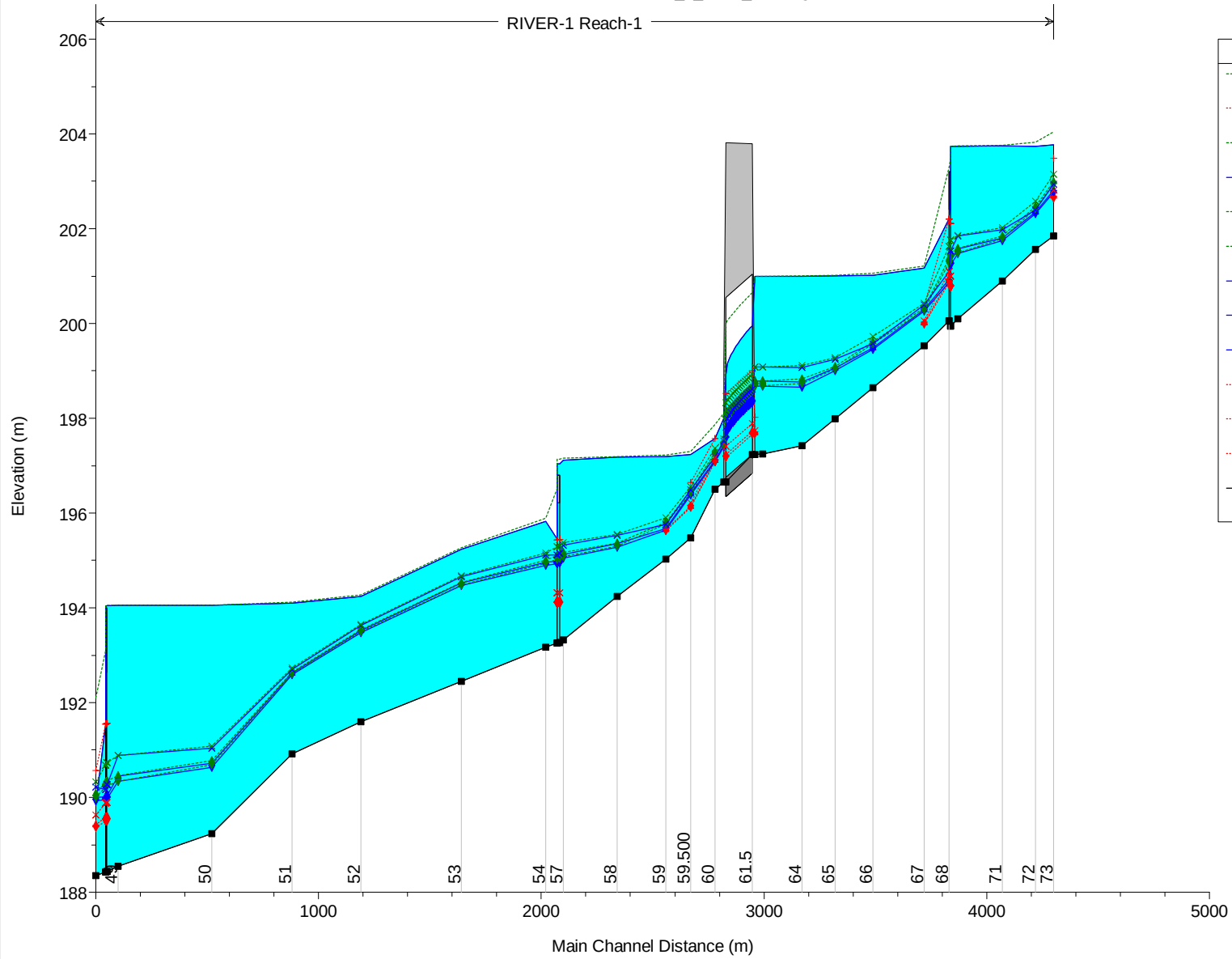
HEC-RAS Plan: Existing Locations: User Defined (Continued)

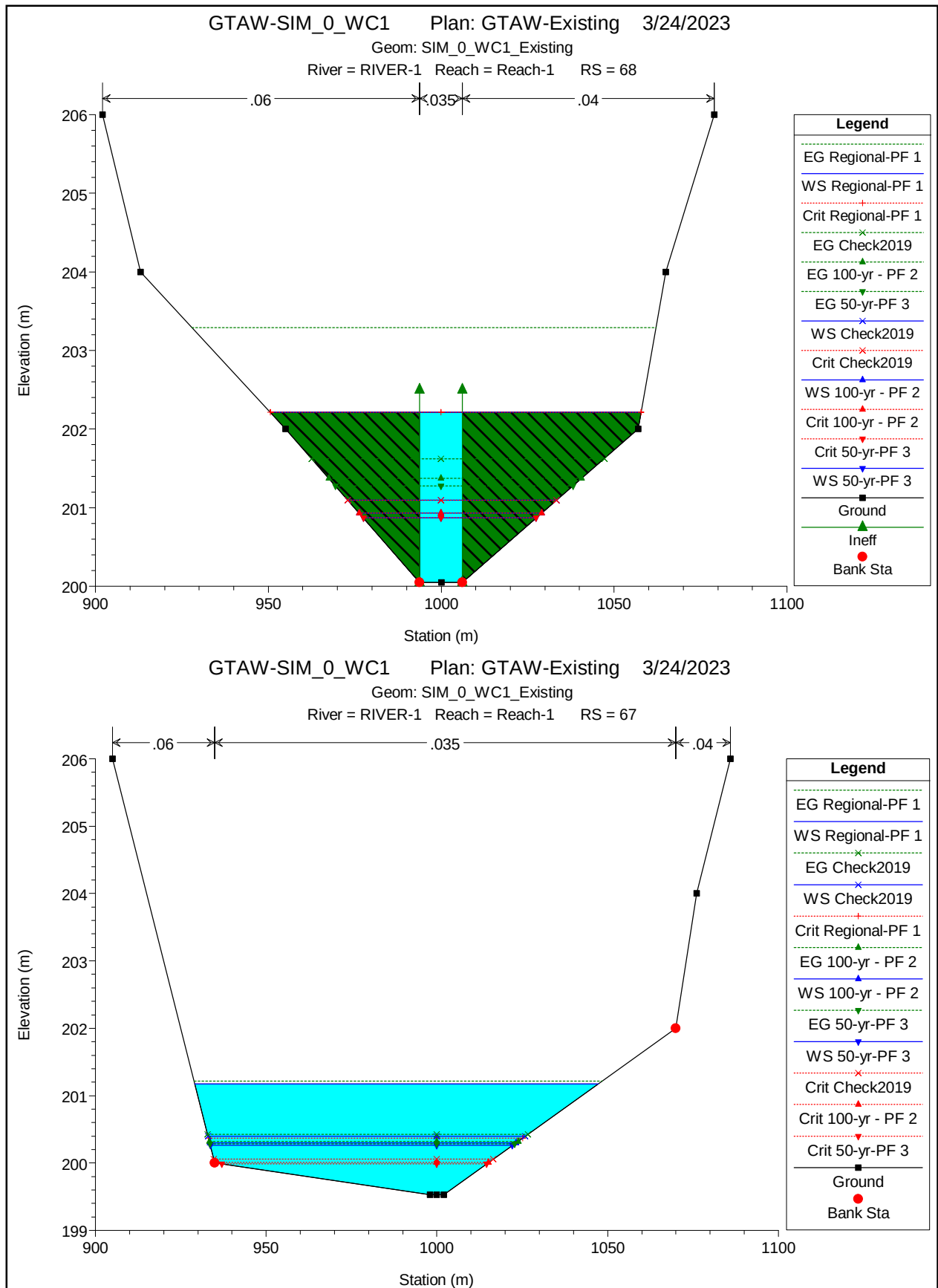
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
RIVER-1	Reach-1	60	50-yr-PF 3	28.52	196.50	197.08	197.08	197.24	0.018065	1.77	16.09	51.32	1.01
RIVER-1	Reach-1	60	Check2019	41.40	196.50	197.18	197.18	197.37	0.017224	1.91	21.66	59.49	1.01
RIVER-1	Reach-1	59.500	Regional-PF 1	122.13	195.48	197.24	196.64	197.30	0.001464	1.10	111.30	113.68	0.35
RIVER-1	Reach-1	59.500	100-yr - PF 2	31.83	195.48	196.42	196.15	196.46	0.003003	0.96	33.02	68.34	0.44
RIVER-1	Reach-1	59.500	50-yr-PF 3	28.52	195.48	196.38	196.12	196.42	0.003013	0.94	30.37	65.54	0.44
RIVER-1	Reach-1	59.500	Check2019	41.40	195.48	196.49	196.22	196.55	0.003388	1.08	38.44	73.73	0.48
RIVER-1	Reach-1	59	Regional-PF 1	122.13	195.03	197.19		197.22	0.000345	0.75	180.52	134.74	0.18
RIVER-1	Reach-1	59	100-yr - PF 2	31.83	195.03	195.67	195.65	195.81	0.015518	1.65	19.28	61.05	0.94
RIVER-1	Reach-1	59	50-yr-PF 3	28.52	195.03	195.64	195.62	195.78	0.015479	1.60	17.78	58.61	0.93
RIVER-1	Reach-1	59	Check2019	41.40	195.03	195.76		195.90	0.012443	1.62	25.52	70.23	0.86

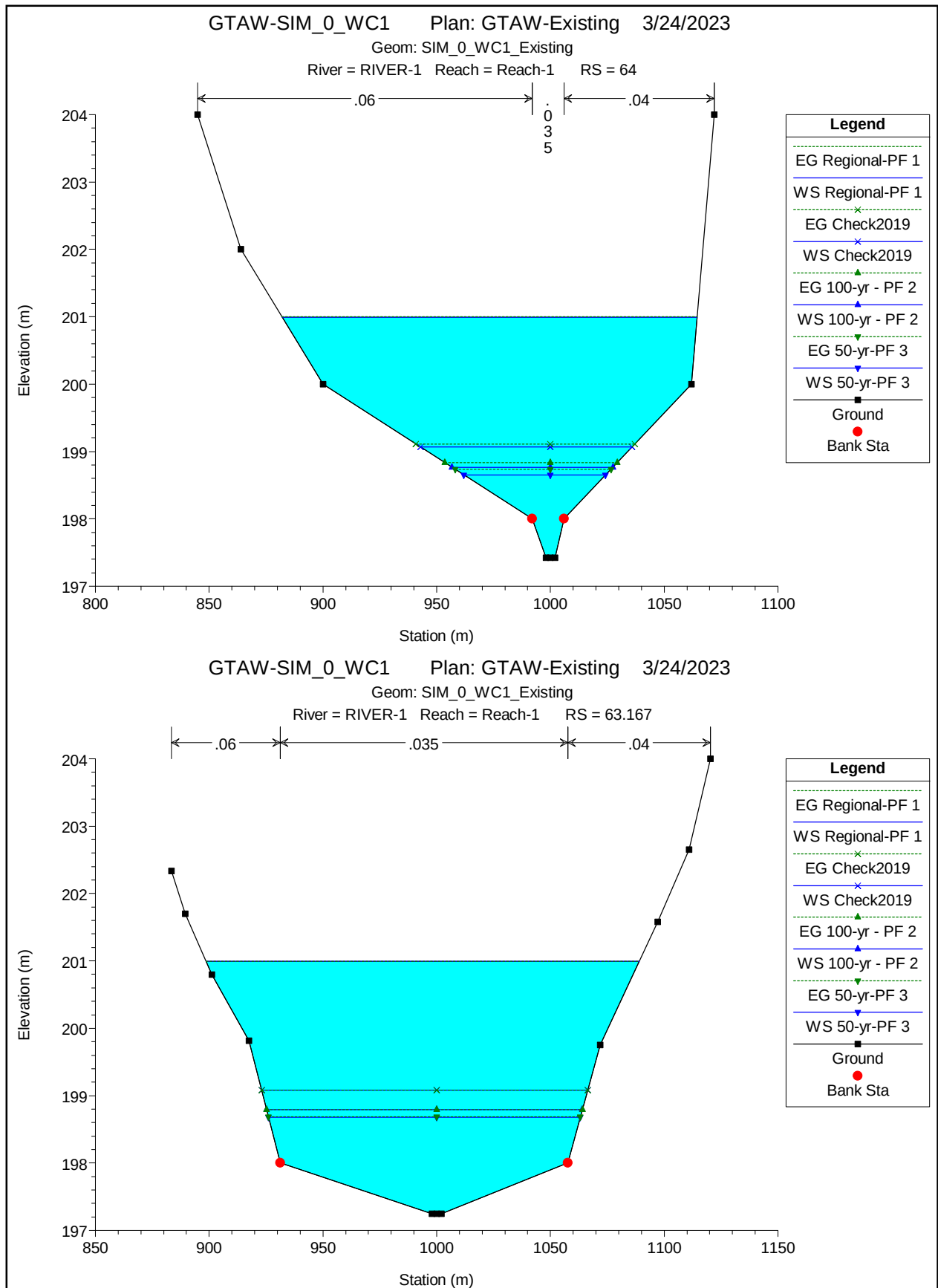
GTAW-SIM_0_WC1 Plan: GTAW-Existing 3/24/2023

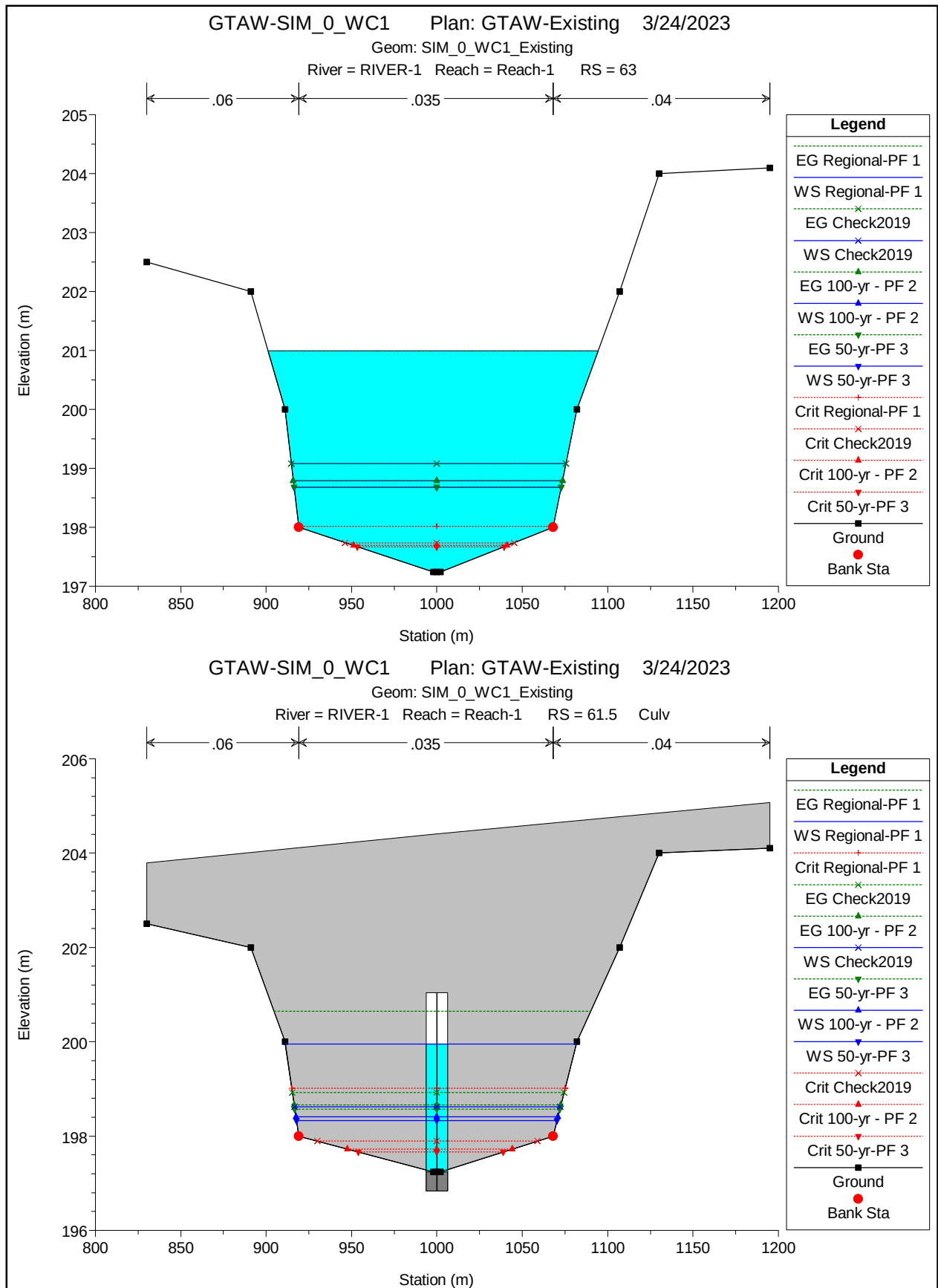
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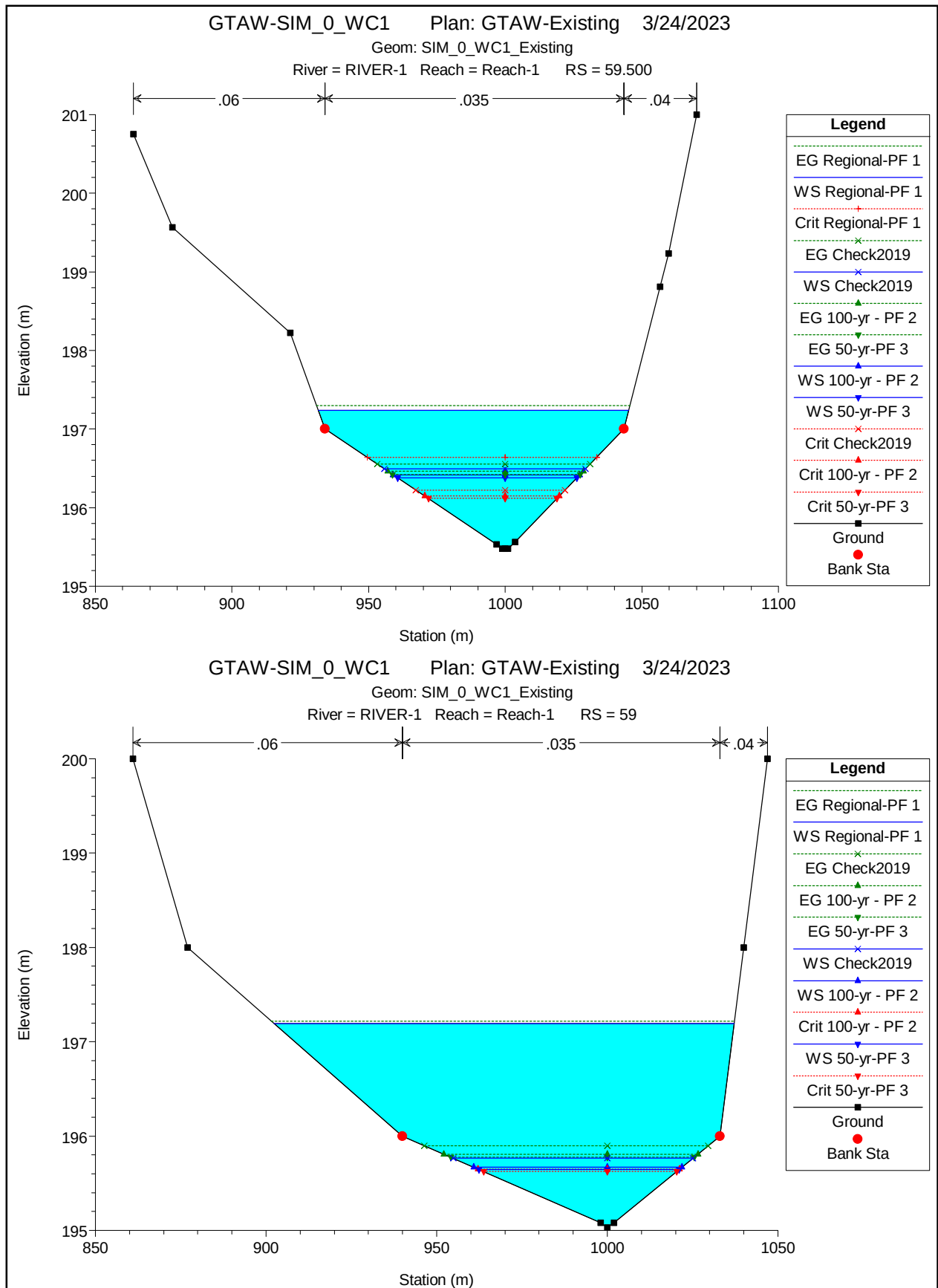
RIVER-1 Reach-1











F.2 Proposed Condition



HEC-RAS Plan: Prop_K_loss_added River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach-1	73	Regional-PF 1	122.13	201.85	203.77	203.48	204.04	0.004578	2.93	70.15	65.96	0.68
Reach-1	73	100-yr - PF 2	31.83	201.85	202.81	202.69	202.99	0.006461	2.15	20.90	36.68	0.72
Reach-1	73	50-yr-PF 3	28.52	201.85	202.77	202.65	202.94	0.006311	2.06	19.34	35.36	0.71
Reach-1	73	Check2019	41.40	201.85	202.94	202.81	203.15	0.006436	2.35	25.79	40.55	0.74
Reach-1	72	Regional-PF 1	122.13	201.56	203.73		203.83	0.001091	1.49	108.26	82.44	0.34
Reach-1	72	100-yr - PF 2	31.83	201.56	202.35		202.47	0.006121	1.58	21.35	42.92	0.65
Reach-1	72	50-yr-PF 3	28.52	201.56	202.32		202.43	0.005792	1.49	20.18	42.14	0.63
Reach-1	72	Check2019	41.40	201.56	202.40		202.57	0.007822	1.88	23.53	44.34	0.75
Reach-1	71	Regional-PF 1	122.13	200.90	203.75		203.76	0.000123	0.56	244.92	135.95	0.12
Reach-1	71	100-yr - PF 2	31.83	200.90	201.80		201.85	0.002854	0.93	34.25	72.00	0.43
Reach-1	71	50-yr-PF 3	28.52	200.90	201.75		201.79	0.003141	0.94	30.43	67.88	0.45
Reach-1	71	Check2019	41.40	200.90	201.98		202.02	0.001899	0.85	48.58	85.71	0.36
Reach-1	70	Regional-PF 1	122.13	200.10	203.74		203.75	0.000051	0.38	330.40	141.86	0.08
Reach-1	70	100-yr - PF 2	31.83	200.10	201.57		201.59	0.000692	0.56	57.06	89.07	0.22
Reach-1	70	50-yr-PF 3	28.52	200.10	201.47		201.49	0.000846	0.59	48.57	81.65	0.24
Reach-1	70	Check2019	41.40	200.10	201.84		201.86	0.000425	0.49	83.93	109.31	0.18
Reach-1	69	Regional-PF 1	122.13	199.95	203.73	202.11	203.74	0.000078	0.61	340.48	147.84	0.10
Reach-1	69	100-yr - PF 2	31.83	199.95	201.32	200.83	201.50	0.002908	1.90	16.79	75.09	0.52
Reach-1	69	50-yr-PF 3	28.52	199.95	201.23	200.76	201.40	0.002856	1.80	15.80	71.40	0.51
Reach-1	69	Check2019	41.40	199.95	201.53	201.00	201.76	0.003019	2.13	19.44	84.99	0.54
Reach-1	68.5		Bridge									
Reach-1	68	Regional-PF 1	122.13	200.05	202.21	202.21	203.29	0.009241	4.59	26.59	107.30	1.00
Reach-1	68	100-yr - PF 2	31.83	200.05	200.93	200.93	201.37	0.012448	2.93	10.85	52.89	1.00
Reach-1	68	50-yr-PF 3	28.52	200.05	200.87	200.87	201.28	0.012856	2.83	10.06	49.94	1.00
Reach-1	68	Check2019	41.40	200.05	201.10	201.10	201.62	0.011960	3.22	12.86	60.40	1.01
Reach-1	67	Regional-PF 1	122.13	199.53	201.24	200.37	201.28	0.000699	0.87	143.58	120.20	0.25
Reach-1	67	100-yr - PF 2	31.83	199.53	200.30	200.01	200.32	0.001526	0.71	44.97	89.63	0.32
Reach-1	67	50-yr-PF 3	28.52	199.53	200.26	199.99	200.28	0.001556	0.69	41.64	88.41	0.32
Reach-1	67	Check2019	41.40	199.53	200.40	200.06	200.43	0.001453	0.77	54.22	92.92	0.32
Reach-1	66	Regional-PF 1	122.13	198.65	201.10		201.14	0.000471	0.92	146.41	109.36	0.22
Reach-1	66	100-yr - PF 2	31.83	198.65	199.48		199.62	0.009014	1.60	19.84	43.55	0.76
Reach-1	66	50-yr-PF 3	28.52	198.65	199.45		199.57	0.008701	1.54	18.52	42.09	0.74

HEC-RAS Plan: Prop_K_loss_added River: RIVER-1 Reach: Reach-1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Reach-1	66	Check2019	41.40	198.65	199.56		199.72	0.009807	1.77	23.40	47.27	0.80
Reach-1	65	Regional-PF 1	122.13	197.99	201.10		201.11	0.000074	0.41	310.54	164.30	0.09
Reach-1	65	100-yr - PF 2	31.83	197.99	199.07		199.10	0.001397	0.73	43.47	76.51	0.31
Reach-1	65	50-yr-PF 3	28.52	197.99	199.01		199.04	0.001512	0.73	38.86	72.36	0.32
Reach-1	65	Check2019	41.40	197.99	199.27		199.30	0.000976	0.68	60.55	90.27	0.27
Reach-1	64	Regional-PF 1	122.13	197.42	201.09		201.10	0.000090	0.62	369.55	184.30	0.11
Reach-1	64	100-yr - PF 2	31.83	197.42	198.81		198.87	0.001636	1.29	40.66	73.76	0.38
Reach-1	64	50-yr-PF 3	28.52	197.42	198.68		198.76	0.002255	1.40	31.90	64.37	0.44
Reach-1	64	Check2019	41.40	197.42	199.12		199.16	0.000876	1.10	67.16	96.76	0.29
Reach-1	63.167	Regional-PF 1	122.13	197.24	201.09		201.09	0.000016	0.26	526.14	192.80	0.04
Reach-1	63.167	100-yr - PF 2	31.83	197.24	198.83		198.83	0.000039	0.20	159.23	139.38	0.06
Reach-1	63.167	50-yr-PF 3	28.52	197.24	198.71		198.71	0.000045	0.20	142.65	137.52	0.06
Reach-1	63.167	Check2019	41.40	197.24	199.13		199.13	0.000031	0.21	201.87	144.07	0.05
Reach-1	63	Regional-PF 1	122.13	197.24	201.09	198.02	201.09	0.000012	0.23	577.11	195.43	0.04
Reach-1	63	100-yr - PF 2	31.83	197.24	198.83	197.69	198.83	0.000029	0.17	185.02	158.09	0.05
Reach-1	63	50-yr-PF 3	28.52	197.24	198.71	197.67	198.71	0.000033	0.17	166.15	156.77	0.05
Reach-1	63	Check2019	41.40	197.24	199.13	197.74	199.13	0.000023	0.18	233.13	161.40	0.05
Reach-1	61.5	Culvert										
Reach-1	60.500	Regional-PF 1	122.13	196.50	197.58	197.58	197.86	0.014959	2.38	51.37	91.50	1.01
Reach-1	60.500	100-yr - PF 2	31.83	196.50	197.11	197.11	197.28	0.017785	1.81	17.58	53.62	1.01
Reach-1	60.500	50-yr-PF 3	28.52	196.50	197.08	197.08	197.24	0.018085	1.77	16.09	51.31	1.01
Reach-1	60.500	Check2019	41.40	196.50	197.18	197.18	197.37	0.017222	1.91	21.66	59.49	1.01
Reach-1	59.500	Regional-PF 1	122.13	195.48	197.24	196.64	197.30	0.001464	1.10	111.30	113.68	0.35
Reach-1	59.500	100-yr - PF 2	31.83	195.48	196.42	196.15	196.46	0.003003	0.96	33.02	68.34	0.44
Reach-1	59.500	50-yr-PF 3	28.52	195.48	196.38	196.12	196.42	0.003013	0.94	30.37	65.54	0.44
Reach-1	59.500	Check2019	41.40	195.48	196.49	196.22	196.55	0.003388	1.08	38.44	73.73	0.48
Reach-1	59	Regional-PF 1	122.13	195.03	197.19		197.22	0.000345	0.75	180.52	134.74	0.18
Reach-1	59	100-yr - PF 2	31.83	195.03	195.67	195.65	195.81	0.015518	1.65	19.28	61.05	0.94
Reach-1	59	50-yr-PF 3	28.52	195.03	195.64	195.63	195.78	0.015479	1.60	17.78	58.61	0.93
Reach-1	59	Check2019	41.40	195.03	195.76		195.90	0.012443	1.62	25.52	70.23	0.86
Reach-1	58	Regional-PF 1	122.13	194.24	197.18		197.19	0.000055	0.35	356.33	178.64	0.08

HEC-RAS Plan: Prop_K_loss_added River: RIVER-1 Reach: Reach-1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach-1	58	100-yr - PF 2	31.83	194.24	195.35		195.36	0.000675	0.51	61.94	107.51	0.22
Reach-1	58	50-yr-PF 3	28.52	194.24	195.28		195.30	0.000755	0.52	54.71	101.04	0.23
Reach-1	58	Check2019	41.40	194.24	195.53		195.55	0.000520	0.50	83.19	124.57	0.19
Reach-1	57	Regional-PF 1	122.13	193.32	197.12		197.16	0.000297	0.92	152.00	92.48	0.18
Reach-1	57	100-yr - PF 2	31.83	193.32	195.12		195.17	0.001014	0.91	35.12	34.95	0.29
Reach-1	57	50-yr-PF 3	28.52	193.32	195.05		195.09	0.001004	0.88	32.46	33.62	0.29
Reach-1	57	Check2019	41.40	193.32	195.33		195.38	0.001023	0.97	42.60	38.45	0.29
Reach-1	56	Regional-PF 1	122.13	193.27	197.04	195.44	197.13	0.000606	1.70	188.31	231.11	0.28
Reach-1	56	100-yr - PF 2	31.83	193.27	195.01	194.16	195.12	0.001323	1.50	21.20	22.22	0.36
Reach-1	56	50-yr-PF 3	28.52	193.27	194.95	194.09	195.05	0.001191	1.39	20.48	21.88	0.34
Reach-1	56	Check2019	41.40	193.27	195.15	194.32	195.32	0.001720	1.80	22.94	23.04	0.42
Reach-1	55.5	Bridge										
Reach-1	55	Regional-PF 1	122.13	193.26	195.45	195.43	196.52	0.008938	4.56	26.77	24.85	0.98
Reach-1	55	100-yr - PF 2	31.83	193.26	194.98	194.15	195.10	0.001359	1.51	21.03	22.14	0.37
Reach-1	55	50-yr-PF 3	28.52	193.26	194.93	194.08	195.03	0.001217	1.40	20.35	21.82	0.35
Reach-1	55	Check2019	41.40	193.26	195.12	194.31	195.29	0.001794	1.83	22.65	22.90	0.43
Reach-1	54	Regional-PF 1	122.13	193.17	195.83		195.89	0.001166	1.72	174.78	175.16	0.35
Reach-1	54	100-yr - PF 2	31.83	193.17	194.96		195.00	0.001001	1.19	57.22	96.98	0.31
Reach-1	54	50-yr-PF 3	28.52	193.17	194.90		194.94	0.001004	1.16	51.49	91.48	0.30
Reach-1	54	Check2019	41.40	193.17	195.11		195.16	0.001004	1.27	72.89	110.64	0.31
Reach-1	53	Regional-PF 1	122.13	192.45	195.23		195.27	0.002386	0.79	147.56	137.30	0.18
Reach-1	53	100-yr - PF 2	31.83	192.45	194.52		194.53	0.001475	0.47	69.36	82.99	0.13
Reach-1	53	50-yr-PF 3	28.52	192.45	194.47		194.48	0.001437	0.45	64.83	78.71	0.13
Reach-1	53	Check2019	41.40	192.45	194.66		194.67	0.001566	0.52	81.51	93.53	0.13
Reach-1	52	Regional-PF 1	122.13	191.60	194.24		194.28	0.002044	0.69	145.03	158.28	0.16
Reach-1	52	100-yr - PF 2	31.83	191.60	193.52		193.54	0.003582	0.70	47.89	91.78	0.20
Reach-1	52	50-yr-PF 3	28.52	191.60	193.47		193.50	0.003655	0.69	43.73	85.50	0.20
Reach-1	52	Check2019	41.40	191.60	193.63		193.65	0.003515	0.72	58.63	106.30	0.20
Reach-1	51	Regional-PF 1	122.13	190.92	194.10		194.11	0.000214	0.29	273.46	178.45	0.05
Reach-1	51	100-yr - PF 2	31.83	190.92	192.62		192.64	0.002405	0.58	51.40	102.02	0.16
Reach-1	51	50-yr-PF 3	28.52	190.92	192.59		192.61	0.002368	0.57	47.90	98.54	0.16
Reach-1	51	Check2019	41.40	190.92	192.70		192.73	0.002640	0.63	59.68	109.82	0.17

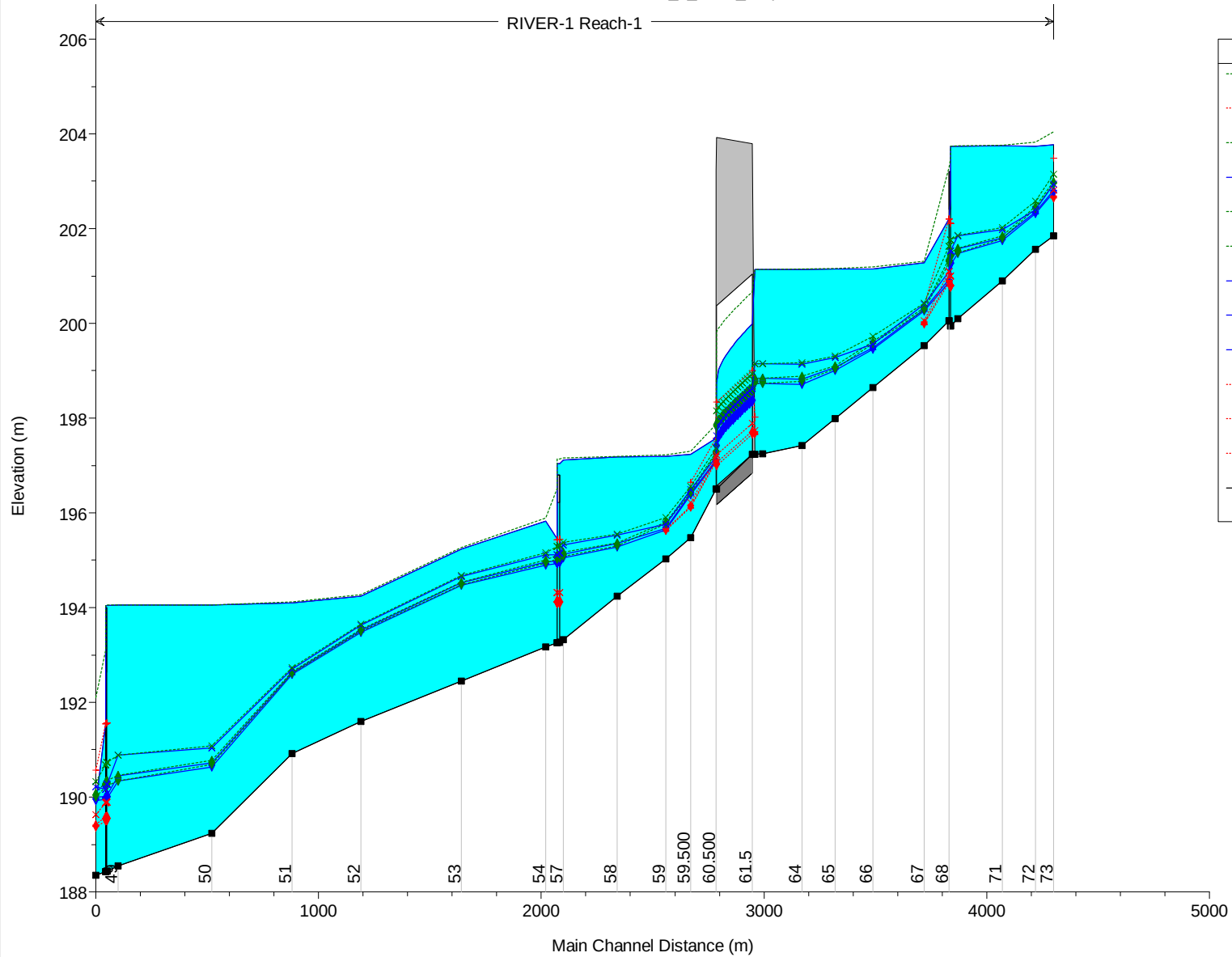
HEC-RAS Plan: Prop_K_loss_added River: RIVER-1 Reach: Reach-1 (Continued)

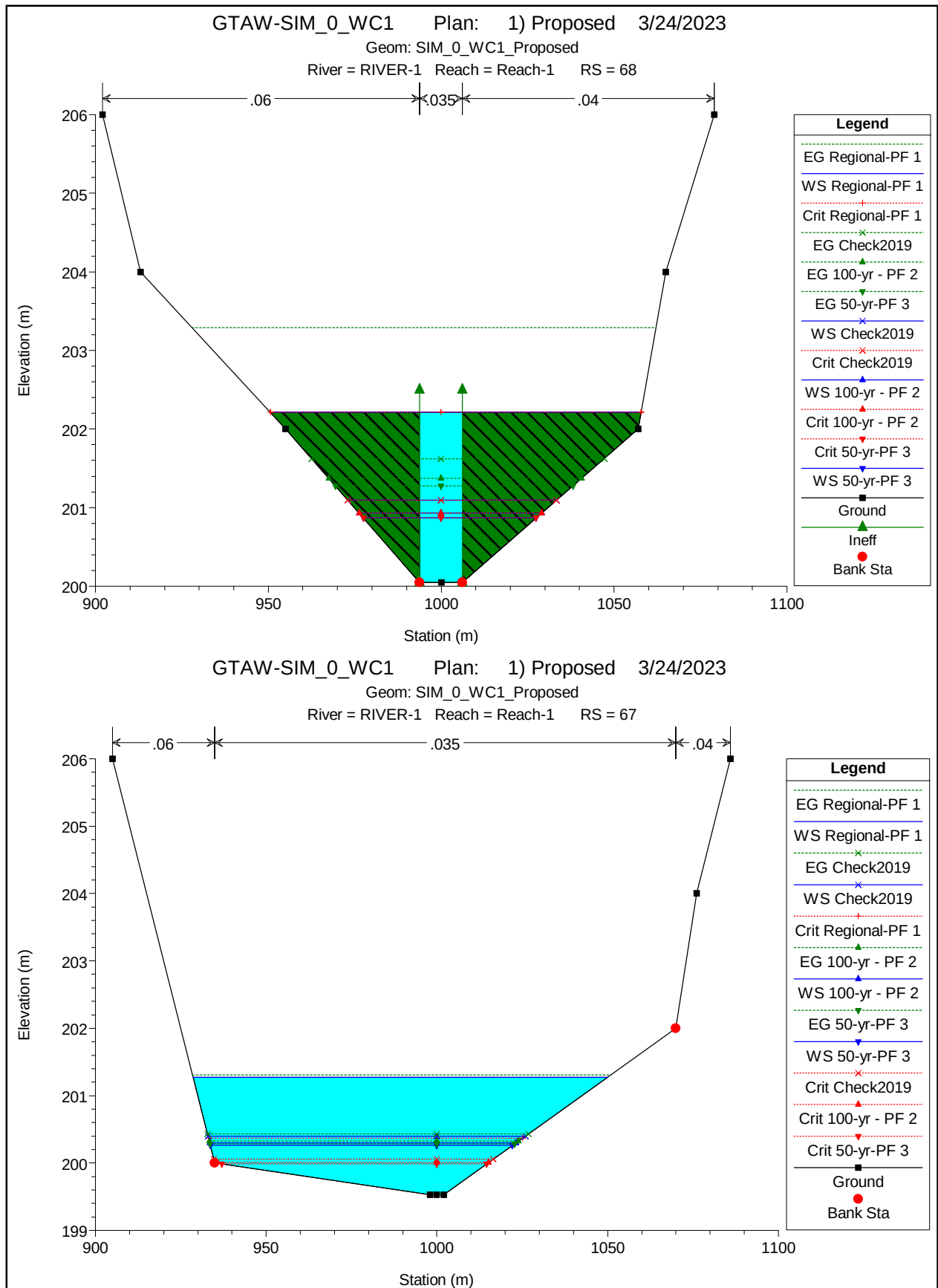
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach-1	50	Regional-PF 1	122.13	189.23	194.06		194.06	0.000100	0.22	522.11	317.00	0.04
Reach-1	50	100-yr - PF 2	31.83	189.23	190.72		190.78	0.018345	1.04	30.58	45.25	0.40
Reach-1	50	50-yr-PF 3	28.52	189.23	190.63		190.69	0.020796	1.06	26.85	42.34	0.43
Reach-1	50	Check2019	41.40	189.23	191.04		191.08	0.010033	0.88	46.79	56.17	0.31
Reach-1	49	Regional-PF 1	122.13	188.55	194.05		194.05	0.000008	0.19	818.38	403.00	0.03
Reach-1	49	100-yr - PF 2	31.83	188.55	190.45		190.46	0.000215	0.42	76.07	76.11	0.13
Reach-1	49	50-yr-PF 3	28.52	188.55	190.34		190.34	0.000236	0.42	67.65	71.78	0.14
Reach-1	49	Check2019	41.40	188.55	190.88		190.89	0.000128	0.37	112.66	92.58	0.11
Reach-1	48	Regional-PF 1	129.37	188.44	194.04	191.56	194.05	0.000036	0.54	495.17	255.00	0.07
Reach-1	48	100-yr - PF 2	29.13	188.44	190.05	189.60	190.34	0.003804	2.42	12.05	12.39	0.61
Reach-1	48	50-yr-PF 3	26.11	188.44	189.98	189.51	190.24	0.003521	2.26	11.55	10.93	0.58
Reach-1	48	Check2019	41.40	188.44	190.27	189.89	190.73	0.004983	3.02	13.72	20.85	0.71
Reach-1	47.5	Bridge										
Reach-1	47	Regional-PF 1	129.37	188.43	191.56	191.56	193.11	0.008164	5.52	23.44	70.04	1.00
Reach-1	47	100-yr - PF 2	29.13	188.43	190.02	189.58	190.32	0.003981	2.45	11.89	11.57	0.62
Reach-1	47	50-yr-PF 3	26.11	188.43	189.95	189.50	190.22	0.003662	2.29	11.41	10.89	0.59
Reach-1	47	Check2019	41.40	188.43	190.17	189.88	190.68	0.005942	3.18	13.02	17.28	0.77
Reach-1	46	Regional-PF 1	129.37	188.35	189.84	190.57	192.10	0.065195	6.65	19.46	22.08	2.26
Reach-1	46	100-yr - PF 2	29.13	188.35	190.00	189.43	190.08	0.002073	1.26	23.14	24.09	0.41
Reach-1	46	50-yr-PF 3	26.11	188.35	189.93	189.37	190.00	0.002070	1.22	21.35	23.10	0.41
Reach-1	46	Check2019	41.40	188.35	190.22	189.62	190.33	0.002074	1.44	29.69	35.23	0.42

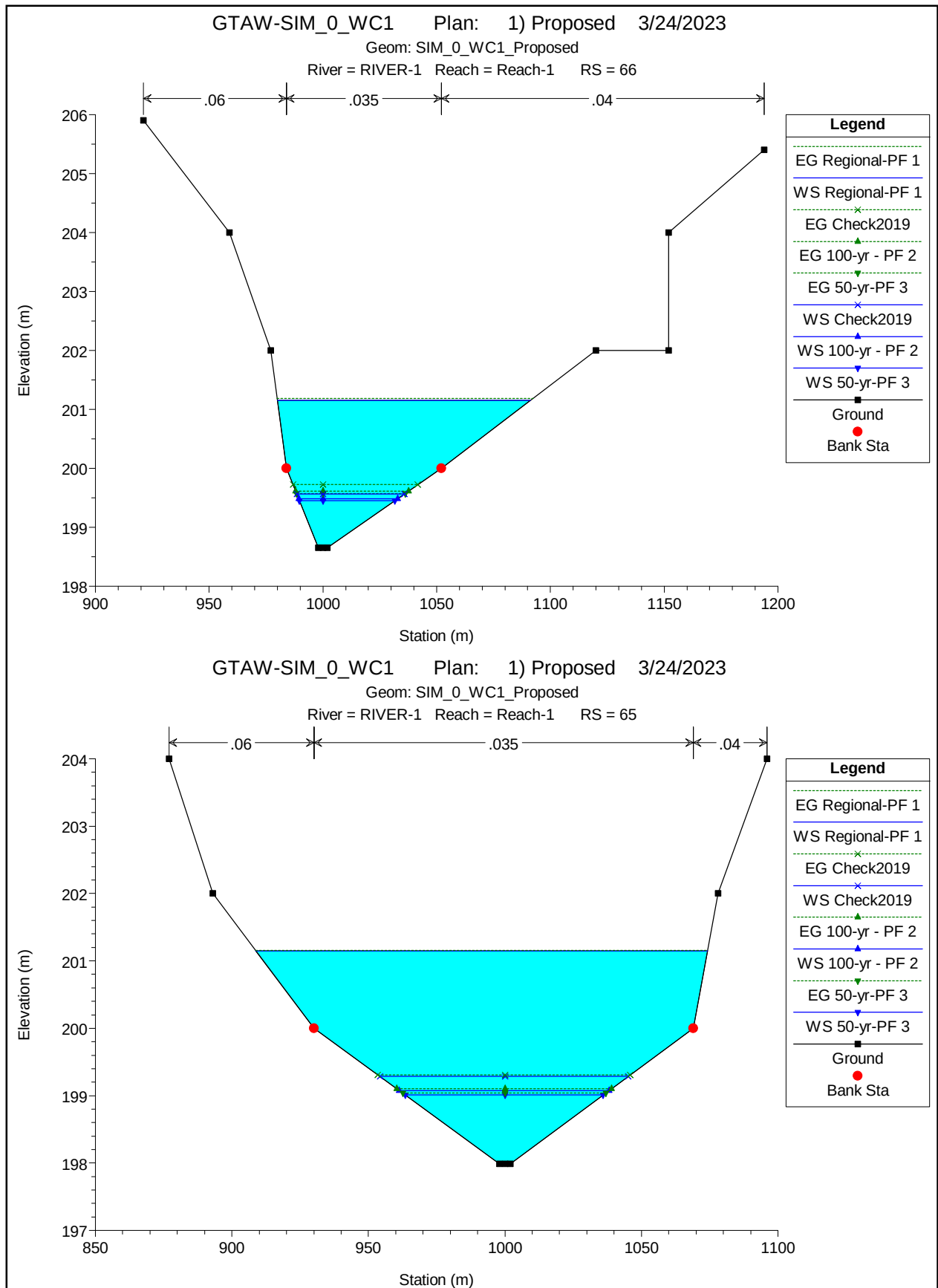
GTAW-SIM_0_WC1 Plan: 1) Proposed 3/24/2023

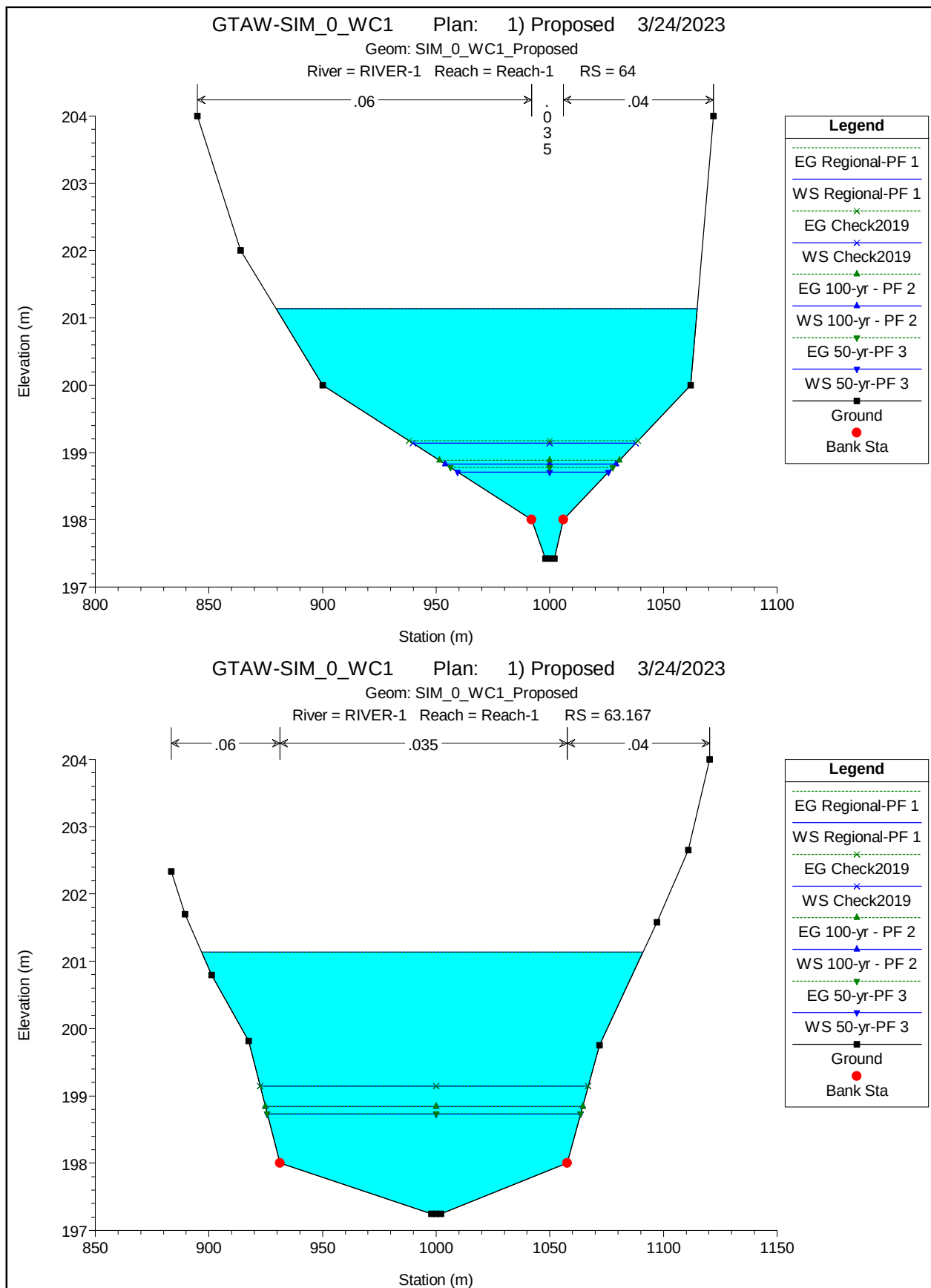
Geom: SIM_0_WC1_Proposed

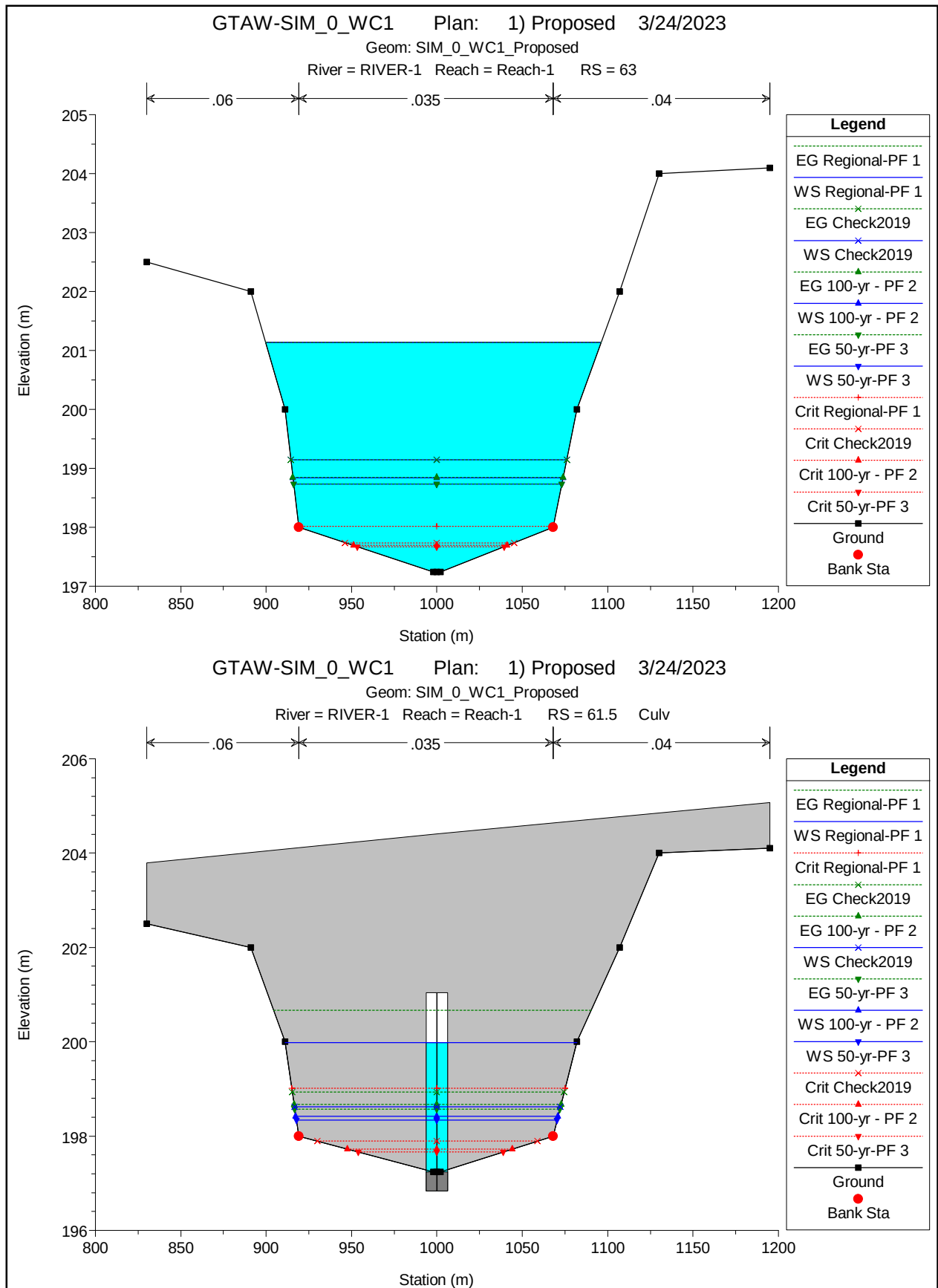
RIVER-1 Reach-1

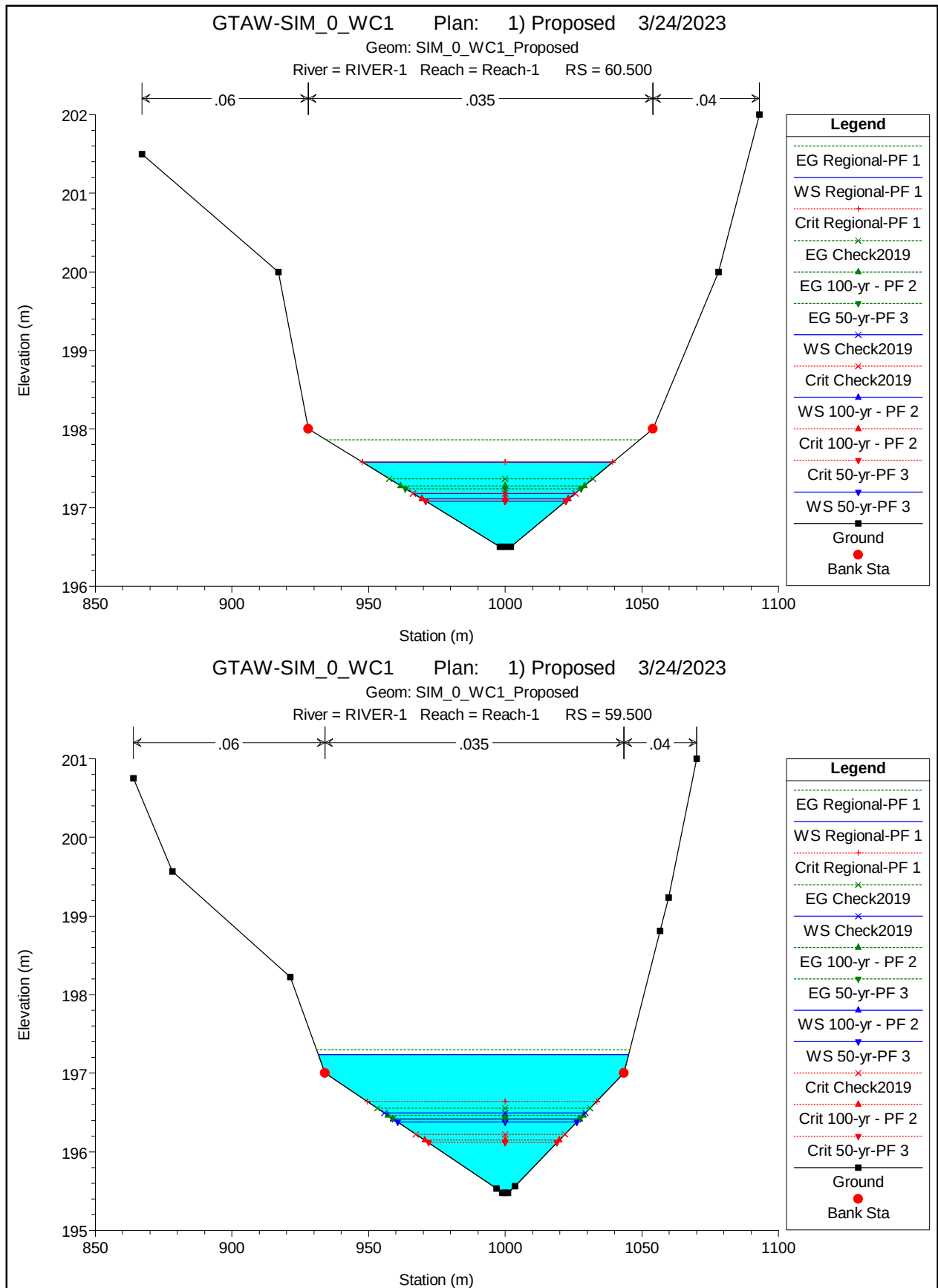








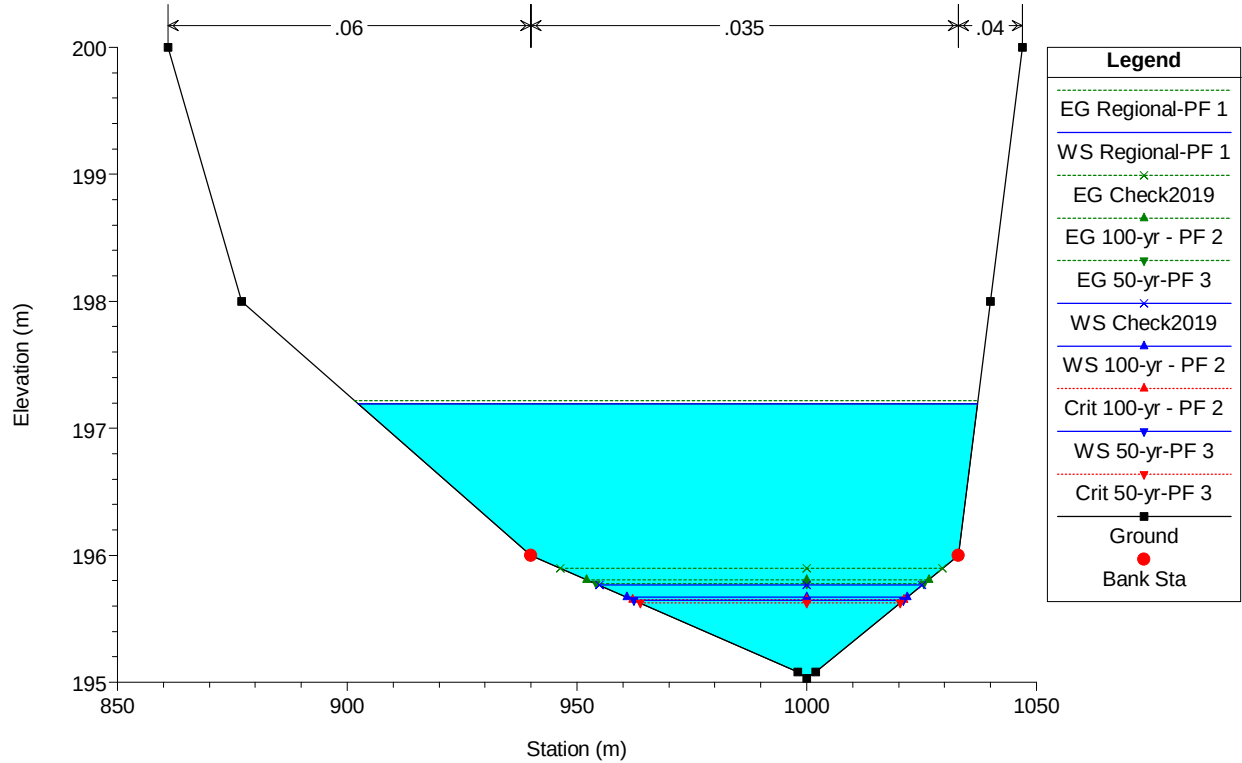




GTAW-SIM_0_WC1 Plan: 1) Proposed 3/24/2023

Geom: SIM_0_WC1_Proposed

River = RIVER-1 Reach = Reach-1 RS = 59



F.3 Future Condition – IDF 2096



HEC-RAS Plan: Prop-2096_R1 River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach-1	73	50-yr 2096	30.89	201.85	202.80	202.68	202.98	0.006445	2.13	20.43	36.29	0.72
Reach-1	73	100-yr 2096	34.47	201.85	202.84	202.72	203.04	0.006491	2.22	22.22	37.77	0.73
Reach-1	73	Check 2096	44.80	201.85	202.99	202.85	203.20	0.006132	2.37	28.00	42.17	0.72
Reach-1	72	50-yr 2096	30.89	201.56	202.34		202.46	0.006011	1.55	21.05	42.72	0.65
Reach-1	72	100-yr 2096	34.47	201.56	202.37		202.50	0.006467	1.66	22.13	43.44	0.68
Reach-1	72	Check 2096	44.80	201.56	202.40	202.33	202.60	0.009266	2.05	23.43	44.28	0.82
Reach-1	71	50-yr 2096	30.89	200.90	201.79		201.83	0.002946	0.93	33.09	70.78	0.44
Reach-1	71	100-yr 2096	34.47	200.90	201.85		201.89	0.002595	0.91	37.67	75.51	0.41
Reach-1	71	Check 2096	44.80	200.90	202.05		202.09	0.001541	0.82	54.59	88.45	0.33
Reach-1	70	50-yr 2096	30.89	200.10	201.54		201.56	0.000734	0.57	54.51	86.91	0.23
Reach-1	70	100-yr 2096	34.47	200.10	201.65		201.66	0.000600	0.54	64.01	94.72	0.21
Reach-1	70	Check 2096	44.80	200.10	201.94		201.95	0.000365	0.47	94.32	116.19	0.17
Reach-1	69	50-yr 2096	30.89	199.95	201.29	200.81	201.47	0.002907	1.87	16.49	73.97	0.52
Reach-1	69	100-yr 2096	34.47	199.95	201.37	200.88	201.57	0.002959	1.97	17.52	77.82	0.53
Reach-1	69	Check 2096	44.80	199.95	201.60	201.05	201.85	0.003042	2.20	20.33	88.34	0.55
Reach-1	68.5		Bridge									
Reach-1	68	50-yr 2096	30.89	200.05	200.91	200.91	201.34	0.012674	2.91	10.60	51.95	1.00
Reach-1	68	100-yr 2096	34.47	200.05	200.97	200.97	201.44	0.012509	3.03	11.37	54.81	1.01
Reach-1	68	Check 2096	44.80	200.05	201.16	201.16	201.71	0.011448	3.28	13.66	63.39	0.99
Reach-1	67	50-yr 2096	30.89	199.53	200.29	200.00	200.31	0.001532	0.70	44.06	89.29	0.32
Reach-1	67	100-yr 2096	34.47	199.53	200.33	200.02	200.35	0.001497	0.73	47.66	90.59	0.32
Reach-1	67	Check 2096	44.80	199.53	200.43	200.07	200.46	0.001447	0.79	57.17	93.95	0.32
Reach-1	66	50-yr 2096	30.89	198.65	199.47		199.60	0.009020	1.59	19.39	43.07	0.76
Reach-1	66	100-yr 2096	34.47	198.65	199.50		199.64	0.009561	1.67	20.60	44.37	0.78
Reach-1	66	Check 2096	44.80	198.65	199.60		199.76	0.009651	1.79	24.98	48.83	0.80
Reach-1	65	50-yr 2096	30.89	197.99	199.06		199.08	0.001408	0.73	42.38	75.55	0.31
Reach-1	65	100-yr 2096	34.47	197.99	199.13		199.16	0.001231	0.71	48.38	80.71	0.29
Reach-1	65	Check 2096	44.80	197.99	199.37		199.39	0.000782	0.64	69.82	96.92	0.24
Reach-1	64	50-yr 2096	30.89	197.42	198.79		198.85	0.001642	1.28	39.53	72.62	0.38
Reach-1	64	100-yr 2096	34.47	197.42	198.93		198.97	0.001208	1.18	49.87	82.48	0.33

HEC-RAS Plan: Prop-2096_R1 River: RIVER-1 Reach: Reach-1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach-1	64	Check 2096	44.80	197.42	199.25		199.29	0.000661	1.01	81.00	106.82	0.25
Reach-1	63.167	50-yr 2096	30.89	197.24	198.81		198.81	0.000039	0.20	157.09	139.14	0.06
Reach-1	63.167	100-yr 2096	34.47	197.24	198.94		198.94	0.000034	0.20	175.01	141.14	0.06
Reach-1	63.167	Check 2096	44.80	197.24	199.26		199.26	0.000028	0.21	221.17	146.14	0.05
Reach-1	63	50-yr 2096	30.89	197.24	198.81	197.68	198.81	0.000028	0.17	182.59	157.92	0.05
Reach-1	63	100-yr 2096	34.47	197.24	198.94	197.70	198.94	0.000025	0.17	202.90	159.33	0.05
Reach-1	63	Check 2096	44.80	197.24	199.26	197.76	199.26	0.000020	0.18	254.71	162.87	0.04
Reach-1	61.5		Culvert									
Reach-1	60.500	50-yr 2096	30.89	196.50	197.10	197.10	197.27	0.017861	1.80	17.16	52.98	1.01
Reach-1	60.500	100-yr 2096	34.47	196.50	197.13	197.13	197.30	0.017620	1.84	18.72	55.33	1.01
Reach-1	60.500	Check 2096	44.80	196.50	197.21	197.21	197.40	0.016038	1.90	23.60	62.09	0.98
Reach-1	59.500	50-yr 2096	30.89	195.48	196.40	196.14	196.45	0.003037	0.96	32.15	67.43	0.44
Reach-1	59.500	100-yr 2096	34.47	195.48	196.44	196.17	196.49	0.003077	0.99	34.74	70.09	0.45
Reach-1	59.500	Check 2096	44.80	195.48	196.51	196.25	196.58	0.003583	1.12	39.94	75.15	0.49
Reach-1	59	50-yr 2096	30.89	195.03	195.66	195.64	195.80	0.015588	1.64	18.82	60.32	0.94
Reach-1	59	100-yr 2096	34.47	195.03	195.69	195.67	195.83	0.015013	1.66	20.73	63.29	0.93
Reach-1	59	Check 2096	44.80	195.03	195.80		195.93	0.011019	1.58	28.33	74.01	0.82
Reach-1	58	50-yr 2096	30.89	194.24	195.33		195.35	0.000696	0.52	59.87	105.70	0.22
Reach-1	58	100-yr 2096	34.47	194.24	195.40		195.42	0.000622	0.51	67.78	112.46	0.21
Reach-1	58	Check 2096	44.80	194.24	195.60		195.61	0.000478	0.49	91.08	130.34	0.19
Reach-1	57	50-yr 2096	30.89	193.32	195.10		195.14	0.001012	0.90	34.37	34.58	0.29
Reach-1	57	100-yr 2096	34.47	193.32	195.18		195.23	0.001018	0.93	37.21	35.96	0.29
Reach-1	57	Check 2096	44.80	193.32	195.39		195.44	0.001021	0.99	45.23	39.61	0.30
Reach-1	56	50-yr 2096	30.89	193.27	194.99	194.14	195.10	0.001285	1.47	21.00	22.13	0.36
Reach-1	56	100-yr 2096	34.47	193.27	195.05	194.21	195.18	0.001429	1.59	21.72	22.47	0.38
Reach-1	56	Check 2096	44.80	193.27	195.19	194.38	195.38	0.001866	1.91	23.47	23.29	0.44
Reach-1	55.5		Bridge									
Reach-1	55	50-yr 2096	30.89	193.26	194.97	194.13	195.08	0.001318	1.48	20.84	22.05	0.36
Reach-1	55	100-yr 2096	34.47	193.26	195.02	194.20	195.15	0.001474	1.60	21.52	22.37	0.39

HEC-RAS Plan: Prop-2096_R1 River: RIVER-1 Reach: Reach-1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach-1	55	Check 2096	44.80	193.26	195.16	194.37	195.35	0.001959	1.94	23.13	23.13	0.45
Reach-1	54	50-yr 2096	30.89	193.17	194.94		194.99	0.001002	1.18	55.61	95.46	0.30
Reach-1	54	100-yr 2096	34.47	193.17	195.01		195.05	0.001000	1.21	61.70	101.08	0.31
Reach-1	54	Check 2096	44.80	193.17	195.16		195.21	0.001008	1.29	78.18	114.88	0.31
Reach-1	53	50-yr 2096	30.89	192.45	194.51		194.52	0.001467	0.47	68.05	81.78	0.13
Reach-1	53	100-yr 2096	34.47	192.45	194.57		194.58	0.001490	0.48	73.05	86.33	0.13
Reach-1	53	Check 2096	44.80	192.45	194.70		194.72	0.001594	0.53	85.54	96.77	0.14
Reach-1	52	50-yr 2096	30.89	191.60	193.51		193.53	0.003575	0.69	46.85	90.25	0.20
Reach-1	52	100-yr 2096	34.47	191.60	193.55		193.57	0.003677	0.71	50.34	95.29	0.20
Reach-1	52	Check 2096	44.80	191.60	193.66		193.68	0.003587	0.74	61.66	110.06	0.20
Reach-1	51	50-yr 2096	30.89	190.92	192.61		192.63	0.002402	0.58	50.37	101.01	0.16
Reach-1	51	100-yr 2096	34.47	190.92	192.65		192.67	0.002423	0.59	54.17	104.69	0.16
Reach-1	51	Check 2096	44.80	190.92	192.74		192.77	0.002545	0.63	63.84	113.53	0.17
Reach-1	50	50-yr 2096	30.89	189.23	190.70		190.75	0.019007	1.05	29.50	44.43	0.41
Reach-1	50	100-yr 2096	34.47	189.23	190.79		190.84	0.016614	1.02	33.71	47.55	0.39
Reach-1	50	Check 2096	44.80	189.23	191.06		191.10	0.011087	0.94	47.82	56.79	0.33
Reach-1	49	50-yr 2096	30.89	188.55	190.42		190.43	0.000221	0.42	73.69	74.92	0.13
Reach-1	49	100-yr 2096	34.47	188.55	190.53		190.54	0.000202	0.42	82.75	79.37	0.13
Reach-1	49	Check 2096	44.80	188.55	190.87		190.88	0.000154	0.40	111.36	92.05	0.12
Reach-1	48	50-yr 2096	28.28	188.44	190.03	189.57	190.32	0.003720	2.37	11.92	11.72	0.60
Reach-1	48	100-yr 2096	31.55	188.44	190.09	189.66	190.42	0.004081	2.55	12.38	14.05	0.63
Reach-1	48	Check 2096	41.00	188.44	190.26	189.89	190.72	0.004957	3.00	13.66	20.56	0.71
Reach-1	47.5	Bridge										
Reach-1	47	50-yr 2096	28.28	188.43	190.00	189.56	190.29	0.003886	2.40	11.76	11.00	0.61
Reach-1	47	100-yr 2096	31.55	188.43	190.05	189.65	190.39	0.004333	2.60	12.16	12.93	0.65
Reach-1	47	Check 2096	41.00	188.43	190.16	189.88	190.67	0.005871	3.16	12.99	17.13	0.77
Reach-1	46	50-yr 2096	28.28	188.35	189.98	189.41	190.06	0.002070	1.25	22.66	23.78	0.41
Reach-1	46	100-yr 2096	31.55	188.35	190.05	189.47	190.14	0.002071	1.30	24.34	26.48	0.41
Reach-1	46	Check 2096	41.00	188.35	190.22	189.62	190.32	0.002073	1.44	29.46	34.90	0.42

G

Hydraulics – Culvert Master Output

- G.1 Existing Condition
- G.2 Proposed Condition
- G.3 Future Condition – IDF 2096



G.1 Existing Condition



Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-EX_50-100yr

Analysis Component			
Storm Event	Design	Discharge	2.4500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.4500 m³/s	Check Discharge	2.7700 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	200.97 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1800 x 900 mm Box	2.4500 m³/s	201.74 m	1.51 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	201.74 m	Discharge	2.4500 m³/s
Inlet Control HW Elev.	201.68 m	Tailwater Elevation	200.97 m
Outlet Control HW Elev.	201.74 m	Control Type	Outlet Control
Headwater Depth/Height	1.10		
Grades			
Upstream Invert	200.75 m	Downstream Invert	200.07 m
Length	124.80 m	Constructed Slope	0.005449 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.69 m
Flow Regime	Subcritical	Critical Depth	0.57 m
Velocity Downstream	1.51 m/s	Critical Slope	0.009111 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	1.80 m
Section Size	1800 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	201.74 m	Upstream Velocity Head	0.20 m
Ke	0.50	Entrance Loss	0.10 m
Inlet Control Properties			
Inlet Control HW Elev.	201.68 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	1.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-EX_50-100yr

Analysis Component			
Storm Event	Check	Discharge	2.7700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.4500 m³/s	Check Discharge	2.7700 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	200.97 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1800 x 900 mm Box	2.7700 m³/s	201.92 m	1.71 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	201.92 m	Discharge	2.7700 m ³ /s
Inlet Control HW Elev.	201.76 m	Tailwater Elevation	200.97 m
Outlet Control HW Elev.	201.92 m	Control Type	Outlet Control
Headwater Depth/Height	1.30		
Grades			
Upstream Invert	200.75 m	Downstream Invert	200.07 m
Length	124.80 m	Constructed Slope	0.005449 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	0.90 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.62 m
Velocity Downstream	1.71 m/s	Critical Slope	0.009261 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	1.80 m
Section Size	1800 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	201.92 m	Upstream Velocity Head	0.15 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	201.76 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	1.6 m ²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-EX_Check

Analysis Component			
Storm Event	Design	Discharge	3.6000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.6000 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	200.97 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1800 x 900 mm Box	3.6000 m³/s	202.58 m	2.22 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-EX_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	202.58 m	Discharge	3.6000 m³/s
Inlet Control HW Elev.	202.08 m	Tailwater Elevation	200.97 m
Outlet Control HW Elev.	202.58 m	Control Type	Outlet Control
Headwater Depth/Height	2.03		
Grades			
Upstream Invert	200.75 m	Downstream Invert	200.07 m
Length	124.80 m	Constructed Slope	0.005449 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	0.90 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.74 m
Velocity Downstream	2.22 m/s	Critical Slope	0.009658 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	1.80 m
Section Size	1800 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	202.58 m	Upstream Velocity Head	0.25 m
Ke	0.50	Entrance Loss	0.13 m
Inlet Control Properties			
Inlet Control HW Elev.	202.08 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	1.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr_Ex

Analysis Component			
Storm Event	Design	Discharge	2.9900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.9900 m³/s	Check Discharge	3.4400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.07 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1200 mm Box	2.9900 m³/s	207.74 m	2.30 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr_Ex

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.74 m	Discharge	2.9900 m³/s
Inlet Control HW Elev.	207.52 m	Tailwater Elevation	207.07 m
Outlet Control HW Elev.	207.74 m	Control Type	Outlet Control
Headwater Depth/Height	0.91		
Grades			
Upstream Invert	206.65 m	Downstream Invert	206.53 m
Length	107.30 m	Constructed Slope	0.001118 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.54 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.54 m
Velocity Downstream	2.30 m/s	Critical Slope	0.007907 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.74 m	Upstream Velocity Head	0.10 m
Ke	0.50	Entrance Loss	0.05 m
Inlet Control Properties			
Inlet Control HW Elev.	207.52 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	2.9 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr_Ex

Analysis Component			
Storm Event	Check	Discharge	3.4400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.9900 m³/s	Check Discharge	3.4400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.07 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1200 mm Box	3.4400 m³/s	207.79 m	2.41 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr_Ex

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.79 m	Discharge	3.4400 m³/s
Inlet Control HW Elev.	207.60 m	Tailwater Elevation	207.07 m
Outlet Control HW Elev.	207.79 m	Control Type	Outlet Control
Headwater Depth/Height	0.95		
Grades			
Upstream Invert	206.65 m	Downstream Invert	206.53 m
Length	107.30 m	Constructed Slope	0.001118 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.59 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.59 m
Velocity Downstream	2.41 m/s	Critical Slope	0.007977 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.79 m	Upstream Velocity Head	0.11 m
Ke	0.50	Entrance Loss	0.05 m
Inlet Control Properties			
Inlet Control HW Elev.	207.60 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	2.9 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report
02_SM_EB_SIM_5_WC1_Check_Ex

Analysis Component			
Storm Event	Design	Discharge	4.4700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.4700 m³/s	Check Discharge	4.9100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.07 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1200 mm Box	4.4700 m³/s	208.00 m	2.63 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_Check_Ex

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	208.00 m	Discharge	4.4700 m³/s
Inlet Control HW Elev.	207.79 m	Tailwater Elevation	207.07 m
Outlet Control HW Elev.	208.00 m	Control Type	Outlet Control
Headwater Depth/Height	1.12		
Grades			
Upstream Invert	206.65 m	Downstream Invert	206.53 m
Length	107.30 m	Constructed Slope	0.001118 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.71 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.71 m
Velocity Downstream	2.63 m/s	Critical Slope	0.008166 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	208.00 m	Upstream Velocity Head	0.14 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	207.79 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	2.9 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report
02_SM_EB_SIM_5_WC1_Check_Ex

Analysis Component			
Storm Event	Check	Discharge	4.9100 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.4700 m³/s	Check Discharge	4.9100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.07 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1200 mm Box	4.9100 m³/s	208.14 m	2.72 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_Check_Ex

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	208.14 m	Discharge	4.9100 m ³ /s
Inlet Control HW Elev.	207.87 m	Tailwater Elevation	207.07 m
Outlet Control HW Elev.	208.14 m	Control Type	Outlet Control
Headwater Depth/Height	1.24		
Grades			
Upstream Invert	206.65 m	Downstream Invert	206.53 m
Length	107.30 m	Constructed Slope	0.001118 m/m
Hydraulic Profile			
Profile	Composite M2 Pressure Profile	Depth, Downstream	0.75 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.75 m
Velocity Downstream	2.72 m/s	Critical Slope	0.008254 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	208.14 m	Upstream Velocity Head	0.15 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	207.87 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	2.9 m ²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-EX_50-100yr

Analysis Component			
Storm Event	Design	Discharge	4.9200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.9200 m³/s	Check Discharge	5.8100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.38 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1500 mm Box	4.9200 m³/s	209.61 m	1.09 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.61 m	Discharge	4.9200 m³/s
Inlet Control HW Elev.	209.38 m	Tailwater Elevation	209.38 m
Outlet Control HW Elev.	209.61 m	Control Type	Outlet Control
Headwater Depth/Height	0.94		
Grades			
Upstream Invert	208.20 m	Downstream Invert	207.88 m
Length	121.50 m	Constructed Slope	0.002634 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	0.93 m
Flow Regime	Subcritical	Critical Depth	0.65 m
Velocity Downstream	1.09 m/s	Critical Slope	0.007318 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.61 m	Upstream Velocity Head	0.08 m
Ke	0.50	Entrance Loss	0.04 m
Inlet Control Properties			
Inlet Control HW Elev.	209.38 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	4.5 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-EX_50-100yr

Analysis Component			
Storm Event	Check	Discharge	5.8100 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.9200 m³/s	Check Discharge	5.8100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.38 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1500 mm Box	5.8100 m³/s	209.68 m	1.29 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.68 m	Discharge	5.8100 m³/s
Inlet Control HW Elev.	209.38 m	Tailwater Elevation	209.38 m
Outlet Control HW Elev.	209.68 m	Control Type	Outlet Control
Headwater Depth/Height	0.99		
Grades			
Upstream Invert	208.20 m	Downstream Invert	207.88 m
Length	121.50 m	Constructed Slope	0.002634 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	1.04 m
Flow Regime	Subcritical	Critical Depth	0.73 m
Velocity Downstream	1.29 m/s	Critical Slope	0.007388 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.68 m	Upstream Velocity Head	0.11 m
Ke	0.50	Entrance Loss	0.05 m
Inlet Control Properties			
Inlet Control HW Elev.	209.38 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	4.5 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-EX_Check & Reg

Analysis Component			
Storm Event	Design	Discharge	7.5500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.5500 m³/s	Check Discharge	10.0200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.38 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1500 mm Box	7.5500 m³/s	209.94 m	1.68 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-EX_Check & Reg

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.94 m	Discharge	7.5500 m³/s
Inlet Control HW Elev.	209.59 m	Tailwater Elevation	209.38 m
Outlet Control HW Elev.	209.94 m	Control Type	Outlet Control
Headwater Depth/Height	1.16		
Grades			
Upstream Invert	208.20 m	Downstream Invert	207.88 m
Length	121.50 m	Constructed Slope	0.002634 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.86 m
Velocity Downstream	1.68 m/s	Critical Slope	0.007554 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.94 m	Upstream Velocity Head	0.14 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	209.59 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	4.5 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-EX_Check & Reg

Analysis Component			
Storm Event	Check	Discharge	10.0200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.5500 m³/s	Check Discharge	10.0200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.38 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1500 mm Box	10.0200 m³/s	210.37 m	2.23 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-EX_Check & Reg

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.37 m	Discharge	10.0200 m³/s
Inlet Control HW Elev.	209.89 m	Tailwater Elevation	209.38 m
Outlet Control HW Elev.	210.37 m	Control Type	Outlet Control
Headwater Depth/Height	1.44		
Grades			
Upstream Invert	208.20 m	Downstream Invert	207.88 m
Length	121.50 m	Constructed Slope	0.002634 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	1.04 m
Velocity Downstream	2.23 m/s	Critical Slope	0.007821 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.37 m	Upstream Velocity Head	0.25 m
Ke	0.50	Entrance Loss	0.13 m
Inlet Control Properties			
Inlet Control HW Elev.	209.89 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	4.5 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-EX_50-100yr

Analysis Component			
Storm Event	Design	Discharge	5.4600 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.4600 m³/s	Check Discharge	6.4700 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.60 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	5.4600 m³/s	209.99 m	1.73 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.99 m	Discharge	5.4600 m³/s
Inlet Control HW Elev.	209.85 m	Tailwater Elevation	209.60 m
Outlet Control HW Elev.	209.99 m	Control Type	Outlet Control
Headwater Depth/Height	0.76		
Grades			
Upstream Invert	208.85 m	Downstream Invert	208.70 m
Length	71.00 m	Constructed Slope	0.002113 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.94 m
Flow Regime	Subcritical	Critical Depth	0.63 m
Velocity Downstream	1.73 m/s	Critical Slope	0.006894 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.99 m	Upstream Velocity Head	0.15 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	209.85 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-EX_50-100yr

Analysis Component			
Storm Event	Check	Discharge	6.4700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.4600 m³/s	Check Discharge	6.4700 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.60 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.4700 m³/s	210.11 m	2.05 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.11 m	Discharge	6.4700 m³/s
Inlet Control HW Elev.	209.98 m	Tailwater Elevation	209.60 m
Outlet Control HW Elev.	210.11 m	Control Type	Outlet Control
Headwater Depth/Height	0.84		
Grades			
Upstream Invert	208.85 m	Downstream Invert	208.70 m
Length	71.00 m	Constructed Slope	0.002113 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	1.06 m
Flow Regime	Subcritical	Critical Depth	0.70 m
Velocity Downstream	2.05 m/s	Critical Slope	0.006921 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.11 m	Upstream Velocity Head	0.18 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	209.98 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-EX_Check & Reg

Analysis Component			
Storm Event	Design	Discharge	8.4000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	8.4000 m³/s	Check Discharge	8.9400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.60 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	8.4000 m³/s	210.33 m	2.67 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-EX_Check & Reg

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.33 m	Discharge	8.4000 m ³ /s
Inlet Control HW Elev.	210.20 m	Tailwater Elevation	209.60 m
Outlet Control HW Elev.	210.33 m	Control Type	Outlet Control
Headwater Depth/Height	0.99		
Grades			
Upstream Invert	208.85 m	Downstream Invert	208.70 m
Length	71.00 m	Constructed Slope	0.002113 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.84 m
Velocity Downstream	2.67 m/s	Critical Slope	0.007010 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.33 m	Upstream Velocity Head	0.22 m
Ke	0.50	Entrance Loss	0.11 m
Inlet Control Properties			
Inlet Control HW Elev.	210.20 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m ²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-EX_Check & Reg

Analysis Component			
Storm Event	Check	Discharge	8.9400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	8.4000 m³/s	Check Discharge	8.9400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.60 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	8.9400 m³/s	210.39 m	2.84 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-EX_Check & Reg

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.39 m	Discharge	8.9400 m³/s
Inlet Control HW Elev.	210.26 m	Tailwater Elevation	209.60 m
Outlet Control HW Elev.	210.39 m	Control Type	Outlet Control
Headwater Depth/Height	1.03		
Grades			
Upstream Invert	208.85 m	Downstream Invert	208.70 m
Length	71.00 m	Constructed Slope	0.002113 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.87 m
Velocity Downstream	2.84 m/s	Critical Slope	0.007040 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.39 m	Upstream Velocity Head	0.23 m
Ke	0.50	Entrance Loss	0.12 m
Inlet Control Properties			
Inlet Control HW Elev.	210.26 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report
14_SIM_EL_SIM_1_WC3.2-EX_50-100yr

Analysis Component			
Storm Event	Design	Discharge	6.1200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.64 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.1200 m³/s	212.08 m	1.94 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.08 m	Discharge	6.1200 m³/s
Inlet Control HW Elev.	211.98 m	Tailwater Elevation	211.64 m
Outlet Control HW Elev.	212.08 m	Control Type	Outlet Control
Headwater Depth/Height	0.79		
Grades			
Upstream Invert	210.90 m	Downstream Invert	210.74 m
Length	44.50 m	Constructed Slope	0.003596 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.85 m
Flow Regime	Subcritical	Critical Depth	0.68 m
Velocity Downstream	1.94 m/s	Critical Slope	0.006910 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.08 m	Upstream Velocity Head	0.21 m
Ke	0.50	Entrance Loss	0.10 m
Inlet Control Properties			
Inlet Control HW Elev.	211.98 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-EX_50-100yr

Analysis Component			
Storm Event	Check	Discharge	7.0500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.64 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	7.0500 m³/s	212.19 m	2.24 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.19 m	Discharge	7.0500 m³/s
Inlet Control HW Elev.	212.09 m	Tailwater Elevation	211.64 m
Outlet Control HW Elev.	212.19 m	Control Type	Outlet Control
Headwater Depth/Height	0.86		
Grades			
Upstream Invert	210.90 m	Downstream Invert	210.74 m
Length	44.50 m	Constructed Slope	0.003596 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.93 m
Flow Regime	Subcritical	Critical Depth	0.75 m
Velocity Downstream	2.24 m/s	Critical Slope	0.006943 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.19 m	Upstream Velocity Head	0.24 m
Ke	0.50	Entrance Loss	0.12 m
Inlet Control Properties			
Inlet Control HW Elev.	212.09 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-EX_Check

Analysis Component			
Storm Event	Design	Discharge	9.1700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.1700 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.64 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	9.1700 m³/s	212.43 m	2.91 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-EX_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.43 m	Discharge	9.1700 m³/s
Inlet Control HW Elev.	212.33 m	Tailwater Elevation	211.64 m
Outlet Control HW Elev.	212.43 m	Control Type	Outlet Control
Headwater Depth/Height	1.02		
Grades			
Upstream Invert	210.90 m	Downstream Invert	210.74 m
Length	44.50 m	Constructed Slope	0.003596 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	1.12 m
Flow Regime	Subcritical	Critical Depth	0.89 m
Velocity Downstream	2.91 m/s	Critical Slope	0.007054 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.43 m	Upstream Velocity Head	0.30 m
Ke	0.50	Entrance Loss	0.15 m
Inlet Control Properties			
Inlet Control HW Elev.	212.33 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_50-100yr

Analysis Component			
Storm Event	Design	Discharge	6.1200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.1200 m³/s	211.81 m	1.94 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	211.81 m	Discharge	6.1200 m³/s
Inlet Control HW Elev.	211.71 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	211.81 m	Control Type	Outlet Control
Headwater Depth/Height	0.78		
Grades			
Upstream Invert	210.63 m	Downstream Invert	210.36 m
Length	77.00 m	Constructed Slope	0.003506 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.70 m
Flow Regime	Subcritical	Critical Depth	0.68 m
Velocity Downstream	1.94 m/s	Critical Slope	0.003887 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	211.81 m	Upstream Velocity Head	0.31 m
Ke	0.50	Entrance Loss	0.16 m
Inlet Control Properties			
Inlet Control HW Elev.	211.71 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_50-100yr

Analysis Component			
Storm Event	Check	Discharge	7.0500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	7.0500 m³/s	211.92 m	2.24 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	211.92 m	Discharge	7.0500 m³/s
Inlet Control HW Elev.	211.82 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	211.92 m	Control Type	Outlet Control
Headwater Depth/Height	0.86		
Grades			
Upstream Invert	210.63 m	Downstream Invert	210.36 m
Length	77.00 m	Constructed Slope	0.003506 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.77 m
Flow Regime	Subcritical	Critical Depth	0.75 m
Velocity Downstream	2.24 m/s	Critical Slope	0.003906 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	211.92 m	Upstream Velocity Head	0.35 m
Ke	0.50	Entrance Loss	0.17 m
Inlet Control Properties			
Inlet Control HW Elev.	211.82 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_Check

Analysis Component			
Storm Event	Design	Discharge	9.1700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.1700 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	9.1700 m³/s	212.17 m	2.91 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.17 m	Discharge	9.1700 m³/s
Inlet Control HW Elev.	212.06 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	212.17 m	Control Type	Outlet Control
Headwater Depth/Height	1.03		
Grades			
Upstream Invert	210.63 m	Downstream Invert	210.36 m
Length	84.00 m	Constructed Slope	0.003214 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	1.17 m
Flow Regime	Subcritical	Critical Depth	0.89 m
Velocity Downstream	2.91 m/s	Critical Slope	0.007054 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.17 m	Upstream Velocity Head	0.27 m
Ke	0.50	Entrance Loss	0.14 m
Inlet Control Properties			
Inlet Control HW Elev.	212.06 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_50-100yr

Analysis Component			
Storm Event	Design	Discharge	6.1200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.1200 m³/s	211.81 m	1.94 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	211.81 m	Discharge	6.1200 m³/s
Inlet Control HW Elev.	211.71 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	211.81 m	Control Type	Outlet Control
Headwater Depth/Height	0.78		
Grades			
Upstream Invert	210.63 m	Downstream Invert	210.36 m
Length	77.00 m	Constructed Slope	0.003506 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.70 m
Flow Regime	Subcritical	Critical Depth	0.68 m
Velocity Downstream	1.94 m/s	Critical Slope	0.003887 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	211.81 m	Upstream Velocity Head	0.31 m
Ke	0.50	Entrance Loss	0.16 m
Inlet Control Properties			
Inlet Control HW Elev.	211.71 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_50-100yr

Analysis Component			
Storm Event	Check	Discharge	7.0500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	7.0500 m³/s	211.92 m	2.24 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	211.92 m	Discharge	7.0500 m³/s
Inlet Control HW Elev.	211.82 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	211.92 m	Control Type	Outlet Control
Headwater Depth/Height	0.86		
Grades			
Upstream Invert	210.63 m	Downstream Invert	210.36 m
Length	77.00 m	Constructed Slope	0.003506 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.77 m
Flow Regime	Subcritical	Critical Depth	0.75 m
Velocity Downstream	2.24 m/s	Critical Slope	0.003906 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	211.92 m	Upstream Velocity Head	0.35 m
Ke	0.50	Entrance Loss	0.17 m
Inlet Control Properties			
Inlet Control HW Elev.	211.82 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_Check

Analysis Component			
Storm Event	Design	Discharge	9.1700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.1700 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	9.1700 m³/s	212.17 m	2.91 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-EX_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.17 m	Discharge	9.1700 m³/s
Inlet Control HW Elev.	212.06 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	212.17 m	Control Type	Outlet Control
Headwater Depth/Height	1.03		
Grades			
Upstream Invert	210.63 m	Downstream Invert	210.36 m
Length	84.00 m	Constructed Slope	0.003214 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	1.17 m
Flow Regime	Subcritical	Critical Depth	0.89 m
Velocity Downstream	2.91 m/s	Critical Slope	0.007054 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.17 m	Upstream Velocity Head	0.27 m
Ke	0.50	Entrance Loss	0.14 m
Inlet Control Properties			
Inlet Control HW Elev.	212.06 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-EX_50-100yr

Analysis Component			
Storm Event	Design	Discharge	5.8700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.8700 m³/s	Check Discharge	6.7200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	213.86 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	5.8700 m³/s	214.05 m	1.12 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	214.05 m	Discharge	5.8700 m³/s
Inlet Control HW Elev.	213.86 m	Tailwater Elevation	213.86 m
Outlet Control HW Elev.	214.05 m	Control Type	Outlet Control
Headwater Depth/Height	0.98		
Grades			
Upstream Invert	212.58 m	Downstream Invert	212.36 m
Length	89.00 m	Constructed Slope	0.002472 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	0.94 m
Flow Regime	Subcritical	Critical Depth	0.66 m
Velocity Downstream	1.12 m/s	Critical Slope	0.006903 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	214.05 m	Upstream Velocity Head	0.08 m
Ke	0.50	Entrance Loss	0.04 m
Inlet Control Properties			
Inlet Control HW Elev.	213.86 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report
18_SIM_EL_SIM_1_WC4-EX_50-100yr

Analysis Component			
Storm Event	Check	Discharge	6.7200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.8700 m³/s	Check Discharge	6.7200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	213.86 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.7200 m³/s	214.10 m	1.28 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-EX_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	214.10 m	Discharge	6.7200 m³/s
Inlet Control HW Elev.	213.86 m	Tailwater Elevation	213.86 m
Outlet Control HW Elev.	214.10 m	Control Type	Outlet Control
Headwater Depth/Height	1.02		
Grades			
Upstream Invert	212.58 m	Downstream Invert	212.36 m
Length	89.00 m	Constructed Slope	0.002472 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	1.03 m
Flow Regime	Subcritical	Critical Depth	0.72 m
Velocity Downstream	1.28 m/s	Critical Slope	0.006930 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	214.10 m	Upstream Velocity Head	0.10 m
Ke	0.50	Entrance Loss	0.05 m
Inlet Control Properties			
Inlet Control HW Elev.	213.86 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-EX_Check

Analysis Component			
Storm Event	Design	Discharge	8.7400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	8.7400 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	213.86 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	8.7400 m³/s	214.30 m	1.66 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-EX_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	214.30 m	Discharge	8.7400 m³/s
Inlet Control HW Elev.	213.96 m	Tailwater Elevation	213.86 m
Outlet Control HW Elev.	214.30 m	Control Type	Outlet Control
Headwater Depth/Height	1.15		
Grades			
Upstream Invert	212.58 m	Downstream Invert	212.36 m
Length	89.00 m	Constructed Slope	0.002472 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.86 m
Velocity Downstream	1.66 m/s	Critical Slope	0.007029 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	214.30 m	Upstream Velocity Head	0.14 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	213.96 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

G.2 Proposed Condition



Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_50-100yr

Analysis Component			
Storm Event	Design	Discharge	2.4500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.4500 m³/s	Check Discharge	2.7700 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	200.97 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1800 x 900 mm Box	2.4500 m³/s	201.75 m	1.51 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	201.75 m	Discharge	2.4500 m³/s
Inlet Control HW Elev.	201.69 m	Tailwater Elevation	200.97 m
Outlet Control HW Elev.	201.75 m	Control Type	Outlet Control
Headwater Depth/Height	1.10		
Grades			
Upstream Invert	200.76 m	Downstream Invert	200.07 m
Length	127.00 m	Constructed Slope	0.005433 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.69 m
Flow Regime	Subcritical	Critical Depth	0.57 m
Velocity Downstream	1.51 m/s	Critical Slope	0.009111 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	1.80 m
Section Size	1800 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	201.75 m	Upstream Velocity Head	0.20 m
Ke	0.50	Entrance Loss	0.10 m
Inlet Control Properties			
Inlet Control HW Elev.	201.69 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	1.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_50-100yr

Analysis Component			
Storm Event	Check	Discharge	2.7700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.4500 m³/s	Check Discharge	2.7700 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	200.97 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1800 x 900 mm Box	2.7700 m³/s	201.93 m	1.71 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	201.93 m	Discharge	2.7700 m³/s
Inlet Control HW Elev.	201.77 m	Tailwater Elevation	200.97 m
Outlet Control HW Elev.	201.93 m	Control Type	Outlet Control
Headwater Depth/Height	1.30		
Grades			
Upstream Invert	200.76 m	Downstream Invert	200.07 m
Length	127.00 m	Constructed Slope	0.005433 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	0.90 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.62 m
Velocity Downstream	1.71 m/s	Critical Slope	0.009261 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	1.80 m
Section Size	1800 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	201.93 m	Upstream Velocity Head	0.15 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	201.77 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	1.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_Check

Analysis Component			
Storm Event	Design	Discharge	3.6000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.6000 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	200.97 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1800 x 900 mm Box	3.6000 m³/s	202.60 m	2.22 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	202.60 m	Discharge	3.6000 m³/s
Inlet Control HW Elev.	202.09 m	Tailwater Elevation	200.97 m
Outlet Control HW Elev.	202.60 m	Control Type	Outlet Control
Headwater Depth/Height	2.04		
Grades			
Upstream Invert	200.76 m	Downstream Invert	200.07 m
Length	127.00 m	Constructed Slope	0.005433 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	0.90 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.74 m
Velocity Downstream	2.22 m/s	Critical Slope	0.009658 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	1.80 m
Section Size	1800 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	202.60 m	Upstream Velocity Head	0.25 m
Ke	0.50	Entrance Loss	0.13 m
Inlet Control Properties			
Inlet Control HW Elev.	202.09 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	1.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report
02_SM_EB_SIM_5_WC1.2_50-100yr_New_Enlarged

Comments: Inlet - headwall beveled 45 deg.

Analysis Component			
Storm Event	Design	Discharge	2.9900 m ³ /s

Peak Discharge Method: User-Specified			
Design Discharge	2.9900 m ³ /s	Check Discharge	3.4400 m ³ /s

Tailwater Conditions: Constant Tailwater	
Tailwater Elevation	207.07 m

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	2.9900 m ³ /s	207.29 m	1.47 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1.2_50-100yr_New_Enlarged

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.29 m	Discharge	2.9900 m³/s
Inlet Control HW Elev.	207.19 m	Tailwater Elevation	207.07 m
Outlet Control HW Elev.	207.29 m	Control Type	Outlet Control
Headwater Depth/Height	0.51		
Grades			
Upstream Invert	206.53 m	Downstream Invert	206.49 m
Length	43.60 m	Constructed Slope	0.000917 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.58 m
Slope Type	Mild	Normal Depth	0.83 m
Flow Regime	Subcritical	Critical Depth	0.42 m
Velocity Downstream	1.47 m/s	Critical Slope	0.006977 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.29 m	Upstream Velocity Head	0.09 m
Ke	0.20	Entrance Loss	0.02 m
Inlet Control Properties			
Inlet Control HW Elev.	207.19 m	Flow Control	Unsubmerged
Inlet Type	90° headwall w 45° bevels	Area Full	5.3 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1.2_50-100yr_New_Enlarged

Comments: Inlet - headwall beveled 45 deg.

Analysis Component			
Storm Event	Check	Discharge	3.4400 m ³ /s

Peak Discharge Method: User-Specified			
Design Discharge	2.9900 m ³ /s	Check Discharge	3.4400 m ³ /s

Tailwater Conditions: Constant Tailwater	
Tailwater Elevation	207.07 m

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	3.4400 m ³ /s	207.35 m	1.69 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1.2_50-100yr_New_Enlarged

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.35 m	Discharge	3.4400 m³/s
Inlet Control HW Elev.	207.26 m	Tailwater Elevation	207.07 m
Outlet Control HW Elev.	207.35 m	Control Type	Outlet Control
Headwater Depth/Height	0.55		
Grades			
Upstream Invert	206.53 m	Downstream Invert	206.49 m
Length	43.60 m	Constructed Slope	0.000917 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.58 m
Slope Type	Mild	Normal Depth	0.91 m
Flow Regime	Subcritical	Critical Depth	0.46 m
Velocity Downstream	1.69 m/s	Critical Slope	0.006935 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.35 m	Upstream Velocity Head	0.10 m
Ke	0.20	Entrance Loss	0.02 m
Inlet Control Properties			
Inlet Control HW Elev.	207.26 m	Flow Control	Unsubmerged
Inlet Type	90° headwall w 45° bevels	Area Full	5.3 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1.2_Check_New_Enlarged

Comments: Inlet - headwall beveled 45 deg.

Analysis Component			
Storm Event	Check	Discharge	4.9100 m ³ /s

Peak Discharge Method: User-Specified			
Design Discharge	4.4700 m ³ /s	Check Discharge	4.9100 m ³ /s

Tailwater Conditions: Constant Tailwater	
Tailwater Elevation	207.07 m

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	4.9100 m ³ /s	207.54 m	2.40 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1.2_Check_New_Enlarged

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.54 m	Discharge	4.9100 m³/s
Inlet Control HW Elev.	207.45 m	Tailwater Elevation	207.07 m
Outlet Control HW Elev.	207.54 m	Control Type	Outlet Control
Headwater Depth/Height	0.68		
Grades			
Upstream Invert	206.53 m	Downstream Invert	206.49 m
Length	43.60 m	Constructed Slope	0.000917 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.59 m
Slope Type	Mild	Normal Depth	1.17 m
Flow Regime	Subcritical	Critical Depth	0.59 m
Velocity Downstream	2.40 m/s	Critical Slope	0.006890 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.54 m	Upstream Velocity Head	0.14 m
Ke	0.20	Entrance Loss	0.03 m
Inlet Control Properties			
Inlet Control HW Elev.	207.45 m	Flow Control	N/A
Inlet Type	90° headwall w 45° bevels	Area Full	5.3 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr_Pr_D/S_enlarged

Analysis Component			
Storm Event	Design	Discharge	2.9900 m³/s

Peak Discharge Method: User-Specified			
Design Discharge	2.9900 m³/s	Check Discharge	3.4400 m³/s

Tailwater Conditions: Tailwater Rating

Discharge (m³/s)	TW Elev. (m)
2.9900	207.29
3.4400	207.35
4.4700	207.49

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1200 mm Box	2.9900 m³/s	207.69 m	1.64 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr_Pr_D/S_enlarged

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.69 m	Discharge	2.9900 m³/s
Inlet Control HW Elev.	207.51 m	Tailwater Elevation	207.29 m
Outlet Control HW Elev.	207.69 m	Control Type	Outlet Control
Headwater Depth/Height	0.86		
Grades			
Upstream Invert	206.66 m	Downstream Invert	206.53 m
Length	111.90 m	Constructed Slope	0.001162 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.76 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.54 m
Velocity Downstream	1.64 m/s	Critical Slope	0.007907 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.69 m	Upstream Velocity Head	0.09 m
Ke	0.20	Entrance Loss	0.02 m
Inlet Control Properties			
Inlet Control HW Elev.	207.51 m	Flow Control	Unsubmerged
Inlet Type	90° headwall w 45° bevels	Area Full	2.9 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr_Pr_D/S_enlarged

Analysis Component			
Storm Event	Check	Discharge	3.4400 m³/s

Peak Discharge Method: User-Specified			
Design Discharge	2.9900 m³/s	Check Discharge	3.4400 m³/s

Tailwater Conditions: Tailwater Rating

Discharge (m³/s)	TW Elev. (m)
2.9900	207.29
3.4400	207.35
4.4700	207.49

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1200 mm Box	3.4400 m³/s	207.79 m	1.75 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr_Pr_D/S_enlarged

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.79 m	Discharge	3.4400 m³/s
Inlet Control HW Elev.	207.60 m	Tailwater Elevation	207.35 m
Outlet Control HW Elev.	207.79 m	Control Type	Outlet Control
Headwater Depth/Height	0.94		
Grades			
Upstream Invert	206.66 m	Downstream Invert	206.53 m
Length	111.90 m	Constructed Slope	0.001162 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.82 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.59 m
Velocity Downstream	1.75 m/s	Critical Slope	0.007977 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.79 m	Upstream Velocity Head	0.10 m
Ke	0.20	Entrance Loss	0.02 m
Inlet Control Properties			
Inlet Control HW Elev.	207.60 m	Flow Control	Unsubmerged
Inlet Type	90° headwall w 45° bevels	Area Full	2.9 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_Check_Pr_D/S_enlarged

Analysis Component			
Storm Event	Design	Discharge	4.4700 m³/s

Peak Discharge Method: User-Specified			
Design Discharge	4.4700 m³/s	Check Discharge	4.9100 m³/s

Tailwater Conditions: Tailwater Rating

Discharge (m³/s)	TW Elev. (m)
2.9900	207.29
3.4400	207.35
4.4700	207.49
4.9100	207.54

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1200 mm Box	4.4700 m³/s	207.99 m	1.94 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_Check_Pr_D/S_enlarged

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.99 m	Discharge	4.4700 m³/s
Inlet Control HW Elev.	207.77 m	Tailwater Elevation	207.49 m
Outlet Control HW Elev.	207.99 m	Control Type	Outlet Control
Headwater Depth/Height	1.11		
Grades			
Upstream Invert	206.66 m	Downstream Invert	206.53 m
Length	111.90 m	Constructed Slope	0.001162 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.96 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.71 m
Velocity Downstream	1.94 m/s	Critical Slope	0.008166 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.99 m	Upstream Velocity Head	0.13 m
Ke	0.20	Entrance Loss	0.03 m
Inlet Control Properties			
Inlet Control HW Elev.	207.77 m	Flow Control	Unsubmerged
Inlet Type	90° headwall w 45° bevels	Area Full	2.9 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_Check_Pr_D/S_enlarged

Analysis Component			
Storm Event	Check	Discharge	4.9100 m³/s

Peak Discharge Method: User-Specified			
Design Discharge	4.4700 m³/s	Check Discharge	4.9100 m³/s

Tailwater Conditions: Tailwater Rating

Discharge (m³/s)	TW Elev. (m)
2.9900	207.29
3.4400	207.35
4.4700	207.49
4.9100	207.54

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1200 mm Box	4.9100 m³/s	208.16 m	2.03 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_Check_Pr_D/S_enlarged

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	208.16 m	Discharge	4.9100 m³/s
Inlet Control HW Elev.	207.85 m	Tailwater Elevation	207.54 m
Outlet Control HW Elev.	208.16 m	Control Type	Outlet Control
Headwater Depth/Height	1.25		
Grades			
Upstream Invert	206.66 m	Downstream Invert	206.53 m
Length	111.90 m	Constructed Slope	0.001162 m/m
Hydraulic Profile			
Profile	CompositeM2PressureProfile	Depth, Downstream	1.01 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.75 m
Velocity Downstream	2.03 m/s	Critical Slope	0.008254 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	208.16 m	Upstream Velocity Head	0.15 m
Ke	0.20	Entrance Loss	0.03 m
Inlet Control Properties			
Inlet Control HW Elev.	207.85 m	Flow Control	Unsubmerged
Inlet Type	90° headwall w 45° bevels	Area Full	2.9 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	3.6300 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.6300 m³/s	Check Discharge	4.1900 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.87 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	3.6300 m³/s	213.48 m	1.14 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.48 m	Discharge	3.6300 m³/s
Inlet Control HW Elev.	213.38 m	Tailwater Elevation	212.87 m
Outlet Control HW Elev.	213.48 m	Control Type	Entrance Control
Headwater Depth/Height	0.72		
Grades			
Upstream Invert	212.40 m	Downstream Invert	211.54 m
Length	122.40 m	Constructed Slope	0.007026 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	1.33 m
Slope Type	Steep	Normal Depth	0.53 m
Flow Regime	N/A	Critical Depth	0.62 m
Velocity Downstream	1.14 m/s	Critical Slope	0.004505 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.48 m	Upstream Velocity Head	0.31 m
Ke	0.50	Entrance Loss	0.15 m
Inlet Control Properties			
Inlet Control HW Elev.	213.38 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	4.1900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.6300 m³/s	Check Discharge	4.1900 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.87 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	4.1900 m³/s	213.59 m	1.31 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.59 m	Discharge	4.1900 m³/s
Inlet Control HW Elev.	213.48 m	Tailwater Elevation	212.87 m
Outlet Control HW Elev.	213.59 m	Control Type	Entrance Control
Headwater Depth/Height	0.79		
Grades			
Upstream Invert	212.40 m	Downstream Invert	211.54 m
Length	122.40 m	Constructed Slope	0.007026 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	1.33 m
Slope Type	Steep	Normal Depth	0.58 m
Flow Regime	N/A	Critical Depth	0.68 m
Velocity Downstream	1.31 m/s	Critical Slope	0.004563 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.59 m	Upstream Velocity Head	0.34 m
Ke	0.50	Entrance Loss	0.17 m
Inlet Control Properties			
Inlet Control HW Elev.	213.48 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_Check & Reg_New

Analysis Component			
Storm Event	Design	Discharge	5.4500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.4500 m³/s	Check Discharge	6.3400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.87 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	5.4500 m³/s	213.81 m	1.71 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_Check & Reg_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.81 m	Discharge	5.4500 m³/s
Inlet Control HW Elev.	213.69 m	Tailwater Elevation	212.87 m
Outlet Control HW Elev.	213.81 m	Control Type	Entrance Control
Headwater Depth/Height	0.94		
Grades			
Upstream Invert	212.40 m	Downstream Invert	211.54 m
Length	122.40 m	Constructed Slope	0.007026 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	1.33 m
Slope Type	Steep	Normal Depth	0.70 m
Flow Regime	N/A	Critical Depth	0.81 m
Velocity Downstream	1.71 m/s	Critical Slope	0.004705 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.81 m	Upstream Velocity Head	0.40 m
Ke	0.50	Entrance Loss	0.20 m
Inlet Control Properties			
Inlet Control HW Elev.	213.69 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_Check & Reg_New

Analysis Component			
Storm Event	Check	Discharge	6.3400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.4500 m³/s	Check Discharge	6.3400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.87 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	6.3400 m³/s	213.96 m	1.99 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_Check & Reg_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.96 m	Discharge	6.3400 m³/s
Inlet Control HW Elev.	213.84 m	Tailwater Elevation	212.87 m
Outlet Control HW Elev.	213.96 m	Control Type	Entrance Control
Headwater Depth/Height	1.04		
Grades			
Upstream Invert	212.40 m	Downstream Invert	211.54 m
Length	122.40 m	Constructed Slope	0.007026 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	1.33 m
Slope Type	Steep	Normal Depth	0.78 m
Flow Regime	N/A	Critical Depth	0.89 m
Velocity Downstream	1.99 m/s	Critical Slope	0.004810 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.96 m	Upstream Velocity Head	0.45 m
Ke	0.50	Entrance Loss	0.22 m
Inlet Control Properties			
Inlet Control HW Elev.	213.84 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report
04_SIM_EL_SIM_1_WC1.2_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	3.6300 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.6300 m³/s	Check Discharge	4.1900 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.60 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	3.6300 m³/s	212.73 m	1.01 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.73 m	Discharge	3.6300 m³/s
Inlet Control HW Elev.	212.60 m	Tailwater Elevation	212.60 m
Outlet Control HW Elev.	212.73 m	Control Type	Outlet Control
Headwater Depth/Height	1.02		
Grades			
Upstream Invert	211.20 m	Downstream Invert	210.55 m
Length	78.50 m	Constructed Slope	0.008280 m/m
Hydraulic Profile			
Profile	CompositePressureProfileS1	Depth, Downstream	2.05 m
Slope Type	N/A	Normal Depth	0.50 m
Flow Regime	Subcritical	Critical Depth	0.62 m
Velocity Downstream	1.01 m/s	Critical Slope	0.004505 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.73 m	Upstream Velocity Head	0.06 m
Ke	0.50	Entrance Loss	0.03 m
Inlet Control Properties			
Inlet Control HW Elev.	212.60 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	4.1900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.6300 m³/s	Check Discharge	4.1900 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.60 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	4.1900 m³/s	212.77 m	1.16 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.77 m	Discharge	4.1900 m³/s
Inlet Control HW Elev.	212.60 m	Tailwater Elevation	212.60 m
Outlet Control HW Elev.	212.77 m	Control Type	Outlet Control
Headwater Depth/Height	1.05		
Grades			
Upstream Invert	211.20 m	Downstream Invert	210.55 m
Length	78.50 m	Constructed Slope	0.008280 m/m
Hydraulic Profile			
Profile	CompositePressureProfileS1	Depth, Downstream	2.05 m
Slope Type	N/A	Normal Depth	0.55 m
Flow Regime	Subcritical	Critical Depth	0.68 m
Velocity Downstream	1.16 m/s	Critical Slope	0.004563 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.77 m	Upstream Velocity Head	0.07 m
Ke	0.50	Entrance Loss	0.04 m
Inlet Control Properties			
Inlet Control HW Elev.	212.60 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_Check & Reg_New

Analysis Component			
Storm Event	Design	Discharge	5.4500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.4500 m³/s	Check Discharge	6.3400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.60 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	5.4500 m³/s	212.89 m	1.51 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_Check & Reg_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.89 m	Discharge	5.4500 m³/s
Inlet Control HW Elev.	212.60 m	Tailwater Elevation	212.60 m
Outlet Control HW Elev.	212.89 m	Control Type	Outlet Control
Headwater Depth/Height	1.13		
Grades			
Upstream Invert	211.20 m	Downstream Invert	210.55 m
Length	78.50 m	Constructed Slope	0.008280 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	2.05 m
Slope Type	N/A	Normal Depth	0.66 m
Flow Regime	N/A	Critical Depth	0.81 m
Velocity Downstream	1.51 m/s	Critical Slope	0.004705 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.89 m	Upstream Velocity Head	0.12 m
Ke	0.50	Entrance Loss	0.06 m
Inlet Control Properties			
Inlet Control HW Elev.	212.60 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_Check & Reg_New

Analysis Component			
Storm Event	Check	Discharge	6.3400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.4500 m³/s	Check Discharge	6.3400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.60 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	6.3400 m³/s	212.99 m	1.76 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_Check & Reg_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.99 m	Discharge	6.3400 m³/s
Inlet Control HW Elev.	212.63 m	Tailwater Elevation	212.60 m
Outlet Control HW Elev.	212.99 m	Control Type	Outlet Control
Headwater Depth/Height	1.19		
Grades			
Upstream Invert	211.20 m	Downstream Invert	210.55 m
Length	78.50 m	Constructed Slope	0.008280 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	2.05 m
Slope Type	N/A	Normal Depth	0.74 m
Flow Regime	N/A	Critical Depth	0.89 m
Velocity Downstream	1.76 m/s	Critical Slope	0.004810 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.99 m	Upstream Velocity Head	0.16 m
Ke	0.50	Entrance Loss	0.08 m
Inlet Control Properties			
Inlet Control HW Elev.	212.63 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	7.3300 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.3300 m³/s	Check Discharge	8.4200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.48 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 1800 mm Box	7.3300 m³/s	209.76 m	1.68 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.76 m	Discharge	7.3300 m³/s
Inlet Control HW Elev.	209.58 m	Tailwater Elevation	209.48 m
Outlet Control HW Elev.	209.76 m	Control Type	Outlet Control
Headwater Depth/Height	0.72		
Grades			
Upstream Invert	208.47 m	Downstream Invert	208.39 m
Length	57.40 m	Constructed Slope	0.001394 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	1.09 m
Slope Type	Mild	Normal Depth	0.98 m
Flow Regime	Subcritical	Critical Depth	0.70 m
Velocity Downstream	1.68 m/s	Critical Slope	0.003708 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 1800 mm	Rise	1.80 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.76 m	Upstream Velocity Head	0.15 m
Ke	0.50	Entrance Loss	0.08 m
Inlet Control Properties			
Inlet Control HW Elev.	209.58 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	7.2 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	8.4200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.3300 m³/s	Check Discharge	8.4200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.48 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 1800 mm Box	8.4200 m³/s	209.84 m	1.93 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.84 m	Discharge	8.4200 m ³ /s
Inlet Control HW Elev.	209.69 m	Tailwater Elevation	209.48 m
Outlet Control HW Elev.	209.84 m	Control Type	Outlet Control
Headwater Depth/Height	0.76		
Grades			
Upstream Invert	208.47 m	Downstream Invert	208.39 m
Length	57.40 m	Constructed Slope	0.001394 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	1.09 m
Slope Type	Mild	Normal Depth	1.07 m
Flow Regime	Subcritical	Critical Depth	0.77 m
Velocity Downstream	1.93 m/s	Critical Slope	0.003716 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 1800 mm	Rise	1.80 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.84 m	Upstream Velocity Head	0.19 m
Ke	0.50	Entrance Loss	0.10 m
Inlet Control Properties			
Inlet Control HW Elev.	209.69 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	7.2 m ²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_Check_New

Analysis Component			
Storm Event	Design	Discharge	10.9400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	10.9400 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.48 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 1800 mm Box	10.9400 m³/s	210.06 m	2.51 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.06 m	Discharge	10.9400 m³/s
Inlet Control HW Elev.	209.94 m	Tailwater Elevation	209.48 m
Outlet Control HW Elev.	210.06 m	Control Type	Outlet Control
Headwater Depth/Height	0.88		
Grades			
Upstream Invert	208.47 m	Downstream Invert	208.39 m
Length	57.40 m	Constructed Slope	0.001394 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	1.09 m
Slope Type	Mild	Normal Depth	1.29 m
Flow Regime	Subcritical	Critical Depth	0.91 m
Velocity Downstream	2.51 m/s	Critical Slope	0.003755 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 1800 mm	Rise	1.80 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.06 m	Upstream Velocity Head	0.28 m
Ke	0.50	Entrance Loss	0.14 m
Inlet Control Properties			
Inlet Control HW Elev.	209.94 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	7.2 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report
06_SIM_EL_SIM_1_WC1-PR_50-100yr

Analysis Component			
Storm Event	Design	Discharge	4.9200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.9200 m³/s	Check Discharge	5.8100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	208.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1500 mm Box	4.9200 m³/s	209.57 m	1.82 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.57 m	Discharge	4.9200 m³/s
Inlet Control HW Elev.	209.45 m	Tailwater Elevation	208.68 m
Outlet Control HW Elev.	209.57 m	Control Type	Outlet Control
Headwater Depth/Height	0.77		
Grades			
Upstream Invert	208.41 m	Downstream Invert	207.78 m
Length	225.60 m	Constructed Slope	0.002793 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.91 m
Flow Regime	Subcritical	Critical Depth	0.65 m
Velocity Downstream	1.82 m/s	Critical Slope	0.007318 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.57 m	Upstream Velocity Head	0.17 m
Ke	0.50	Entrance Loss	0.08 m
Inlet Control Properties			
Inlet Control HW Elev.	209.45 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	4.5 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_50-100yr

Analysis Component			
Storm Event	Check	Discharge	5.8100 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.9200 m³/s	Check Discharge	5.8100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	208.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1500 mm Box	5.8100 m³/s	209.71 m	2.15 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.71 m	Discharge	5.8100 m³/s
Inlet Control HW Elev.	209.57 m	Tailwater Elevation	208.68 m
Outlet Control HW Elev.	209.71 m	Control Type	Outlet Control
Headwater Depth/Height	0.86		
Grades			
Upstream Invert	208.41 m	Downstream Invert	207.78 m
Length	225.60 m	Constructed Slope	0.002793 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	1.02 m
Flow Regime	Subcritical	Critical Depth	0.73 m
Velocity Downstream	2.15 m/s	Critical Slope	0.007388 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.71 m	Upstream Velocity Head	0.18 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	209.57 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	4.5 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_Check & Reg

Analysis Component			
Storm Event	Design	Discharge	7.5500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.5500 m³/s	Check Discharge	10.0200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	208.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1500 mm Box	7.5500 m³/s	209.96 m	2.80 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_Check & Reg

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.96 m	Discharge	7.5500 m³/s
Inlet Control HW Elev.	209.80 m	Tailwater Elevation	208.68 m
Outlet Control HW Elev.	209.96 m	Control Type	Outlet Control
Headwater Depth/Height	1.04		
Grades			
Upstream Invert	208.41 m	Downstream Invert	207.78 m
Length	225.60 m	Constructed Slope	0.002793 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.86 m
Velocity Downstream	2.80 m/s	Critical Slope	0.007554 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.96 m	Upstream Velocity Head	0.21 m
Ke	0.50	Entrance Loss	0.11 m
Inlet Control Properties			
Inlet Control HW Elev.	209.80 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	4.5 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_Check & Reg

Analysis Component			
Storm Event	Check	Discharge	10.0200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.5500 m³/s	Check Discharge	10.0200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	208.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1500 mm Box	10.0200 m³/s	210.51 m	3.20 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_Check & Reg

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.51 m	Discharge	10.0200 m³/s
Inlet Control HW Elev.	210.10 m	Tailwater Elevation	208.68 m
Outlet Control HW Elev.	210.51 m	Control Type	Outlet Control
Headwater Depth/Height	1.40		
Grades			
Upstream Invert	208.41 m	Downstream Invert	207.78 m
Length	225.60 m	Constructed Slope	0.002793 m/m
Hydraulic Profile			
Profile	CompositeM2PressureProfile	Depth, Downstream	1.04 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	1.04 m
Velocity Downstream	3.20 m/s	Critical Slope	0.007821 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.51 m	Upstream Velocity Head	0.25 m
Ke	0.50	Entrance Loss	0.13 m
Inlet Control Properties			
Inlet Control HW Elev.	210.10 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	4.5 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	5.1700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.1700 m³/s	Check Discharge	6.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.75 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 2000 mm Box	5.1700 m³/s	207.87 m	1.08 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.87 m	Discharge	5.1700 m³/s
Inlet Control HW Elev.	207.75 m	Tailwater Elevation	207.75 m
Outlet Control HW Elev.	207.87 m	Control Type	Outlet Control
Headwater Depth/Height	0.62		
Grades			
Upstream Invert	206.63 m	Downstream Invert	206.55 m
Length	75.50 m	Constructed Slope	0.001060 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	1.20 m
Slope Type	Mild	Normal Depth	0.84 m
Flow Regime	Subcritical	Critical Depth	0.55 m
Velocity Downstream	1.08 m/s	Critical Slope	0.003722 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 2000 mm	Rise	2.00 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.87 m	Upstream Velocity Head	0.06 m
Ke	0.50	Entrance Loss	0.03 m
Inlet Control Properties			
Inlet Control HW Elev.	207.75 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	8.0 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	6.0500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.1700 m³/s	Check Discharge	6.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.75 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 2000 mm Box	6.0500 m³/s	207.92 m	1.26 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.92 m	Discharge	6.0500 m³/s
Inlet Control HW Elev.	207.75 m	Tailwater Elevation	207.75 m
Outlet Control HW Elev.	207.92 m	Control Type	Outlet Control
Headwater Depth/Height	0.64		
Grades			
Upstream Invert	206.63 m	Downstream Invert	206.55 m
Length	75.50 m	Constructed Slope	0.001060 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	1.20 m
Slope Type	Mild	Normal Depth	0.94 m
Flow Regime	Subcritical	Critical Depth	0.62 m
Velocity Downstream	1.26 m/s	Critical Slope	0.003710 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 2000 mm	Rise	2.00 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.92 m	Upstream Velocity Head	0.09 m
Ke	0.50	Entrance Loss	0.04 m
Inlet Control Properties			
Inlet Control HW Elev.	207.75 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	8.0 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_Check & Reg_New

Analysis Component			
Storm Event	Design	Discharge	7.8700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.8700 m³/s	Check Discharge	10.9000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.75 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 2000 mm Box	7.8700 m³/s	208.03 m	1.64 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_Check & Reg_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	208.03 m	Discharge	7.8700 m³/s
Inlet Control HW Elev.	207.79 m	Tailwater Elevation	207.75 m
Outlet Control HW Elev.	208.03 m	Control Type	Outlet Control
Headwater Depth/Height	0.70		
Grades			
Upstream Invert	206.63 m	Downstream Invert	206.55 m
Length	75.50 m	Constructed Slope	0.001060 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	1.20 m
Slope Type	Mild	Normal Depth	1.13 m
Flow Regime	Subcritical	Critical Depth	0.73 m
Velocity Downstream	1.64 m/s	Critical Slope	0.003711 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 2000 mm	Rise	2.00 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	208.03 m	Upstream Velocity Head	0.14 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	207.79 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	8.0 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_Check & Reg_New

Analysis Component			
Storm Event	Check	Discharge	10.9000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.8700 m³/s	Check Discharge	10.9000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.75 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 2000 mm Box	10.9000 m³/s	208.25 m	2.27 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_Check & Reg_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	208.25 m	Discharge	10.9000 m³/s
Inlet Control HW Elev.	208.09 m	Tailwater Elevation	207.75 m
Outlet Control HW Elev.	208.25 m	Control Type	Outlet Control
Headwater Depth/Height	0.81		
Grades			
Upstream Invert	206.63 m	Downstream Invert	206.55 m
Length	75.50 m	Constructed Slope	0.001060 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	1.20 m
Slope Type	Mild	Normal Depth	1.42 m
Flow Regime	Subcritical	Critical Depth	0.91 m
Velocity Downstream	2.27 m/s	Critical Slope	0.003755 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 2000 mm	Rise	2.00 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	208.25 m	Upstream Velocity Head	0.24 m
Ke	0.50	Entrance Loss	0.12 m
Inlet Control Properties			
Inlet Control HW Elev.	208.09 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	8.0 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	2.5100 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.5100 m³/s	Check Discharge	2.9100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	216.34 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1200 mm Box	2.5100 m³/s	216.95 m	1.16 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	216.95 m	Discharge	2.5100 m³/s
Inlet Control HW Elev.	216.86 m	Tailwater Elevation	216.34 m
Outlet Control HW Elev.	216.95 m	Control Type	Entrance Control
Headwater Depth/Height	0.60		
Grades			
Upstream Invert	216.22 m	Downstream Invert	215.62 m
Length	120.70 m	Constructed Slope	0.005000 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.72 m
Slope Type	Steep	Normal Depth	0.39 m
Flow Regime	N/A	Critical Depth	0.41 m
Velocity Downstream	1.16 m/s	Critical Slope	0.004097 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	216.95 m	Upstream Velocity Head	0.21 m
Ke	0.50	Entrance Loss	0.10 m
Inlet Control Properties			
Inlet Control HW Elev.	216.86 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	3.6 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	2.9100 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.5100 m³/s	Check Discharge	2.9100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	216.34 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1200 mm Box	2.9100 m³/s	217.02 m	1.34 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	217.02 m	Discharge	2.9100 m³/s
Inlet Control HW Elev.	216.93 m	Tailwater Elevation	216.34 m
Outlet Control HW Elev.	217.02 m	Control Type	Entrance Control
Headwater Depth/Height	0.67		
Grades			
Upstream Invert	216.22 m	Downstream Invert	215.62 m
Length	120.70 m	Constructed Slope	0.005000 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.72 m
Slope Type	Steep	Normal Depth	0.43 m
Flow Regime	N/A	Critical Depth	0.46 m
Velocity Downstream	1.34 m/s	Critical Slope	0.004084 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	217.02 m	Upstream Velocity Head	0.23 m
Ke	0.50	Entrance Loss	0.11 m
Inlet Control Properties			
Inlet Control HW Elev.	216.93 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	3.6 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-Check_New

Analysis Component			
Storm Event	Design	Discharge	3.7900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.7900 m³/s	Check Discharge	3.9100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	216.34 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1200 mm Box	3.7900 m³/s	217.18 m	1.75 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	217.18 m	Discharge	3.7900 m³/s
Inlet Control HW Elev.	217.06 m	Tailwater Elevation	216.34 m
Outlet Control HW Elev.	217.18 m	Control Type	Entrance Control
Headwater Depth/Height	0.80		
Grades			
Upstream Invert	216.22 m	Downstream Invert	215.62 m
Length	120.70 m	Constructed Slope	0.005000 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.72 m
Slope Type	Steep	Normal Depth	0.51 m
Flow Regime	N/A	Critical Depth	0.55 m
Velocity Downstream	1.75 m/s	Critical Slope	0.004084 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	217.18 m	Upstream Velocity Head	0.27 m
Ke	0.50	Entrance Loss	0.14 m
Inlet Control Properties			
Inlet Control HW Elev.	217.06 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	3.6 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-Check_New

Analysis Component			
Storm Event	Check	Discharge	3.9100 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.7900 m³/s	Check Discharge	3.9100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	216.34 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1200 mm Box	3.9100 m³/s	217.20 m	1.80 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	217.20 m	Discharge	3.9100 m³/s
Inlet Control HW Elev.	217.08 m	Tailwater Elevation	216.34 m
Outlet Control HW Elev.	217.20 m	Control Type	Entrance Control
Headwater Depth/Height	0.81		
Grades			
Upstream Invert	216.22 m	Downstream Invert	215.62 m
Length	120.70 m	Constructed Slope	0.005000 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.72 m
Slope Type	Steep	Normal Depth	0.52 m
Flow Regime	N/A	Critical Depth	0.56 m
Velocity Downstream	1.80 m/s	Critical Slope	0.004086 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	217.20 m	Upstream Velocity Head	0.28 m
Ke	0.50	Entrance Loss	0.14 m
Inlet Control Properties			
Inlet Control HW Elev.	217.08 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	3.6 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_50-100yr-New

Analysis Component			
Storm Event	Design	Discharge	3.7800 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.7800 m³/s	Check Discharge	4.3800 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4500 x 1200 mm Box	3.7800 m³/s	215.75 m	0.86 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_50-100yr-New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	215.75 m	Discharge	3.7800 m³/s
Inlet Control HW Elev.	215.68 m	Tailwater Elevation	215.68 m
Outlet Control HW Elev.	215.75 m	Control Type	Outlet Control
Headwater Depth/Height	0.84		
Grades			
Upstream Invert	214.74 m	Downstream Invert	214.70 m
Length	44.40 m	Constructed Slope	0.000901 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.98 m
Slope Type	Mild	Normal Depth	0.66 m
Flow Regime	Subcritical	Critical Depth	0.42 m
Velocity Downstream	0.86 m/s	Critical Slope	0.003706 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.50 m
Section Size	4500 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	215.75 m	Upstream Velocity Head	0.04 m
Ke	0.50	Entrance Loss	0.02 m
Inlet Control Properties			
Inlet Control HW Elev.	215.68 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_50-100yr-New

Analysis Component			
Storm Event	Check	Discharge	4.3800 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.7800 m³/s	Check Discharge	4.3800 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4500 x 1200 mm Box	4.3800 m³/s	215.77 m	0.99 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_50-100yr-New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	215.77 m	Discharge	4.3800 m³/s
Inlet Control HW Elev.	215.68 m	Tailwater Elevation	215.68 m
Outlet Control HW Elev.	215.77 m	Control Type	Outlet Control
Headwater Depth/Height	0.86		
Grades			
Upstream Invert	214.74 m	Downstream Invert	214.70 m
Length	44.40 m	Constructed Slope	0.000901 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.98 m
Slope Type	Mild	Normal Depth	0.73 m
Flow Regime	Subcritical	Critical Depth	0.46 m
Velocity Downstream	0.99 m/s	Critical Slope	0.003664 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.50 m
Section Size	4500 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	215.77 m	Upstream Velocity Head	0.05 m
Ke	0.50	Entrance Loss	0.03 m
Inlet Control Properties			
Inlet Control HW Elev.	215.68 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_Check_New

Analysis Component			
Storm Event	Design	Discharge	5.7000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.7000 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4500 x 1200 mm Box	5.7000 m³/s	215.84 m	1.29 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	215.84 m	Discharge	5.7000 m³/s
Inlet Control HW Elev.	215.68 m	Tailwater Elevation	215.68 m
Outlet Control HW Elev.	215.84 m	Control Type	Outlet Control
Headwater Depth/Height	0.91		
Grades			
Upstream Invert	214.74 m	Downstream Invert	214.70 m
Length	44.40 m	Constructed Slope	0.000901 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.98 m
Slope Type	Mild	Normal Depth	0.87 m
Flow Regime	Subcritical	Critical Depth	0.55 m
Velocity Downstream	1.29 m/s	Critical Slope	0.003606 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.50 m
Section Size	4500 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	215.84 m	Upstream Velocity Head	0.09 m
Ke	0.50	Entrance Loss	0.04 m
Inlet Control Properties			
Inlet Control HW Elev.	215.68 m	Flow Control	N/A
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	3.7800 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.7800 m³/s	Check Discharge	4.3800 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.15 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-8500 x 900 mm Box	3.7800 m³/s	215.43 m	0.82 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	215.43 m	Discharge	3.7800 m³/s
Inlet Control HW Elev.	215.37 m	Tailwater Elevation	215.15 m
Outlet Control HW Elev.	215.43 m	Control Type	Entrance Control
Headwater Depth/Height	0.53		
Grades			
Upstream Invert	214.95 m	Downstream Invert	214.61 m
Length	27.60 m	Constructed Slope	0.012319 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.54 m
Slope Type	Steep	Normal Depth	0.19 m
Flow Regime	N/A	Critical Depth	0.27 m
Velocity Downstream	0.82 m/s	Critical Slope	0.003698 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	8.50 m
Section Size	8500 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	215.43 m	Upstream Velocity Head	0.14 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	215.37 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	7.7 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	4.3800 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.7800 m³/s	Check Discharge	4.3800 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.15 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-8500 x 900 mm Box	4.3800 m³/s	215.48 m	0.95 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	215.48 m	Discharge	4.3800 m³/s
Inlet Control HW Elev.	215.42 m	Tailwater Elevation	215.15 m
Outlet Control HW Elev.	215.48 m	Control Type	Entrance Control
Headwater Depth/Height	0.58		
Grades			
Upstream Invert	214.95 m	Downstream Invert	214.61 m
Length	27.60 m	Constructed Slope	0.012319 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.54 m
Slope Type	Steep	Normal Depth	0.21 m
Flow Regime	N/A	Critical Depth	0.30 m
Velocity Downstream	0.95 m/s	Critical Slope	0.003609 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	8.50 m
Section Size	8500 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	215.48 m	Upstream Velocity Head	0.15 m
Ke	0.50	Entrance Loss	0.08 m
Inlet Control Properties			
Inlet Control HW Elev.	215.42 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	7.7 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_Check_New

Analysis Component			
Storm Event	Design	Discharge	5.7000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.7000 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.15 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-8500 x 900 mm Box	5.7000 m³/s	215.58 m	1.24 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	215.58 m	Discharge	5.7000 m³/s
Inlet Control HW Elev.	215.51 m	Tailwater Elevation	215.15 m
Outlet Control HW Elev.	215.58 m	Control Type	Entrance Control
Headwater Depth/Height	0.70		
Grades			
Upstream Invert	214.95 m	Downstream Invert	214.61 m
Length	27.60 m	Constructed Slope	0.012319 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.54 m
Slope Type	Steep	Normal Depth	0.24 m
Flow Regime	N/A	Critical Depth	0.36 m
Velocity Downstream	1.24 m/s	Critical Slope	0.003461 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	8.50 m
Section Size	8500 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	215.58 m	Upstream Velocity Head	0.18 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	215.51 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	7.7 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_50-100yr

Analysis Component			
Storm Event	Design	Discharge	5.4600 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.4600 m³/s	Check Discharge	6.4700 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.64 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	5.4600 m³/s	210.07 m	1.73 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.07 m	Discharge	5.4600 m³/s
Inlet Control HW Elev.	209.85 m	Tailwater Elevation	209.64 m
Outlet Control HW Elev.	210.07 m	Control Type	Outlet Control
Headwater Depth/Height	0.81		
Grades			
Upstream Invert	208.85 m	Downstream Invert	208.74 m
Length	113.60 m	Constructed Slope	0.000968 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.63 m
Velocity Downstream	1.73 m/s	Critical Slope	0.006894 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.07 m	Upstream Velocity Head	0.11 m
Ke	0.50	Entrance Loss	0.06 m
Inlet Control Properties			
Inlet Control HW Elev.	209.85 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_50-100yr

Analysis Component			
Storm Event	Check	Discharge	6.4700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.4600 m³/s	Check Discharge	6.4700 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.64 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.4700 m³/s	210.19 m	2.05 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.19 m	Discharge	6.4700 m³/s
Inlet Control HW Elev.	209.98 m	Tailwater Elevation	209.64 m
Outlet Control HW Elev.	210.19 m	Control Type	Outlet Control
Headwater Depth/Height	0.89		
Grades			
Upstream Invert	208.85 m	Downstream Invert	208.74 m
Length	113.60 m	Constructed Slope	0.000968 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.70 m
Velocity Downstream	2.05 m/s	Critical Slope	0.006921 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.19 m	Upstream Velocity Head	0.14 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	209.98 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_Check & Reg

Analysis Component			
Storm Event	Design	Discharge	8.4000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	8.4000 m³/s	Check Discharge	8.9400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.64 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	8.4000 m³/s	210.41 m	2.67 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_Check & Reg

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.41 m	Discharge	8.4000 m³/s
Inlet Control HW Elev.	210.20 m	Tailwater Elevation	209.64 m
Outlet Control HW Elev.	210.41 m	Control Type	Outlet Control
Headwater Depth/Height	1.04		
Grades			
Upstream Invert	208.85 m	Downstream Invert	208.74 m
Length	113.60 m	Constructed Slope	0.000968 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.84 m
Velocity Downstream	2.67 m/s	Critical Slope	0.007010 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.41 m	Upstream Velocity Head	0.17 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	210.20 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_Check & Reg

Analysis Component			
Storm Event	Check	Discharge	8.9400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	8.4000 m³/s	Check Discharge	8.9400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.64 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	8.9400 m³/s	210.48 m	2.84 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_Check & Reg

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.48 m	Discharge	8.9400 m³/s
Inlet Control HW Elev.	210.26 m	Tailwater Elevation	209.64 m
Outlet Control HW Elev.	210.48 m	Control Type	Outlet Control
Headwater Depth/Height	1.08		
Grades			
Upstream Invert	208.85 m	Downstream Invert	208.74 m
Length	113.60 m	Constructed Slope	0.000968 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.87 m
Velocity Downstream	2.84 m/s	Critical Slope	0.007040 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.48 m	Upstream Velocity Head	0.18 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	210.26 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

12_SIM_EL_SIM_1_WC3-50-100YR_New

Analysis Component			
Storm Event	Design	Discharge	1.8800 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	1.8800 m³/s	Check Discharge	2.1500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	219.81 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1500 x 1200mm Box	1.8800 m³/s	220.35 m	1.74 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

12_SIM_EL_SIM_1_WC3-50-100YR_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	220.35 m	Discharge	1.8800 m ³ /s
Inlet Control HW Elev.	220.27 m	Tailwater Elevation	219.81 m
Outlet Control HW Elev.	220.35 m	Control Type	Outlet Control
Headwater Depth/Height	0.79		
Grades			
Upstream Invert	219.40 m	Downstream Invert	219.09 m
Length	120.80 m	Constructed Slope	0.002566 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.72 m
Slope Type	Mild	Normal Depth	0.72 m
Flow Regime	Subcritical	Critical Depth	0.54 m
Velocity Downstream	1.74 m/s	Critical Slope	0.005591 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	1.50 m
Section Size	1500 x 1200mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	220.35 m	Upstream Velocity Head	0.15 m
Ke	0.50	Entrance Loss	0.08 m
Inlet Control Properties			
Inlet Control HW Elev.	220.27 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	1.8 m ²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report
12_SIM_EL_SIM_1_WC3-50-100YR_New

Analysis Component			
Storm Event	Check	Discharge	2.1500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	1.8800 m³/s	Check Discharge	2.1500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	219.81 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1500 x 1200mm Box	2.1500 m³/s	220.44 m	1.99 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

12_SIM_EL_SIM_1_WC3-50-100YR_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	220.44 m	Discharge	2.1500 m³/s
Inlet Control HW Elev.	220.35 m	Tailwater Elevation	219.81 m
Outlet Control HW Elev.	220.44 m	Control Type	Outlet Control
Headwater Depth/Height	0.87		
Grades			
Upstream Invert	219.40 m	Downstream Invert	219.09 m
Length	120.80 m	Constructed Slope	0.002566 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.72 m
Slope Type	Mild	Normal Depth	0.80 m
Flow Regime	Subcritical	Critical Depth	0.59 m
Velocity Downstream	1.99 m/s	Critical Slope	0.005713 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	1.50 m
Section Size	1500 x 1200mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	220.44 m	Upstream Velocity Head	0.17 m
Ke	0.50	Entrance Loss	0.08 m
Inlet Control Properties			
Inlet Control HW Elev.	220.35 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	1.8 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

12_SIM_EL_SIM_1_WC3-Check_New

Analysis Component			
Storm Event	Design	Discharge	2.7900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.7900 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	219.81 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1500 x 1200mm Box	2.7900 m³/s	220.64 m	2.58 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

12_SIM_EL_SIM_1_WC3-Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	220.64 m	Discharge	2.7900 m³/s
Inlet Control HW Elev.	220.54 m	Tailwater Elevation	219.81 m
Outlet Control HW Elev.	220.64 m	Control Type	Outlet Control
Headwater Depth/Height	1.04		
Grades			
Upstream Invert	219.40 m	Downstream Invert	219.09 m
Length	120.80 m	Constructed Slope	0.002566 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.72 m
Slope Type	Mild	Normal Depth	0.98 m
Flow Regime	Subcritical	Critical Depth	0.71 m
Velocity Downstream	2.58 m/s	Critical Slope	0.006003 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	1.50 m
Section Size	1500 x 1200mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	220.64 m	Upstream Velocity Head	0.20 m
Ke	0.50	Entrance Loss	0.10 m
Inlet Control Properties			
Inlet Control HW Elev.	220.54 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	1.8 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_50-100yr_NewR1

Analysis Component			
Storm Event	Design	Discharge	6.1200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.80 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.1200 m³/s	213.38 m	1.17 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_50-100yr_NewR1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.38 m	Discharge	6.1200 m³/s
Inlet Control HW Elev.	213.24 m	Tailwater Elevation	212.80 m
Outlet Control HW Elev.	213.38 m	Control Type	Entrance Control
Headwater Depth/Height	0.79		
Grades			
Upstream Invert	212.19 m	Downstream Invert	211.30 m
Length	54.00 m	Constructed Slope	0.016481 m/m
Hydraulic Profile			
Profile Composite	Pressure Profile S1S2	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	0.42 m
Flow Regime	N/A	Critical Depth	0.68 m
Velocity Downstream	1.17 m/s	Critical Slope	0.003887 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.38 m	Upstream Velocity Head	0.34 m
Ke	0.50	Entrance Loss	0.17 m
Inlet Control Properties			
Inlet Control HW Elev.	213.24 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.3 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_50-100yr_NewR1

Analysis Component			
Storm Event	Check	Discharge	7.0500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.80 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	7.0500 m³/s	213.49 m	1.34 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_50-100yr_NewR1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.49 m	Discharge	7.0500 m³/s
Inlet Control HW Elev.	213.34 m	Tailwater Elevation	212.80 m
Outlet Control HW Elev.	213.49 m	Control Type	Entrance Control
Headwater Depth/Height	0.87		
Grades			
Upstream Invert	212.19 m	Downstream Invert	211.30 m
Length	54.00 m	Constructed Slope	0.016481 m/m
Hydraulic Profile			
Profile	Composite	Pressure Profile	S1S2
Slope Type	N/A	Depth, Downstream	1.50 m
Flow Regime	N/A	Normal Depth	0.46 m
Velocity Downstream	1.34 m/s	Critical Depth	0.75 m
		Critical Slope	0.003906 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.49 m	Upstream Velocity Head	0.37 m
Ke	0.50	Entrance Loss	0.19 m
Inlet Control Properties			
Inlet Control HW Elev.	213.34 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.3 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_Check_NewR1

Analysis Component			
Storm Event	Check	Discharge	9.1700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.1700 m³/s	Check Discharge	9.1700 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.80 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	9.1700 m³/s	213.74 m	1.75 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_Check_NewR1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.74 m	Discharge	9.1700 m³/s
Inlet Control HW Elev.	213.56 m	Tailwater Elevation	212.80 m
Outlet Control HW Elev.	213.74 m	Control Type	Entrance Control
Headwater Depth/Height	1.04		
Grades			
Upstream Invert	212.19 m	Downstream Invert	211.30 m
Length	54.00 m	Constructed Slope	0.016481 m/m
Hydraulic Profile			
Profile Composite	Pressure Profile S1S2	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	0.55 m
Flow Regime	N/A	Critical Depth	0.89 m
Velocity Downstream	1.75 m/s	Critical Slope	0.003968 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.74 m	Upstream Velocity Head	0.44 m
Ke	0.50	Entrance Loss	0.22 m
Inlet Control Properties			
Inlet Control HW Elev.	213.56 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.3 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report
14_SIM_EL_SIM_1_WC3.2-PR_50-100yrR1

Analysis Component			
Storm Event	Design	Discharge	6.1200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.17 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.1200 m³/s	212.35 m	1.17 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-PR_50-100yrR1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.35 m	Discharge	6.1200 m³/s
Inlet Control HW Elev.	212.17 m	Tailwater Elevation	212.17 m
Outlet Control HW Elev.	212.35 m	Control Type	Outlet Control
Headwater Depth/Height	0.97		
Grades			
Upstream Invert	210.90 m	Downstream Invert	210.67 m
Length	66.10 m	Constructed Slope	0.003480 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	0.86 m
Flow Regime	Subcritical	Critical Depth	0.68 m
Velocity Downstream	1.17 m/s	Critical Slope	0.006910 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.35 m	Upstream Velocity Head	0.09 m
Ke	0.50	Entrance Loss	0.04 m
Inlet Control Properties			
Inlet Control HW Elev.	212.17 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-PR_50-100yrR1

Analysis Component			
Storm Event	Check	Discharge	7.0500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.17 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	7.0500 m³/s	212.41 m	1.34 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-PR_50-100yrR1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.41 m	Discharge	7.0500 m³/s
Inlet Control HW Elev.	212.17 m	Tailwater Elevation	212.17 m
Outlet Control HW Elev.	212.41 m	Control Type	Outlet Control
Headwater Depth/Height	1.01		
Grades			
Upstream Invert	210.90 m	Downstream Invert	210.67 m
Length	66.10 m	Constructed Slope	0.003480 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	0.95 m
Flow Regime	Subcritical	Critical Depth	0.75 m
Velocity Downstream	1.34 m/s	Critical Slope	0.006943 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.41 m	Upstream Velocity Head	0.12 m
Ke	0.50	Entrance Loss	0.06 m
Inlet Control Properties			
Inlet Control HW Elev.	212.17 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-PR_50-CheckrR1

Analysis Component			
Storm Event	Check	Discharge	9.1700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.1700 m³/s	Check Discharge	9.1700 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.17 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	9.1700 m³/s	212.57 m	1.75 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-PR_50-CheckrR1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.57 m	Discharge	9.1700 m³/s
Inlet Control HW Elev.	212.33 m	Tailwater Elevation	212.17 m
Outlet Control HW Elev.	212.57 m	Control Type	Outlet Control
Headwater Depth/Height	1.11		
Grades			
Upstream Invert	210.90 m	Downstream Invert	210.67 m
Length	66.10 m	Constructed Slope	0.003480 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	1.14 m
Flow Regime	Subcritical	Critical Depth	0.89 m
Velocity Downstream	1.75 m/s	Critical Slope	0.007054 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.57 m	Upstream Velocity Head	0.18 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	212.33 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_50-100yr R1

Analysis Component			
Storm Event	Design	Discharge	6.1200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.1200 m³/s	211.84 m	1.94 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_50-100yr R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	211.84 m	Discharge	6.1200 m³/s
Inlet Control HW Elev.	211.75 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	211.84 m	Control Type	Outlet Control
Headwater Depth/Height	0.78		
Grades			
Upstream Invert	210.67 m	Downstream Invert	210.36 m
Length	93.70 m	Constructed Slope	0.003308 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.72 m
Flow Regime	Subcritical	Critical Depth	0.68 m
Velocity Downstream	1.94 m/s	Critical Slope	0.003887 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	211.84 m	Upstream Velocity Head	0.30 m
Ke	0.50	Entrance Loss	0.15 m
Inlet Control Properties			
Inlet Control HW Elev.	211.75 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_50-100yr R1

Analysis Component			
Storm Event	Check	Discharge	7.0500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.1200 m³/s	Check Discharge	7.0500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	7.0500 m³/s	211.96 m	2.24 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_50-100yr R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	211.96 m	Discharge	7.0500 m³/s
Inlet Control HW Elev.	211.86 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	211.96 m	Control Type	Outlet Control
Headwater Depth/Height	0.86		
Grades			
Upstream Invert	210.67 m	Downstream Invert	210.36 m
Length	93.70 m	Constructed Slope	0.003308 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.79 m
Flow Regime	Subcritical	Critical Depth	0.75 m
Velocity Downstream	2.24 m/s	Critical Slope	0.003906 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	211.96 m	Upstream Velocity Head	0.33 m
Ke	0.50	Entrance Loss	0.17 m
Inlet Control Properties			
Inlet Control HW Elev.	211.86 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_50-Check R1

Analysis Component			
Storm Event	Check	Discharge	9.1700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.1700 m³/s	Check Discharge	9.1700 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	9.1700 m³/s	212.20 m	2.91 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_50-Check R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.20 m	Discharge	9.1700 m³/s
Inlet Control HW Elev.	212.10 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	212.20 m	Control Type	Outlet Control
Headwater Depth/Height	1.02		
Grades			
Upstream Invert	210.67 m	Downstream Invert	210.36 m
Length	93.70 m	Constructed Slope	0.003308 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.95 m
Flow Regime	Subcritical	Critical Depth	0.89 m
Velocity Downstream	2.91 m/s	Critical Slope	0.003968 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.20 m	Upstream Velocity Head	0.39 m
Ke	0.50	Entrance Loss	0.20 m
Inlet Control Properties			
Inlet Control HW Elev.	212.10 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	6.7800 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.7800 m³/s	Check Discharge	7.8400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.95 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	6.7800 m³/s	210.39 m	1.34 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.39 m	Discharge	6.7800 m³/s
Inlet Control HW Elev.	210.24 m	Tailwater Elevation	209.95 m
Outlet Control HW Elev.	210.39 m	Control Type	Entrance Control
Headwater Depth/Height	0.60		
Grades			
Upstream Invert	209.12 m	Downstream Invert	208.50 m
Length	62.00 m	Constructed Slope	0.010000 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	1.45 m
Slope Type	Steep	Normal Depth	0.53 m
Flow Regime	N/A	Critical Depth	0.73 m
Velocity Downstream	1.34 m/s	Critical Slope	0.003899 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.39 m	Upstream Velocity Head	0.36 m
Ke	0.50	Entrance Loss	0.18 m
Inlet Control Properties			
Inlet Control HW Elev.	210.24 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	7.8400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.7800 m³/s	Check Discharge	7.8400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.95 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	7.8400 m³/s	210.52 m	1.54 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.52 m	Discharge	7.8400 m³/s
Inlet Control HW Elev.	210.36 m	Tailwater Elevation	209.95 m
Outlet Control HW Elev.	210.52 m	Control Type	Entrance Control
Headwater Depth/Height	0.67		
Grades			
Upstream Invert	209.12 m	Downstream Invert	208.50 m
Length	62.00 m	Constructed Slope	0.010000 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	1.45 m
Slope Type	Steep	Normal Depth	0.58 m
Flow Regime	N/A	Critical Depth	0.80 m
Velocity Downstream	1.54 m/s	Critical Slope	0.003926 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.52 m	Upstream Velocity Head	0.40 m
Ke	0.50	Entrance Loss	0.20 m
Inlet Control Properties			
Inlet Control HW Elev.	210.36 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_Check & Reg_New

Analysis Component			
Storm Event	Design	Discharge	10.1900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	10.1900 m³/s	Check Discharge	10.2500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.95 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	10.1900 m³/s	210.79 m	2.01 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_Check & Reg_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.79 m	Discharge	10.1900 m³/s
Inlet Control HW Elev.	210.59 m	Tailwater Elevation	209.95 m
Outlet Control HW Elev.	210.79 m	Control Type	Entrance Control
Headwater Depth/Height	0.79		
Grades			
Upstream Invert	209.12 m	Downstream Invert	208.50 m
Length	62.00 m	Constructed Slope	0.010000 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	1.45 m
Slope Type	Steep	Normal Depth	0.70 m
Flow Regime	N/A	Critical Depth	0.95 m
Velocity Downstream	2.01 m/s	Critical Slope	0.004003 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.79 m	Upstream Velocity Head	0.48 m
Ke	0.50	Entrance Loss	0.24 m
Inlet Control Properties			
Inlet Control HW Elev.	210.59 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_Check & Reg_New

Analysis Component			
Storm Event	Check	Discharge	10.2500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	10.1900 m³/s	Check Discharge	10.2500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.95 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	10.2500 m³/s	210.79 m	2.02 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_Check & Reg_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.79 m	Discharge	10.2500 m³/s
Inlet Control HW Elev.	210.60 m	Tailwater Elevation	209.95 m
Outlet Control HW Elev.	210.79 m	Control Type	Entrance Control
Headwater Depth/Height	0.80		
Grades			
Upstream Invert	209.12 m	Downstream Invert	208.50 m
Length	62.00 m	Constructed Slope	0.010000 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	1.45 m
Slope Type	Steep	Normal Depth	0.70 m
Flow Regime	N/A	Critical Depth	0.96 m
Velocity Downstream	2.02 m/s	Critical Slope	0.004005 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.79 m	Upstream Velocity Head	0.48 m
Ke	0.50	Entrance Loss	0.24 m
Inlet Control Properties			
Inlet Control HW Elev.	210.60 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	6.5900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.5900 m³/s	Check Discharge	7.6200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	210.50 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	6.5900 m³/s	210.58 m	0.90 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.58 m	Discharge	6.5900 m³/s
Inlet Control HW Elev.	210.50 m	Tailwater Elevation	210.50 m
Outlet Control HW Elev.	210.58 m	Control Type	Outlet Control
Headwater Depth/Height	0.99		
Grades			
Upstream Invert	208.50 m	Downstream Invert	208.40 m
Length	87.00 m	Constructed Slope	0.001149 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	2.10 m
Slope Type	Mild	Normal Depth	1.09 m
Flow Regime	Subcritical	Critical Depth	0.71 m
Velocity Downstream	0.90 m/s	Critical Slope	0.003895 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.58 m	Upstream Velocity Head	0.04 m
Ke	0.50	Entrance Loss	0.02 m
Inlet Control Properties			
Inlet Control HW Elev.	210.50 m	Flow Control	N/A
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	7.6200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.5900 m³/s	Check Discharge	7.6200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	210.50 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	7.6200 m³/s	210.61 m	1.04 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.61 m	Discharge	7.6200 m³/s
Inlet Control HW Elev.	210.50 m	Tailwater Elevation	210.50 m
Outlet Control HW Elev.	210.61 m	Control Type	Outlet Control
Headwater Depth/Height	1.00		
Grades			
Upstream Invert	208.50 m	Downstream Invert	208.40 m
Length	87.00 m	Constructed Slope	0.001149 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	2.10 m
Slope Type	Mild	Normal Depth	1.21 m
Flow Regime	Subcritical	Critical Depth	0.78 m
Velocity Downstream	1.04 m/s	Critical Slope	0.003920 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.61 m	Upstream Velocity Head	0.06 m
Ke	0.50	Entrance Loss	0.03 m
Inlet Control Properties			
Inlet Control HW Elev.	210.50 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_Check & Reg_New

Analysis Component			
Storm Event	Design	Discharge	9.9000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.9000 m³/s	Check Discharge	10.4000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	210.50 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	9.9000 m³/s	210.68 m	1.35 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_Check & Reg_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.68 m	Discharge	9.9000 m³/s
Inlet Control HW Elev.	210.50 m	Tailwater Elevation	210.50 m
Outlet Control HW Elev.	210.68 m	Control Type	Outlet Control
Headwater Depth/Height	1.04		
Grades			
Upstream Invert	208.50 m	Downstream Invert	208.40 m
Length	87.00 m	Constructed Slope	0.001149 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	2.10 m
Slope Type	Mild	Normal Depth	1.46 m
Flow Regime	Subcritical	Critical Depth	0.93 m
Velocity Downstream	1.35 m/s	Critical Slope	0.003993 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.68 m	Upstream Velocity Head	0.10 m
Ke	0.50	Entrance Loss	0.05 m
Inlet Control Properties			
Inlet Control HW Elev.	210.50 m	Flow Control	N/A
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_Check & Reg_New

Analysis Component			
Storm Event	Check	Discharge	10.4000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.9000 m³/s	Check Discharge	10.4000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	210.50 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	10.4000 m³/s	210.70 m	1.41 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_Check & Reg_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.70 m	Discharge	10.4000 m³/s
Inlet Control HW Elev.	210.50 m	Tailwater Elevation	210.50 m
Outlet Control HW Elev.	210.70 m	Control Type	Outlet Control
Headwater Depth/Height	1.05		
Grades			
Upstream Invert	208.50 m	Downstream Invert	208.40 m
Length	87.00 m	Constructed Slope	0.001149 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	2.10 m
Slope Type	Mild	Normal Depth	1.51 m
Flow Regime	Subcritical	Critical Depth	0.97 m
Velocity Downstream	1.41 m/s	Critical Slope	0.004011 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.70 m	Upstream Velocity Head	0.11 m
Ke	0.50	Entrance Loss	0.05 m
Inlet Control Properties			
Inlet Control HW Elev.	210.50 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-PR_50-100yr

Analysis Component			
Storm Event	Design	Discharge	5.8700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.8700 m³/s	Check Discharge	6.7200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	213.86 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	5.8700 m³/s	214.09 m	1.12 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	214.09 m	Discharge	5.8700 m³/s
Inlet Control HW Elev.	213.86 m	Tailwater Elevation	213.86 m
Outlet Control HW Elev.	214.09 m	Control Type	Outlet Control
Headwater Depth/Height	0.95		
Grades			
Upstream Invert	212.67 m	Downstream Invert	212.36 m
Length	126.00 m	Constructed Slope	0.002460 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	0.94 m
Flow Regime	Subcritical	Critical Depth	0.66 m
Velocity Downstream	1.12 m/s	Critical Slope	0.006903 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	214.09 m	Upstream Velocity Head	0.09 m
Ke	0.50	Entrance Loss	0.04 m
Inlet Control Properties			
Inlet Control HW Elev.	213.86 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report
18_SIM_EL_SIM_1_WC4-PR_50-100yr

Analysis Component			
Storm Event	Check	Discharge	6.7200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.8700 m³/s	Check Discharge	6.7200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	213.86 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.7200 m³/s	214.15 m	1.28 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	214.15 m	Discharge	6.7200 m³/s
Inlet Control HW Elev.	213.86 m	Tailwater Elevation	213.86 m
Outlet Control HW Elev.	214.15 m	Control Type	Outlet Control
Headwater Depth/Height	0.99		
Grades			
Upstream Invert	212.67 m	Downstream Invert	212.36 m
Length	126.00 m	Constructed Slope	0.002460 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	1.03 m
Flow Regime	Subcritical	Critical Depth	0.72 m
Velocity Downstream	1.28 m/s	Critical Slope	0.006930 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	214.15 m	Upstream Velocity Head	0.11 m
Ke	0.50	Entrance Loss	0.05 m
Inlet Control Properties			
Inlet Control HW Elev.	213.86 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-PR_Check

Analysis Component			
Storm Event	Design	Discharge	8.7400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	8.7400 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	213.90 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	8.7400 m³/s	214.44 m	1.66 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-PR_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	214.44 m	Discharge	8.7400 m³/s
Inlet Control HW Elev.	214.05 m	Tailwater Elevation	213.90 m
Outlet Control HW Elev.	214.44 m	Control Type	Outlet Control
Headwater Depth/Height	1.18		
Grades			
Upstream Invert	212.67 m	Downstream Invert	212.36 m
Length	126.00 m	Constructed Slope	0.002460 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	1.54 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.86 m
Velocity Downstream	1.66 m/s	Critical Slope	0.007029 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	214.44 m	Upstream Velocity Head	0.14 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	214.05 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

G.3 Future Condition – IDF 2096



Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_50-100yr

Analysis Component			
Storm Event	Design	Discharge	2.7000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.7000 m³/s	Check Discharge	3.0300 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	200.97 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1800 x 900 mm Box	2.7000 m³/s	201.89 m	1.67 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	201.89 m	Discharge	2.7000 m³/s
Inlet Control HW Elev.	201.75 m	Tailwater Elevation	200.97 m
Outlet Control HW Elev.	201.89 m	Control Type	Outlet Control
Headwater Depth/Height	1.25		
Grades			
Upstream Invert	200.76 m	Downstream Invert	200.07 m
Length	127.00 m	Constructed Slope	0.005433 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	0.90 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.61 m
Velocity Downstream	1.67 m/s	Critical Slope	0.009228 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	1.80 m
Section Size	1800 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	201.89 m	Upstream Velocity Head	0.14 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	201.75 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	1.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_50-100yr

Analysis Component			
Storm Event	Check	Discharge	3.0300 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.7000 m³/s	Check Discharge	3.0300 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	200.97 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1800 x 900 mm Box	3.0300 m³/s	202.12 m	1.87 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	202.12 m	Discharge	3.0300 m³/s
Inlet Control HW Elev.	201.85 m	Tailwater Elevation	200.97 m
Outlet Control HW Elev.	202.12 m	Control Type	Outlet Control
Headwater Depth/Height	1.51		
Grades			
Upstream Invert	200.76 m	Downstream Invert	200.07 m
Length	127.00 m	Constructed Slope	0.005433 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	0.90 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.66 m
Velocity Downstream	1.87 m/s	Critical Slope	0.009384 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	1.80 m
Section Size	1800 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	202.12 m	Upstream Velocity Head	0.18 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	201.85 m	Flow Control	Transition
Inlet Type	30 to 75° wingwall flares	Area Full	1.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_Check

Analysis Component			
Storm Event	Design	Discharge	3.9400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.9400 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	200.97 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1800 x 900 mm Box	3.9400 m³/s	202.92 m	2.43 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

01_SM_EB_SIM_2_WC1-PR_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	202.92 m	Discharge	3.9400 m³/s
Inlet Control HW Elev.	202.20 m	Tailwater Elevation	200.97 m
Outlet Control HW Elev.	202.92 m	Control Type	Outlet Control
Headwater Depth/Height	2.40		
Grades			
Upstream Invert	200.76 m	Downstream Invert	200.07 m
Length	127.00 m	Constructed Slope	0.005433 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	0.90 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.79 m
Velocity Downstream	2.43 m/s	Critical Slope	0.009822 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	1.80 m
Section Size	1800 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	202.92 m	Upstream Velocity Head	0.30 m
Ke	0.50	Entrance Loss	0.15 m
Inlet Control Properties			
Inlet Control HW Elev.	202.20 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	1.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1.2_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	3.3500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.3500 m³/s	Check Discharge	3.7900 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.07 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	3.3500 m³/s	207.34 m	1.65 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1.2_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.34 m	Discharge	3.3500 m³/s
Inlet Control HW Elev.	207.24 m	Tailwater Elevation	207.07 m
Outlet Control HW Elev.	207.34 m	Control Type	Outlet Control
Headwater Depth/Height	0.54		
Grades			
Upstream Invert	206.53 m	Downstream Invert	206.49 m
Length	43.60 m	Constructed Slope	0.000917 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.58 m
Slope Type	Mild	Normal Depth	0.90 m
Flow Regime	Subcritical	Critical Depth	0.45 m
Velocity Downstream	1.65 m/s	Critical Slope	0.006942 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.34 m	Upstream Velocity Head	0.10 m
Ke	0.20	Entrance Loss	0.02 m
Inlet Control Properties			
Inlet Control HW Elev.	207.24 m	Flow Control	Unsubmerged
Inlet Type	90° headwall w 45° bevels	Area Full	5.3 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1.2_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	3.7900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.3500 m³/s	Check Discharge	3.7900 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.07 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	3.7900 m³/s	207.39 m	1.87 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1.2_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.39 m	Discharge	3.7900 m³/s
Inlet Control HW Elev.	207.31 m	Tailwater Elevation	207.07 m
Outlet Control HW Elev.	207.39 m	Control Type	Outlet Control
Headwater Depth/Height	0.58		
Grades			
Upstream Invert	206.53 m	Downstream Invert	206.49 m
Length	43.60 m	Constructed Slope	0.000917 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.58 m
Slope Type	Mild	Normal Depth	0.98 m
Flow Regime	Subcritical	Critical Depth	0.49 m
Velocity Downstream	1.87 m/s	Critical Slope	0.006914 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.39 m	Upstream Velocity Head	0.11 m
Ke	0.20	Entrance Loss	0.02 m
Inlet Control Properties			
Inlet Control HW Elev.	207.31 m	Flow Control	Unsubmerged
Inlet Type	90° headwall w 45° bevels	Area Full	5.3 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1.2_Check_New

Analysis Component			
Storm Event	Design	Discharge	4.9300 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.9300 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.07 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	4.9300 m³/s	207.55 m	2.40 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1.2_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.55 m	Discharge	4.9300 m³/s
Inlet Control HW Elev.	207.45 m	Tailwater Elevation	207.07 m
Outlet Control HW Elev.	207.55 m	Control Type	Outlet Control
Headwater Depth/Height	0.68		
Grades			
Upstream Invert	206.53 m	Downstream Invert	206.49 m
Length	43.60 m	Constructed Slope	0.000917 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.59 m
Slope Type	Mild	Normal Depth	1.18 m
Flow Regime	Subcritical	Critical Depth	0.59 m
Velocity Downstream	2.40 m/s	Critical Slope	0.006890 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.55 m	Upstream Velocity Head	0.14 m
Ke	0.20	Entrance Loss	0.03 m
Inlet Control Properties			
Inlet Control HW Elev.	207.45 m	Flow Control	N/A
Inlet Type	90° headwall w 45° bevels	Area Full	5.3 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr

Analysis Component			
Storm Event	Design	Discharge	3.3500 m³/s

Peak Discharge Method: User-Specified			
Design Discharge	3.3500 m³/s	Check Discharge	3.7900 m³/s

Tailwater Conditions: Tailwater Rating

Discharge (m³/s)	TW Elev. (m)
4.5300	207.49
5.1900	207.58
6.7500	207.77

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1200 mm Box	3.3500 m³/s	207.88 m	2.39 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.88 m	Discharge	3.3500 m³/s
Inlet Control HW Elev.	207.58 m	Tailwater Elevation	0.00 m
Outlet Control HW Elev.	207.88 m	Control Type	Outlet Control
Headwater Depth/Height	1.02		
Grades			
Upstream Invert	206.66 m	Downstream Invert	206.53 m
Length	111.90 m	Constructed Slope	0.001162 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.58 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.58 m
Velocity Downstream	2.39 m/s	Critical Slope	0.007962 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.88 m	Upstream Velocity Head	0.12 m
Ke	0.20	Entrance Loss	0.02 m
Inlet Control Properties			
Inlet Control HW Elev.	207.58 m	Flow Control	N/A
Inlet Type	90° headwall w 45° bevels	Area Full	2.9 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr

Analysis Component			
Storm Event	Check	Discharge	3.7900 m³/s

Peak Discharge Method: User-Specified			
Design Discharge	3.3500 m³/s	Check Discharge	3.7900 m³/s

Tailwater Conditions: Tailwater Rating

Discharge (m³/s)	TW Elev. (m)
4.5300	207.49
5.1900	207.58
6.7500	207.77

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1200 mm Box	3.7900 m³/s	207.84 m	2.49 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.84 m	Discharge	3.7900 m³/s
Inlet Control HW Elev.	207.66 m	Tailwater Elevation	0.00 m
Outlet Control HW Elev.	207.84 m	Control Type	Outlet Control
Headwater Depth/Height	0.98		
Grades			
Upstream Invert	206.66 m	Downstream Invert	206.53 m
Length	111.90 m	Constructed Slope	0.001162 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.63 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.63 m
Velocity Downstream	2.49 m/s	Critical Slope	0.008038 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.84 m	Upstream Velocity Head	0.12 m
Ke	0.20	Entrance Loss	0.02 m
Inlet Control Properties			
Inlet Control HW Elev.	207.66 m	Flow Control	Unsubmerged
Inlet Type	90° headwall w 45° bevels	Area Full	2.9 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report
02_SM_EB_SIM_5_WC1_Check

Analysis Component			
Storm Event	Design	Discharge	4.9300 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.9300 m³/s	Check Discharge	0.0000 m³/s

Tailwater Conditions: Tailwater Rating	
Discharge (m³/s)	TW Elev. (m)
4.5300	207.49
5.1900	207.58
6.7500	207.77

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1200 mm Box	4.9300 m³/s	208.90 m	2.02 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

02_SM_EB_SIM_5_WC1_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	208.90 m	Discharge	4.9300 m³/s
Inlet Control HW Elev.	207.93 m	Tailwater Elevation	207.54 m
Outlet Control HW Elev.	208.90 m	Control Type	Outlet Control
Headwater Depth/Height	1.86		
Grades			
Upstream Invert	206.66 m	Downstream Invert	206.53 m
Length	111.90 m	Constructed Slope	0.001162 m/m
Hydraulic Profile			
Profile	CompositeM2PressureProfile	Depth, Downstream	1.01 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.75 m
Velocity Downstream	2.02 m/s	Critical Slope	0.008258 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	208.90 m	Upstream Velocity Head	0.27 m
Ke	0.20	Entrance Loss	0.05 m
Inlet Control Properties			
Inlet Control HW Elev.	207.93 m	Flow Control	N/A
Inlet Type	90° headwall w 45° bevels	Area Full	2.9 m²
K	0.49500	HDS 5 Chart	10
M	0.66700	HDS 5 Scale	2
C	0.03140	Equation Form	2
Y	0.82000		

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	4.0800 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.0800 m³/s	Check Discharge	4.6500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.87 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	4.0800 m³/s	213.56 m	1.28 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.56 m	Discharge	4.0800 m³/s
Inlet Control HW Elev.	213.46 m	Tailwater Elevation	212.87 m
Outlet Control HW Elev.	213.56 m	Control Type	Entrance Control
Headwater Depth/Height	0.78		
Grades			
Upstream Invert	212.40 m	Downstream Invert	211.54 m
Length	122.40 m	Constructed Slope	0.007026 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	1.33 m
Slope Type	Steep	Normal Depth	0.57 m
Flow Regime	N/A	Critical Depth	0.67 m
Velocity Downstream	1.28 m/s	Critical Slope	0.004551 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.56 m	Upstream Velocity Head	0.33 m
Ke	0.50	Entrance Loss	0.17 m
Inlet Control Properties			
Inlet Control HW Elev.	213.46 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	4.6500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.0800 m³/s	Check Discharge	4.6500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.87 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	4.6500 m³/s	213.67 m	1.46 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.67 m	Discharge	4.6500 m³/s
Inlet Control HW Elev.	213.56 m	Tailwater Elevation	212.87 m
Outlet Control HW Elev.	213.67 m	Control Type	Entrance Control
Headwater Depth/Height	0.85		
Grades			
Upstream Invert	212.40 m	Downstream Invert	211.54 m
Length	122.40 m	Constructed Slope	0.007026 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	1.33 m
Slope Type	Steep	Normal Depth	0.63 m
Flow Regime	N/A	Critical Depth	0.73 m
Velocity Downstream	1.46 m/s	Critical Slope	0.004614 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.67 m	Upstream Velocity Head	0.36 m
Ke	0.50	Entrance Loss	0.18 m
Inlet Control Properties			
Inlet Control HW Elev.	213.56 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_Check_New

Analysis Component			
Storm Event	Design	Discharge	6.0500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.0500 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.87 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	6.0500 m³/s	213.91 m	1.90 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

03_SIM_EL_SIM_1_WC1.1_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.91 m	Discharge	6.0500 m³/s
Inlet Control HW Elev.	213.79 m	Tailwater Elevation	212.87 m
Outlet Control HW Elev.	213.91 m	Control Type	Entrance Control
Headwater Depth/Height	1.01		
Grades			
Upstream Invert	212.40 m	Downstream Invert	211.54 m
Length	122.40 m	Constructed Slope	0.007026 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	1.33 m
Slope Type	Steep	Normal Depth	0.75 m
Flow Regime	N/A	Critical Depth	0.87 m
Velocity Downstream	1.90 m/s	Critical Slope	0.004776 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.91 m	Upstream Velocity Head	0.43 m
Ke	0.50	Entrance Loss	0.22 m
Inlet Control Properties			
Inlet Control HW Elev.	213.79 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	4.0800 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.0800 m³/s	Check Discharge	4.6500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.60 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	4.0800 m³/s	212.76 m	1.13 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.76 m	Discharge	4.0800 m³/s
Inlet Control HW Elev.	212.60 m	Tailwater Elevation	212.60 m
Outlet Control HW Elev.	212.76 m	Control Type	Outlet Control
Headwater Depth/Height	1.04		
Grades			
Upstream Invert	211.20 m	Downstream Invert	210.55 m
Length	78.50 m	Constructed Slope	0.008280 m/m
Hydraulic Profile			
Profile	CompositePressureProfileS1	Depth, Downstream	2.05 m
Slope Type	N/A	Normal Depth	0.54 m
Flow Regime	Subcritical	Critical Depth	0.67 m
Velocity Downstream	1.13 m/s	Critical Slope	0.004551 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.76 m	Upstream Velocity Head	0.07 m
Ke	0.50	Entrance Loss	0.03 m
Inlet Control Properties			
Inlet Control HW Elev.	212.60 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	4.6500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.0800 m³/s	Check Discharge	4.6500 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.60 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	4.6500 m³/s	212.81 m	1.29 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.81 m	Discharge	4.6500 m³/s
Inlet Control HW Elev.	212.60 m	Tailwater Elevation	212.60 m
Outlet Control HW Elev.	212.81 m	Control Type	Outlet Control
Headwater Depth/Height	1.07		
Grades			
Upstream Invert	211.20 m	Downstream Invert	210.55 m
Length	78.50 m	Constructed Slope	0.008280 m/m
Hydraulic Profile			
Profile	CompositePressureProfileS1	Depth, Downstream	2.05 m
Slope Type	N/A	Normal Depth	0.59 m
Flow Regime	Subcritical	Critical Depth	0.73 m
Velocity Downstream	1.29 m/s	Critical Slope	0.004614 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.81 m	Upstream Velocity Head	0.09 m
Ke	0.50	Entrance Loss	0.04 m
Inlet Control Properties			
Inlet Control HW Elev.	212.60 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_Check_New

Analysis Component			
Storm Event	Design	Discharge	6.0500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.0500 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.60 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-2400 x 1500 mm Box	6.0500 m³/s	212.96 m	1.68 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

04_SIM_EL_SIM_1_WC1.2_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.96 m	Discharge	6.0500 m³/s
Inlet Control HW Elev.	212.60 m	Tailwater Elevation	212.60 m
Outlet Control HW Elev.	212.96 m	Control Type	Outlet Control
Headwater Depth/Height	1.17		
Grades			
Upstream Invert	211.20 m	Downstream Invert	210.55 m
Length	78.50 m	Constructed Slope	0.008280 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	2.05 m
Slope Type	N/A	Normal Depth	0.71 m
Flow Regime	N/A	Critical Depth	0.87 m
Velocity Downstream	1.68 m/s	Critical Slope	0.004776 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	2.40 m
Section Size	2400 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.96 m	Upstream Velocity Head	0.14 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	212.60 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	3.6 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	8.2000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	8.2000 m³/s	Check Discharge	9.3000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.48 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 1800 mm Box	8.2000 m³/s	209.83 m	1.88 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.83 m	Discharge	8.2000 m³/s
Inlet Control HW Elev.	209.67 m	Tailwater Elevation	209.48 m
Outlet Control HW Elev.	209.83 m	Control Type	Outlet Control
Headwater Depth/Height	0.75		
Grades			
Upstream Invert	208.47 m	Downstream Invert	208.39 m
Length	57.40 m	Constructed Slope	0.001394 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	1.09 m
Slope Type	Mild	Normal Depth	1.05 m
Flow Regime	Subcritical	Critical Depth	0.75 m
Velocity Downstream	1.88 m/s	Critical Slope	0.003714 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 1800 mm	Rise	1.80 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.83 m	Upstream Velocity Head	0.18 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	209.67 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	7.2 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	9.3000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	8.2000 m³/s	Check Discharge	9.3000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.48 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 1800 mm Box	9.3000 m³/s	209.92 m	2.13 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.92 m	Discharge	9.3000 m³/s
Inlet Control HW Elev.	209.78 m	Tailwater Elevation	209.48 m
Outlet Control HW Elev.	209.92 m	Control Type	Outlet Control
Headwater Depth/Height	0.80		
Grades			
Upstream Invert	208.47 m	Downstream Invert	208.39 m
Length	57.40 m	Constructed Slope	0.001394 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	1.09 m
Slope Type	Mild	Normal Depth	1.15 m
Flow Regime	Subcritical	Critical Depth	0.82 m
Velocity Downstream	2.13 m/s	Critical Slope	0.003727 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 1800 mm	Rise	1.80 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.92 m	Upstream Velocity Head	0.22 m
Ke	0.50	Entrance Loss	0.11 m
Inlet Control Properties			
Inlet Control HW Elev.	209.78 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	7.2 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_Check_New

Analysis Component			
Storm Event	Design	Discharge	12.0900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	12.0900 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.48 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 1800 mm Box	12.0900 m³/s	210.16 m	2.77 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

05_SIM_EL_SIM_1_WC1.5_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.16 m	Discharge	12.0900 m³/s
Inlet Control HW Elev.	210.04 m	Tailwater Elevation	209.48 m
Outlet Control HW Elev.	210.16 m	Control Type	Outlet Control
Headwater Depth/Height	0.94		
Grades			
Upstream Invert	208.47 m	Downstream Invert	208.39 m
Length	57.40 m	Constructed Slope	0.001394 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	1.09 m
Slope Type	Mild	Normal Depth	1.39 m
Flow Regime	Subcritical	Critical Depth	0.98 m
Velocity Downstream	2.77 m/s	Critical Slope	0.003779 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 1800 mm	Rise	1.80 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.16 m	Upstream Velocity Head	0.31 m
Ke	0.50	Entrance Loss	0.16 m
Inlet Control Properties			
Inlet Control HW Elev.	210.04 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	7.2 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_50-100yr

Analysis Component			
Storm Event	Design	Discharge	5.5900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.5900 m³/s	Check Discharge	6.6600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	208.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1500 mm Box	5.5900 m³/s	209.67 m	2.07 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.67 m	Discharge	5.5900 m³/s
Inlet Control HW Elev.	209.54 m	Tailwater Elevation	208.68 m
Outlet Control HW Elev.	209.67 m	Control Type	Outlet Control
Headwater Depth/Height	0.84		
Grades			
Upstream Invert	208.41 m	Downstream Invert	207.78 m
Length	225.60 m	Constructed Slope	0.002793 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.99 m
Flow Regime	Subcritical	Critical Depth	0.71 m
Velocity Downstream	2.07 m/s	Critical Slope	0.007369 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.67 m	Upstream Velocity Head	0.18 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	209.54 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	4.5 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_50-100yr

Analysis Component			
Storm Event	Check	Discharge	6.6600 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.5900 m³/s	Check Discharge	6.6600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	208.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1500 mm Box	6.6600 m³/s	209.83 m	2.47 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	209.83 m	Discharge	6.6600 m³/s
Inlet Control HW Elev.	209.69 m	Tailwater Elevation	208.68 m
Outlet Control HW Elev.	209.83 m	Control Type	Outlet Control
Headwater Depth/Height	0.95		
Grades			
Upstream Invert	208.41 m	Downstream Invert	207.78 m
Length	225.60 m	Constructed Slope	0.002793 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	1.13 m
Flow Regime	Subcritical	Critical Depth	0.80 m
Velocity Downstream	2.47 m/s	Critical Slope	0.007465 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	209.83 m	Upstream Velocity Head	0.20 m
Ke	0.50	Entrance Loss	0.10 m
Inlet Control Properties			
Inlet Control HW Elev.	209.69 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	4.5 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_Check

Analysis Component			
Storm Event	Design	Discharge	8.6600 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	8.6600 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	208.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1500 mm Box	8.6600 m³/s	210.11 m	3.05 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

06_SIM_EL_SIM_1_WC1-PR_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.11 m	Discharge	8.6600 m³/s
Inlet Control HW Elev.	209.94 m	Tailwater Elevation	208.68 m
Outlet Control HW Elev.	210.11 m	Control Type	Outlet Control
Headwater Depth/Height	1.13		
Grades			
Upstream Invert	208.41 m	Downstream Invert	207.78 m
Length	225.60 m	Constructed Slope	0.002793 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.95 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.95 m
Velocity Downstream	3.05 m/s	Critical Slope	0.007671 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.11 m	Upstream Velocity Head	0.23 m
Ke	0.50	Entrance Loss	0.12 m
Inlet Control Properties			
Inlet Control HW Elev.	209.94 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	4.5 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	5.9300 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.9300 m³/s	Check Discharge	6.8800 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.75 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 2000 mm Box	5.9300 m³/s	207.91 m	1.24 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.91 m	Discharge	5.9300 m³/s
Inlet Control HW Elev.	207.75 m	Tailwater Elevation	207.75 m
Outlet Control HW Elev.	207.91 m	Control Type	Outlet Control
Headwater Depth/Height	0.64		
Grades			
Upstream Invert	206.63 m	Downstream Invert	206.55 m
Length	75.50 m	Constructed Slope	0.001060 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	1.20 m
Slope Type	Mild	Normal Depth	0.93 m
Flow Regime	Subcritical	Critical Depth	0.61 m
Velocity Downstream	1.24 m/s	Critical Slope	0.003711 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 2000 mm	Rise	2.00 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.91 m	Upstream Velocity Head	0.08 m
Ke	0.50	Entrance Loss	0.04 m
Inlet Control Properties			
Inlet Control HW Elev.	207.75 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	8.0 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	6.8800 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	5.9300 m³/s	Check Discharge	6.8800 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.75 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 2000 mm Box	6.8800 m³/s	207.96 m	1.43 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	207.96 m	Discharge	6.8800 m³/s
Inlet Control HW Elev.	207.75 m	Tailwater Elevation	207.75 m
Outlet Control HW Elev.	207.96 m	Control Type	Outlet Control
Headwater Depth/Height	0.67		
Grades			
Upstream Invert	206.63 m	Downstream Invert	206.55 m
Length	75.50 m	Constructed Slope	0.001060 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	1.20 m
Slope Type	Mild	Normal Depth	1.03 m
Flow Regime	Subcritical	Critical Depth	0.67 m
Velocity Downstream	1.43 m/s	Critical Slope	0.003707 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 2000 mm	Rise	2.00 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	207.96 m	Upstream Velocity Head	0.11 m
Ke	0.50	Entrance Loss	0.06 m
Inlet Control Properties			
Inlet Control HW Elev.	207.75 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	8.0 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_Check_New

Analysis Component			
Storm Event	Design	Discharge	8.9400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	8.9400 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	207.75 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4000 x 2000 mm Box	8.9400 m³/s	208.10 m	1.86 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

07_SIM_EL_SIM_1_WC1.6_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	208.10 m	Discharge	8.9400 m³/s
Inlet Control HW Elev.	207.90 m	Tailwater Elevation	207.75 m
Outlet Control HW Elev.	208.10 m	Control Type	Outlet Control
Headwater Depth/Height	0.73		
Grades			
Upstream Invert	206.63 m	Downstream Invert	206.55 m
Length	75.50 m	Constructed Slope	0.001060 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	1.20 m
Slope Type	Mild	Normal Depth	1.23 m
Flow Regime	Subcritical	Critical Depth	0.80 m
Velocity Downstream	1.86 m/s	Critical Slope	0.003722 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.00 m
Section Size	4000 x 2000 mm	Rise	2.00 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	208.10 m	Upstream Velocity Head	0.17 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	207.90 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	8.0 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	4.7700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.7700 m³/s	Check Discharge	5.3900 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	216.34 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1200 mm Box	4.7700 m³/s	217.33 m	2.20 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	217.33 m	Discharge	4.7700 m³/s
Inlet Control HW Elev.	217.20 m	Tailwater Elevation	216.34 m
Outlet Control HW Elev.	217.33 m	Control Type	Entrance Control
Headwater Depth/Height	0.93		
Grades			
Upstream Invert	216.22 m	Downstream Invert	215.62 m
Length	120.70 m	Constructed Slope	0.005000 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.72 m
Slope Type	Steep	Normal Depth	0.60 m
Flow Regime	N/A	Critical Depth	0.64 m
Velocity Downstream	2.20 m/s	Critical Slope	0.004111 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	217.33 m	Upstream Velocity Head	0.32 m
Ke	0.50	Entrance Loss	0.16 m
Inlet Control Properties			
Inlet Control HW Elev.	217.20 m	Flow Control	N/A
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	3.6 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	5.3900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	4.7700 m³/s	Check Discharge	5.3900 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	216.34 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1200 mm Box	5.3900 m³/s	217.43 m	2.48 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	217.43 m	Discharge	5.3900 m³/s
Inlet Control HW Elev.	217.29 m	Tailwater Elevation	216.34 m
Outlet Control HW Elev.	217.43 m	Control Type	Entrance Control
Headwater Depth/Height	1.01		
Grades			
Upstream Invert	216.22 m	Downstream Invert	215.62 m
Length	120.70 m	Constructed Slope	0.005000 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.72 m
Slope Type	Steep	Normal Depth	0.65 m
Flow Regime	N/A	Critical Depth	0.69 m
Velocity Downstream	2.48 m/s	Critical Slope	0.004136 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	217.43 m	Upstream Velocity Head	0.35 m
Ke	0.50	Entrance Loss	0.17 m
Inlet Control Properties			
Inlet Control HW Elev.	217.29 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	3.6 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-Check_New

Analysis Component			
Storm Event	Design	Discharge	7.0000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.0000 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	216.34 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3000 x 1200 mm Box	7.0000 m³/s	217.66 m	3.01 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

08_SIM_EL_SIM_1_WC2-Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	217.66 m	Discharge	7.0000 m³/s
Inlet Control HW Elev.	217.49 m	Tailwater Elevation	216.34 m
Outlet Control HW Elev.	217.66 m	Control Type	Entrance Control
Headwater Depth/Height	1.20		
Grades			
Upstream Invert	216.22 m	Downstream Invert	215.62 m
Length	120.70 m	Constructed Slope	0.005000 m/m
Hydraulic Profile			
Profile	S2	Depth, Downstream	0.77 m
Slope Type	Steep	Normal Depth	0.77 m
Flow Regime	Supercritical	Critical Depth	0.82 m
Velocity Downstream	3.01 m/s	Critical Slope	0.004218 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.00 m
Section Size	3000 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	217.66 m	Upstream Velocity Head	0.41 m
Ke	0.50	Entrance Loss	0.21 m
Inlet Control Properties			
Inlet Control HW Elev.	217.49 m	Flow Control	N/A
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	3.6 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_50-100yr-New

Analysis Component			
Storm Event	Design	Discharge	6.4900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.4900 m³/s	Check Discharge	7.3600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4500 x 1200 mm Box	6.4900 m³/s	215.88 m	1.47 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_50-100yr-New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	215.88 m	Discharge	6.4900 m³/s
Inlet Control HW Elev.	215.68 m	Tailwater Elevation	215.68 m
Outlet Control HW Elev.	215.88 m	Control Type	Outlet Control
Headwater Depth/Height	0.95		
Grades			
Upstream Invert	214.74 m	Downstream Invert	214.70 m
Length	44.40 m	Constructed Slope	0.000901 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.98 m
Slope Type	Mild	Normal Depth	0.95 m
Flow Regime	Subcritical	Critical Depth	0.60 m
Velocity Downstream	1.47 m/s	Critical Slope	0.003587 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.50 m
Section Size	4500 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	215.88 m	Upstream Velocity Head	0.11 m
Ke	0.50	Entrance Loss	0.06 m
Inlet Control Properties			
Inlet Control HW Elev.	215.68 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_50-100yr-New

Analysis Component			
Storm Event	Check	Discharge	7.3600 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.4900 m³/s	Check Discharge	7.3600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4500 x 1200 mm Box	7.3600 m³/s	215.94 m	1.67 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_50-100yr-New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	215.94 m	Discharge	7.3600 m³/s
Inlet Control HW Elev.	215.74 m	Tailwater Elevation	215.68 m
Outlet Control HW Elev.	215.94 m	Control Type	Outlet Control
Headwater Depth/Height	1.00		
Grades			
Upstream Invert	214.74 m	Downstream Invert	214.70 m
Length	44.40 m	Constructed Slope	0.000901 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.98 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.65 m
Velocity Downstream	1.67 m/s	Critical Slope	0.003573 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.50 m
Section Size	4500 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	215.94 m	Upstream Velocity Head	0.14 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	215.74 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_Check_New

Analysis Component			
Storm Event	Design	Discharge	9.5700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.5700 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.68 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-4500 x 1200 mm Box	9.5700 m³/s	216.10 m	2.17 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

09_SIM_EL_SIM_1_WC2.1_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	216.10 m	Discharge	9.5700 m³/s
Inlet Control HW Elev.	215.93 m	Tailwater Elevation	215.68 m
Outlet Control HW Elev.	216.10 m	Control Type	Outlet Control
Headwater Depth/Height	1.13		
Grades			
Upstream Invert	214.74 m	Downstream Invert	214.70 m
Length	44.40 m	Constructed Slope	0.000901 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.98 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.77 m
Velocity Downstream	2.17 m/s	Critical Slope	0.003564 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	4.50 m
Section Size	4500 x 1200 mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	216.10 m	Upstream Velocity Head	0.21 m
Ke	0.50	Entrance Loss	0.11 m
Inlet Control Properties			
Inlet Control HW Elev.	215.93 m	Flow Control	N/A
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	6.4900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.4900 m³/s	Check Discharge	7.3600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.15 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-8500 x 900 mm Box	6.4900 m³/s	215.63 m	1.41 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	215.63 m	Discharge	6.4900 m³/s
Inlet Control HW Elev.	215.57 m	Tailwater Elevation	215.15 m
Outlet Control HW Elev.	215.63 m	Control Type	Entrance Control
Headwater Depth/Height	0.76		
Grades			
Upstream Invert	214.95 m	Downstream Invert	214.61 m
Length	27.60 m	Constructed Slope	0.012319 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.54 m
Slope Type	Steep	Normal Depth	0.26 m
Flow Regime	N/A	Critical Depth	0.39 m
Velocity Downstream	1.41 m/s	Critical Slope	0.003395 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	8.50 m
Section Size	8500 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	215.63 m	Upstream Velocity Head	0.20 m
Ke	0.50	Entrance Loss	0.10 m
Inlet Control Properties			
Inlet Control HW Elev.	215.57 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	7.7 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	7.3600 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.4900 m³/s	Check Discharge	7.3600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.15 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-8500 x 900 mm Box	7.3600 m³/s	215.69 m	1.60 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	215.69 m	Discharge	7.3600 m³/s
Inlet Control HW Elev.	215.62 m	Tailwater Elevation	215.15 m
Outlet Control HW Elev.	215.69 m	Control Type	Entrance Control
Headwater Depth/Height	0.83		
Grades			
Upstream Invert	214.95 m	Downstream Invert	214.61 m
Length	27.60 m	Constructed Slope	0.012319 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.54 m
Slope Type	Steep	Normal Depth	0.28 m
Flow Regime	N/A	Critical Depth	0.42 m
Velocity Downstream	1.60 m/s	Critical Slope	0.003333 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	8.50 m
Section Size	8500 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	215.69 m	Upstream Velocity Head	0.21 m
Ke	0.50	Entrance Loss	0.11 m
Inlet Control Properties			
Inlet Control HW Elev.	215.62 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	7.7 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_Check_New

Analysis Component			
Storm Event	Design	Discharge	9.5700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.5700 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	215.15 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-8500 x 900 mm Box	9.5700 m³/s	215.83 m	2.08 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

10_SIM_EL_SIM_1_WC2.2_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	215.83 m	Discharge	9.5700 m³/s
Inlet Control HW Elev.	215.76 m	Tailwater Elevation	215.15 m
Outlet Control HW Elev.	215.83 m	Control Type	Entrance Control
Headwater Depth/Height	0.98		
Grades			
Upstream Invert	214.95 m	Downstream Invert	214.61 m
Length	27.60 m	Constructed Slope	0.012319 m/m
Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.54 m
Slope Type	Steep	Normal Depth	0.33 m
Flow Regime	N/A	Critical Depth	0.51 m
Velocity Downstream	2.08 m/s	Critical Slope	0.003218 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	8.50 m
Section Size	8500 x 900 mm	Rise	0.90 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	215.83 m	Upstream Velocity Head	0.25 m
Ke	0.50	Entrance Loss	0.13 m
Inlet Control Properties			
Inlet Control HW Elev.	215.76 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	7.7 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_50-100yr

Analysis Component			
Storm Event	Design	Discharge	6.2700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.2700 m³/s	Check Discharge	7.3000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.64 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.2700 m³/s	210.16 m	1.99 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.16 m	Discharge	6.2700 m³/s
Inlet Control HW Elev.	209.95 m	Tailwater Elevation	209.64 m
Outlet Control HW Elev.	210.16 m	Control Type	Outlet Control
Headwater Depth/Height	0.88		
Grades			
Upstream Invert	208.85 m	Downstream Invert	208.74 m
Length	113.60 m	Constructed Slope	0.000968 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.69 m
Velocity Downstream	1.99 m/s	Critical Slope	0.006914 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.16 m	Upstream Velocity Head	0.13 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	209.95 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report
11_SIM_EL_SIM_1_WC2.3-PR_50-100yr

Analysis Component			
Storm Event	Check	Discharge	7.3000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.2700 m³/s	Check Discharge	7.3000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.64 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	7.3000 m³/s	210.28 m	2.32 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.28 m	Discharge	7.3000 m³/s
Inlet Control HW Elev.	210.07 m	Tailwater Elevation	209.64 m
Outlet Control HW Elev.	210.28 m	Control Type	Outlet Control
Headwater Depth/Height	0.96		
Grades			
Upstream Invert	208.85 m	Downstream Invert	208.74 m
Length	113.60 m	Constructed Slope	0.000968 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.76 m
Velocity Downstream	2.32 m/s	Critical Slope	0.006954 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.28 m	Upstream Velocity Head	0.15 m
Ke	0.50	Entrance Loss	0.08 m
Inlet Control Properties			
Inlet Control HW Elev.	210.07 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_Check

Analysis Component			
Storm Event	Design	Discharge	9.4900 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.4900 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	209.64 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	9.4900 m³/s	210.54 m	2.98 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

11_SIM_EL_SIM_1_WC2.3-PR_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.54 m	Discharge	9.4900 m³/s
Inlet Control HW Elev.	210.32 m	Tailwater Elevation	209.64 m
Outlet Control HW Elev.	210.54 m	Control Type	Outlet Control
Headwater Depth/Height	1.13		
Grades			
Upstream Invert	208.85 m	Downstream Invert	208.74 m
Length	113.60 m	Constructed Slope	0.000968 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.91 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.91 m
Velocity Downstream	2.98 m/s	Critical Slope	0.007073 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.54 m	Upstream Velocity Head	0.19 m
Ke	0.50	Entrance Loss	0.10 m
Inlet Control Properties			
Inlet Control HW Elev.	210.32 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

12_SIM_EL_SIM_1_WC3-50-100YR_New

Analysis Component			
Storm Event	Design	Discharge	2.3200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.3200 m³/s	Check Discharge	2.6300 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	219.81 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1500 x 1200mm Box	2.3200 m³/s	220.50 m	2.15 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

12_SIM_EL_SIM_1_WC3-50-100YR_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	220.50 m	Discharge	2.3200 m³/s
Inlet Control HW Elev.	220.40 m	Tailwater Elevation	219.81 m
Outlet Control HW Elev.	220.50 m	Control Type	Outlet Control
Headwater Depth/Height	0.91		
Grades			
Upstream Invert	219.40 m	Downstream Invert	219.09 m
Length	120.80 m	Constructed Slope	0.002566 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.72 m
Slope Type	Mild	Normal Depth	0.85 m
Flow Regime	Subcritical	Critical Depth	0.62 m
Velocity Downstream	2.15 m/s	Critical Slope	0.005790 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	1.50 m
Section Size	1500 x 1200mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	220.50 m	Upstream Velocity Head	0.18 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	220.40 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	1.8 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

12_SIM_EL_SIM_1_WC3-50-100YR_New

Analysis Component			
Storm Event	Check	Discharge	2.6300 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	2.3200 m³/s	Check Discharge	2.6300 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	219.81 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1500 x 1200mm Box	2.6300 m³/s	220.59 m	2.44 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

12_SIM_EL_SIM_1_WC3-50-100YR_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	220.59 m	Discharge	2.6300 m³/s
Inlet Control HW Elev.	220.49 m	Tailwater Elevation	219.81 m
Outlet Control HW Elev.	220.59 m	Control Type	Outlet Control
Headwater Depth/Height	0.99		
Grades			
Upstream Invert	219.40 m	Downstream Invert	219.09 m
Length	120.80 m	Constructed Slope	0.002566 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.72 m
Slope Type	Mild	Normal Depth	0.93 m
Flow Regime	Subcritical	Critical Depth	0.68 m
Velocity Downstream	2.44 m/s	Critical Slope	0.005931 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	1.50 m
Section Size	1500 x 1200mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	220.59 m	Upstream Velocity Head	0.19 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	220.49 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	1.8 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

12_SIM_EL_SIM_1_WC3-Check_New

Analysis Component			
Storm Event	Design	Discharge	3.4200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	3.4200 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	219.81 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-1500 x 1200mm Box	3.4200 m³/s	220.83 m	2.82 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

12_SIM_EL_SIM_1_WC3-Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	220.83 m	Discharge	3.4200 m³/s
Inlet Control HW Elev.	220.71 m	Tailwater Elevation	219.81 m
Outlet Control HW Elev.	220.83 m	Control Type	Outlet Control
Headwater Depth/Height	1.19		
Grades			
Upstream Invert	219.40 m	Downstream Invert	219.09 m
Length	120.80 m	Constructed Slope	0.002566 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.81 m
Slope Type	Mild	Normal Depth	N/A m
Flow Regime	Subcritical	Critical Depth	0.81 m
Velocity Downstream	2.82 m/s	Critical Slope	0.006283 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	1.50 m
Section Size	1500 x 1200mm	Rise	1.20 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	220.83 m	Upstream Velocity Head	0.22 m
Ke	0.50	Entrance Loss	0.11 m
Inlet Control Properties			
Inlet Control HW Elev.	220.71 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	1.8 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_50-100yr_New-R1

Analysis Component			
Storm Event	Design	Discharge	6.8700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.8700 m³/s	Check Discharge	7.8600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.80 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.8700 m³/s	213.47 m	1.31 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_50-100yr_New-R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.47 m	Discharge	6.8700 m³/s
Inlet Control HW Elev.	213.32 m	Tailwater Elevation	212.80 m
Outlet Control HW Elev.	213.47 m	Control Type	Entrance Control
Headwater Depth/Height	0.85		
Grades			
Upstream Invert	212.19 m	Downstream Invert	211.30 m
Length	54.00 m	Constructed Slope	0.016481 m/m
Hydraulic Profile			
Profile Composite	Pressure Profile S1S2	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	0.45 m
Flow Regime	N/A	Critical Depth	0.73 m
Velocity Downstream	1.31 m/s	Critical Slope	0.003901 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.47 m	Upstream Velocity Head	0.37 m
Ke	0.50	Entrance Loss	0.18 m
Inlet Control Properties			
Inlet Control HW Elev.	213.32 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.3 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_50-100yr_New-R1

Analysis Component			
Storm Event	Check	Discharge	7.8600 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.8700 m³/s	Check Discharge	7.8600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.80 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	7.8600 m³/s	213.59 m	1.50 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_50-100yr_New-R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.59 m	Discharge	7.8600 m³/s
Inlet Control HW Elev.	213.43 m	Tailwater Elevation	212.80 m
Outlet Control HW Elev.	213.59 m	Control Type	Entrance Control
Headwater Depth/Height	0.93		
Grades			
Upstream Invert	212.19 m	Downstream Invert	211.30 m
Length	54.00 m	Constructed Slope	0.016481 m/m
Hydraulic Profile			
Profile Composite	Pressure Profile S1S2	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	0.50 m
Flow Regime	N/A	Critical Depth	0.80 m
Velocity Downstream	1.50 m/s	Critical Slope	0.003927 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.59 m	Upstream Velocity Head	0.40 m
Ke	0.50	Entrance Loss	0.20 m
Inlet Control Properties			
Inlet Control HW Elev.	213.43 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.3 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_Check_New-R1

Analysis Component			
Storm Event	Design	Discharge	10.2200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	10.2200 m³/s	Check Discharge	10.2200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.80 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	10.2200 m³/s	213.86 m	1.95 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

13_SIM_EL_SIM_1_WC3.1_Check_New-R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	213.86 m	Discharge	10.2200 m³/s
Inlet Control HW Elev.	213.67 m	Tailwater Elevation	212.80 m
Outlet Control HW Elev.	213.86 m	Control Type	Entrance Control
Headwater Depth/Height	1.11		
Grades			
Upstream Invert	212.19 m	Downstream Invert	211.30 m
Length	54.00 m	Constructed Slope	0.016481 m/m
Hydraulic Profile			
Profile Composite	Pressure Profile S1S2	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	0.59 m
Flow Regime	N/A	Critical Depth	0.95 m
Velocity Downstream	1.95 m/s	Critical Slope	0.004004 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	213.86 m	Upstream Velocity Head	0.48 m
Ke	0.50	Entrance Loss	0.24 m
Inlet Control Properties			
Inlet Control HW Elev.	213.67 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	5.3 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-PR_50-100yr-R1

Analysis Component			
Storm Event	Design	Discharge	6.8700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.8700 m³/s	Check Discharge	7.8600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.17 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.8700 m³/s	212.40 m	1.31 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-PR_50-100yr-R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.40 m	Discharge	6.8700 m³/s
Inlet Control HW Elev.	212.17 m	Tailwater Elevation	212.17 m
Outlet Control HW Elev.	212.40 m	Control Type	Outlet Control
Headwater Depth/Height	1.00		
Grades			
Upstream Invert	210.90 m	Downstream Invert	210.67 m
Length	66.10 m	Constructed Slope	0.003480 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	0.93 m
Flow Regime	Subcritical	Critical Depth	0.73 m
Velocity Downstream	1.31 m/s	Critical Slope	0.006936 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.40 m	Upstream Velocity Head	0.11 m
Ke	0.50	Entrance Loss	0.06 m
Inlet Control Properties			
Inlet Control HW Elev.	212.17 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-PR_50-100yr-R1

Analysis Component			
Storm Event	Check	Discharge	7.8600 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.8700 m³/s	Check Discharge	7.8600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.17 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	7.8600 m³/s	212.47 m	1.50 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-PR_50-100yr-R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.47 m	Discharge	7.8600 m³/s
Inlet Control HW Elev.	212.19 m	Tailwater Elevation	212.17 m
Outlet Control HW Elev.	212.47 m	Control Type	Outlet Control
Headwater Depth/Height	1.04		
Grades			
Upstream Invert	210.90 m	Downstream Invert	210.67 m
Length	66.10 m	Constructed Slope	0.003480 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	1.02 m
Flow Regime	Subcritical	Critical Depth	0.80 m
Velocity Downstream	1.50 m/s	Critical Slope	0.006981 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.47 m	Upstream Velocity Head	0.14 m
Ke	0.50	Entrance Loss	0.07 m
Inlet Control Properties			
Inlet Control HW Elev.	212.19 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-PR_Checkr-R1

Analysis Component			
Storm Event	Design	Discharge	10.2200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	10.2200 m³/s	Check Discharge	10.2200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	212.17 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	10.2200 m³/s	212.70 m	1.95 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

14_SIM_EL_SIM_1_WC3.2-PR_Checkr-R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.70 m	Discharge	10.2200 m³/s
Inlet Control HW Elev.	212.44 m	Tailwater Elevation	212.17 m
Outlet Control HW Elev.	212.70 m	Control Type	Outlet Control
Headwater Depth/Height	1.20		
Grades			
Upstream Invert	210.90 m	Downstream Invert	210.67 m
Length	66.10 m	Constructed Slope	0.003480 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.95 m
Velocity Downstream	1.95 m/s	Critical Slope	0.007118 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.70 m	Upstream Velocity Head	0.19 m
Ke	0.50	Entrance Loss	0.10 m
Inlet Control Properties			
Inlet Control HW Elev.	212.44 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_50-100yr-R1

Analysis Component			
Storm Event	Design	Discharge	6.8700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.8700 m³/s	Check Discharge	7.8600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.8700 m³/s	211.94 m	2.18 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_50-100yr-R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	211.94 m	Discharge	6.8700 m³/s
Inlet Control HW Elev.	211.84 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	211.94 m	Control Type	Outlet Control
Headwater Depth/Height	0.84		
Grades			
Upstream Invert	210.67 m	Downstream Invert	210.36 m
Length	93.70 m	Constructed Slope	0.003308 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.77 m
Flow Regime	Subcritical	Critical Depth	0.73 m
Velocity Downstream	2.18 m/s	Critical Slope	0.003901 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	211.94 m	Upstream Velocity Head	0.33 m
Ke	0.50	Entrance Loss	0.16 m
Inlet Control Properties			
Inlet Control HW Elev.	211.84 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_50-100yr-R1

Analysis Component			
Storm Event	Check	Discharge	7.8600 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.8700 m³/s	Check Discharge	7.8600 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	7.8600 m³/s	212.05 m	2.50 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_50-100yr-R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.05 m	Discharge	7.8600 m³/s
Inlet Control HW Elev.	211.96 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	212.05 m	Control Type	Outlet Control
Headwater Depth/Height	0.92		
Grades			
Upstream Invert	210.67 m	Downstream Invert	210.36 m
Length	93.70 m	Constructed Slope	0.003308 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	0.90 m
Slope Type	Mild	Normal Depth	0.85 m
Flow Regime	Subcritical	Critical Depth	0.80 m
Velocity Downstream	2.50 m/s	Critical Slope	0.003927 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.05 m	Upstream Velocity Head	0.36 m
Ke	0.50	Entrance Loss	0.18 m
Inlet Control Properties			
Inlet Control HW Elev.	211.96 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_Check-R1

Analysis Component			
Storm Event	Design	Discharge	10.2200 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	10.2200 m³/s	Check Discharge	10.2200 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	211.26 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	10.2200 m³/s	212.32 m	3.06 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

15_SIM_EL_SIM_1_WC3.3-PR_Check-R1

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	212.32 m	Discharge	10.2200 m³/s
Inlet Control HW Elev.	212.21 m	Tailwater Elevation	211.26 m
Outlet Control HW Elev.	212.32 m	Control Type	Outlet Control
Headwater Depth/Height	1.10		
Grades			
Upstream Invert	210.67 m	Downstream Invert	210.36 m
Length	93.70 m	Constructed Slope	0.003308 m/m
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.95 m
Slope Type	Mild	Normal Depth	1.02 m
Flow Regime	Subcritical	Critical Depth	0.95 m
Velocity Downstream	3.06 m/s	Critical Slope	0.004004 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	212.32 m	Upstream Velocity Head	0.42 m
Ke	0.50	Entrance Loss	0.21 m
Inlet Control Properties			
Inlet Control HW Elev.	212.21 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	7.6300 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.6300 m³/s	Check Discharge	8.7400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	208.50 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	7.6300 m³/s	210.49 m	3.76 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.49 m	Discharge	7.6300 m³/s
Inlet Control HW Elev.	210.33 m	Tailwater Elevation	208.50 m
Outlet Control HW Elev.	210.49 m	Control Type	Entrance Control
Headwater Depth/Height	0.65		
Grades			
Upstream Invert	209.12 m	Downstream Invert	208.50 m
Length	62.00 m	Constructed Slope	0.010000 m/m
Hydraulic Profile			
Profile	S2	Depth, Downstream	0.58 m
Slope Type	Steep	Normal Depth	0.57 m
Flow Regime	Supercritical	Critical Depth	0.79 m
Velocity Downstream	3.76 m/s	Critical Slope	0.003921 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.49 m	Upstream Velocity Head	0.39 m
Ke	0.50	Entrance Loss	0.20 m
Inlet Control Properties			
Inlet Control HW Elev.	210.33 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	8.7400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.6300 m³/s	Check Discharge	8.7400 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	208.50 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	8.7400 m³/s	210.62 m	3.91 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.62 m	Discharge	8.7400 m³/s
Inlet Control HW Elev.	210.45 m	Tailwater Elevation	208.50 m
Outlet Control HW Elev.	210.62 m	Control Type	Entrance Control
Headwater Depth/Height	0.72		
Grades			
Upstream Invert	209.12 m	Downstream Invert	208.50 m
Length	62.00 m	Constructed Slope	0.010000 m/m
Hydraulic Profile			
Profile	S2	Depth, Downstream	0.64 m
Slope Type	Steep	Normal Depth	0.63 m
Flow Regime	Supercritical	Critical Depth	0.86 m
Velocity Downstream	3.91 m/s	Critical Slope	0.003954 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.62 m	Upstream Velocity Head	0.43 m
Ke	0.50	Entrance Loss	0.21 m
Inlet Control Properties			
Inlet Control HW Elev.	210.45 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_Check_New

Analysis Component			
Storm Event	Design	Discharge	11.3700 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	11.3700 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	208.50 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	11.3700 m³/s	210.91 m	4.22 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

16_SIM_EL_SIM_1_WC3.5_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.91 m	Discharge	11.3700 m³/s
Inlet Control HW Elev.	210.70 m	Tailwater Elevation	208.50 m
Outlet Control HW Elev.	210.91 m	Control Type	Entrance Control
Headwater Depth/Height	0.85		
Grades			
Upstream Invert	209.12 m	Downstream Invert	208.50 m
Length	62.00 m	Constructed Slope	0.010000 m/m
Hydraulic Profile			
Profile	S2	Depth, Downstream	0.77 m
Slope Type	Steep	Normal Depth	0.75 m
Flow Regime	Supercritical	Critical Depth	1.02 m
Velocity Downstream	4.22 m/s	Critical Slope	0.004046 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.91 m	Upstream Velocity Head	0.51 m
Ke	0.50	Entrance Loss	0.26 m
Inlet Control Properties			
Inlet Control HW Elev.	210.70 m	Flow Control	N/A
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_50-100yr_New

Analysis Component			
Storm Event	Design	Discharge	7.4100 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.4100 m³/s	Check Discharge	8.5000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	210.50 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	7.4100 m³/s	210.60 m	1.01 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.60 m	Discharge	7.4100 m³/s
Inlet Control HW Elev.	210.50 m	Tailwater Elevation	210.50 m
Outlet Control HW Elev.	210.60 m	Control Type	Outlet Control
Headwater Depth/Height	1.00		
Grades			
Upstream Invert	208.50 m	Downstream Invert	208.40 m
Length	87.00 m	Constructed Slope	0.001149 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	2.10 m
Slope Type	Mild	Normal Depth	1.18 m
Flow Regime	Subcritical	Critical Depth	0.77 m
Velocity Downstream	1.01 m/s	Critical Slope	0.003915 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.60 m	Upstream Velocity Head	0.06 m
Ke	0.50	Entrance Loss	0.03 m
Inlet Control Properties			
Inlet Control HW Elev.	210.50 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_50-100yr_New

Analysis Component			
Storm Event	Check	Discharge	8.5000 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	7.4100 m³/s	Check Discharge	8.5000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	210.50 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	8.5000 m³/s	210.63 m	1.16 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_50-100yr_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.63 m	Discharge	8.5000 m³/s
Inlet Control HW Elev.	210.50 m	Tailwater Elevation	210.50 m
Outlet Control HW Elev.	210.63 m	Control Type	Outlet Control
Headwater Depth/Height	1.02		
Grades			
Upstream Invert	208.50 m	Downstream Invert	208.40 m
Length	87.00 m	Constructed Slope	0.001149 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	2.10 m
Slope Type	Mild	Normal Depth	1.30 m
Flow Regime	Subcritical	Critical Depth	0.84 m
Velocity Downstream	1.16 m/s	Critical Slope	0.003946 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.63 m	Upstream Velocity Head	0.07 m
Ke	0.50	Entrance Loss	0.04 m
Inlet Control Properties			
Inlet Control HW Elev.	210.50 m	Flow Control	Unsubmerged
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_Check_New

Analysis Component			
Storm Event	Design	Discharge	11.0500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	11.0500 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	210.50 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 2100 mm Box	11.0500 m³/s	210.73 m	1.50 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

17_SIM_EL_SIM_1_WC3.6_Check_New

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	210.73 m	Discharge	11.0500 m³/s
Inlet Control HW Elev.	210.50 m	Tailwater Elevation	210.50 m
Outlet Control HW Elev.	210.73 m	Control Type	Outlet Control
Headwater Depth/Height	1.06		
Grades			
Upstream Invert	208.50 m	Downstream Invert	208.40 m
Length	87.00 m	Constructed Slope	0.001149 m/m
Hydraulic Profile			
Profile	M1	Depth, Downstream	2.10 m
Slope Type	Mild	Normal Depth	1.58 m
Flow Regime	Subcritical	Critical Depth	1.01 m
Velocity Downstream	1.50 m/s	Critical Slope	0.004034 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.015
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 2100 mm	Rise	2.10 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	210.73 m	Upstream Velocity Head	0.12 m
Ke	0.50	Entrance Loss	0.06 m
Inlet Control Properties			
Inlet Control HW Elev.	210.50 m	Flow Control	N/A
Inlet Type	33.7° wingwall flare, d=0.0830	Area Full	7.4 m²
K	0.48600	HDS 5 Chart	9
M	0.66700	HDS 5 Scale	2
C	0.02490	Equation Form	2
Y	0.83000		

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-PR_50-100yr

Analysis Component			
Storm Event	Design	Discharge	6.5500 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.5500 m³/s	Check Discharge	7.4100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	213.86 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	6.5500 m³/s	214.14 m	1.25 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	214.14 m	Discharge	6.5500 m³/s
Inlet Control HW Elev.	213.86 m	Tailwater Elevation	213.86 m
Outlet Control HW Elev.	214.14 m	Control Type	Outlet Control
Headwater Depth/Height	0.98		
Grades			
Upstream Invert	212.67 m	Downstream Invert	212.36 m
Length	126.00 m	Constructed Slope	0.002460 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	1.01 m
Flow Regime	Subcritical	Critical Depth	0.71 m
Velocity Downstream	1.25 m/s	Critical Slope	0.006924 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	214.14 m	Upstream Velocity Head	0.10 m
Ke	0.50	Entrance Loss	0.05 m
Inlet Control Properties			
Inlet Control HW Elev.	213.86 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report
18_SIM_EL_SIM_1_WC4-PR_50-100yr

Analysis Component			
Storm Event	Check	Discharge	7.4100 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	6.5500 m³/s	Check Discharge	7.4100 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	213.86 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	7.4100 m³/s	214.21 m	1.41 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-PR_50-100yr

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	214.21 m	Discharge	7.4100 m³/s
Inlet Control HW Elev.	213.91 m	Tailwater Elevation	213.86 m
Outlet Control HW Elev.	214.21 m	Control Type	Outlet Control
Headwater Depth/Height	1.03		
Grades			
Upstream Invert	212.67 m	Downstream Invert	212.36 m
Length	126.00 m	Constructed Slope	0.002460 m/m
Hydraulic Profile			
Profile	CompositePressureProfileM1	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	1.11 m
Flow Regime	Subcritical	Critical Depth	0.77 m
Velocity Downstream	1.41 m/s	Critical Slope	0.006960 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	214.21 m	Upstream Velocity Head	0.13 m
Ke	0.50	Entrance Loss	0.06 m
Inlet Control Properties			
Inlet Control HW Elev.	213.91 m	Flow Control	Unsubmerged
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-PR_Check

Analysis Component			
Storm Event	Design	Discharge	9.6400 m³/s
Peak Discharge Method: User-Specified			
Design Discharge	9.6400 m³/s	Check Discharge	0.0000 m³/s
Tailwater Conditions: Constant Tailwater			
Tailwater Elevation	213.86 m		

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	1-3500 x 1500 mm Box	9.6400 m³/s	214.52 m	1.84 m/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Designer/Analyzer Report

18_SIM_EL_SIM_1_WC4-PR_Check

Component: Culvert-1

Culvert Summary			
Computed Headwater Elev.	214.52 m	Discharge	9.6400 m³/s
Inlet Control HW Elev.	214.15 m	Tailwater Elevation	213.86 m
Outlet Control HW Elev.	214.52 m	Control Type	Outlet Control
Headwater Depth/Height	1.23		
Grades			
Upstream Invert	212.67 m	Downstream Invert	212.36 m
Length	126.00 m	Constructed Slope	0.002460 m/m
Hydraulic Profile			
Profile	Pressure Profile	Depth, Downstream	1.50 m
Slope Type	N/A	Normal Depth	N/A m
Flow Regime	N/A	Critical Depth	0.92 m
Velocity Downstream	1.84 m/s	Critical Slope	0.007082 m/m
Section			
Section Shape	Box	Mannings Coefficient	0.020
Section Material	Concrete	Span	3.50 m
Section Size	3500 x 1500 mm	Rise	1.50 m
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev.	214.52 m	Upstream Velocity Head	0.17 m
Ke	0.50	Entrance Loss	0.09 m
Inlet Control Properties			
Inlet Control HW Elev.	214.15 m	Flow Control	N/A
Inlet Type	30 to 75° wingwall flares	Area Full	5.3 m²
K	0.02600	HDS 5 Chart	8
M	1.00000	HDS 5 Scale	1
C	0.03470	Equation Form	1
Y	0.86000		

H

Stormwater Management Calculations



Project: GTAW- Highway 413

Project No.: 60347240

Date: March 24, 2023

Prepared by: A.Ignacio

DRAINAGE AND PAVEMENT AREA COMPARISON

Outlet No.	Existing Condition					Proposed Condition					Proposed Impact			
	Catchment ID	Drainage Area (ha)	Pavement Area (ha)	Totals		Catchment ID	Drainage Area (ha)	Pavemert Area (ha)	Totals		Proposed Drainage Area	Change in Drainage Area (ha)	Increase in Pavement Area (ha)	
				Drainage Area (ha)	Pavement Area (ha)				Drainage Area (ha)	Pavement Area (ha)				
1	100	10.3	4.6	32.1	14.5	200	10.3	5.2	32.1	20.5	32.1	0.0	6.1	
	101	21.8	9.8			201	21.8	15.4						
2	120	13.3	6.0	13.3	6.0	220	10.7	5.8	10.7	5.8	10.7	-2.7	-0.2	
3	121	3.6	0.0	19.8	5.0	121	1.6	0.5	14.8	6.3	14.8	-4.9	1.4	
	122	16.1	5.0			122	13.2	5.9						
4	130	2.3	0.4	53.8	11.5	230	9.1	1.3	53.5	15.8	53.5	-0.3	4.3	
	131	14.7	0.6			231	7.5	1.8						
	132	8.2	2.6			232	8.2	3.2						
	133	6.8	3.2			233	6.8	3.2						
	134	15.5	2.4			234	17.6	5.0						
	135	6.4	2.3			235	4.3	1.3						
5	140	17.1	1.8	46.2	11.1	240	20.1	8.5	50.7	26.7	50.7	4.5	15.6	
	141	11.3	0.8			241	12.3	9.0						
	142	10.9	5.8			142	10.9	5.8						
	143	0.8	0.5			143	0.8	0.5						
	144	6.1	2.3			244	6.6	2.9						
6	150	6.9	0.0	6.9	0.0	250	4.4	2.0	4.4	2.0	4.4	-2.5	2.0	
7	151	10.7	3.1	27.7	10.1	251	10.7	3.9	27.6	11.0	27.6	-0.1	0.9	
	152	15.4	6.6			252	15.5	7.0						
	153	1.7	0.3			253	1.5	0.0						
8	160	9.1	4.4	13.9	5.6	260	9.0	5.0	13.6	6.2	13.6	-0.4	0.5	
	161	3.5	1.2			261	2.9	1.2						
	162	1.3	0.0			262	1.6	0.0						
9	170	1.9	0.9	2.6	0.9	270	1.9	1.0	2.6	1.1	2.6	0.0	0.2	
	171	0.7	0.0			271	0.7	0.1						
Total Pavement Area - Existing Condition					64.5	Total Pavement Area - Proposed Condition					95.4	Net Increase		30.8

Highway Drainage : Pond Drainage Area and Imperviousness Calculation

Pond Name/ Crossing/ HRP	Tributary	Catchment	Area (ha)	Impervious (ha)	% Impervious	Total DA	Combined Imp.	Notes
Pond 7		2018	10.10	2.95	29%	10.1	29%	say 35%
Pond 8	1-1	1030	30.38	2.25	7%	39.5	9%	say 20%
		230	9.14	1.34	15%			
Pond 1 Relocation - Alt 2		231	7.45	1.81	24%	29.8	27%	
		232	8.25	3.19	39%			say 35%
		233	6.79	2.00	29%			
		221	3.79	1.02	27%			
		222	3.54	0.18	5%			
Pond 6 Relocation - Alt 2		234	17.56	4.96	28%	17.6	28%	say 35%
Pond 9		1040	10.35	0.00	0%	54.0	34%	say 40%
		1041	11.30	0.71	6%			
		240	20.08	8.48	42%			
		241	12.29	9.02	73%			
Pond 3 Modified	1-3	1050	4.49	0.00	0.00	85.3	17%	
		250	4.37	1.99	46			
		1051	50.34	2.55	5			say 25%
		251	10.65	3.93	37			
		252	15.48	6.28	45			

Pond Volumes

Pond ID	Drainage Area	Imper.	Total Treatment Volume		Permanent Pool Volume	Extended Detention					Quantity Control - 100-year
						Per 40 m ³ /ha	Run-off Volume (from VO)	25mm Storm Volume	Recomm. ED	Release Rate (24 hrs)	Total Qty Control
	(ha)	(%)	m ³ /ha	m ³	m ³	m ³	mm	m ³	m ³	m ³ /s	
Pond 7	10.10	35	140	1,410	1,006	404	17.80	1,798	1,798	0.021	3,620
Pond 8	39.52	20	95	3,741	2,160	1,581	4.43	1,751	1,751	0.020	2,830
Pond 1 Relocated	29.83	35	140	4,165	2,972	1,193	5.82	1,736	1,736	0.020	15,300
Pond 6	17.56	35	140	2,452	1,750	703	6.63	1,164	1,164	0.013	6,210
Pond 9	54.00	40	153	8,284	6,124	2,160	9.67	5,222	5,222	0.060	6,600
Pond3 Modified	85.33	20	95	8,078	4,664	3,413	7.81	6,664	6,664	0.077	10,800

SWM CALCULATION

Pond 7

Existing Condition VO output

LOCATION	Run	NHYD	FlowType	DT (hr)	A ha	Q m3/s	RV mm	DWF m3/s
101,201	Run 01	101	Outflow	0.07	21.8	1.97	12	36.4
	Run 02	101	Outflow	0.07	21.8	2.91	12	51.8
	Run 03	101	Outflow	0.07	21.8	3.53	12	61.8
	Run 04	101	Outflow	0.07	21.8	4.46	12	74.1
	Run 05	101	Outflow	0.07	21.8	5.12	12	84.6
	Run 06	101	Outflow	0.07	21.8	5.79	12	95.3
HRP 2.1 Confluence	Run 01	9	Outflow	0.05	32.2	2.92	12	36.5
	Run 02	9	Outflow	0.05	32.2	4.34	12	51.9
	Run 03	9	Outflow	0.05	32.2	5.3	12	61.9
	Run 04	9	Outflow	0.05	32.2	6.59	12	74.2
	Run 05	9	Outflow	0.05	32.2	7.56	12	84.7
	Run 06	9	Outflow	0.05	32.2	8.56	12	95.4

Proposed Condition VO output

Run	NHYD	FlowType	DT (hr)	A ha	Q m3/s	RV mm	DWF m3/s
Run 01	201	Outflow	0.07	21.8	2.87	12	45.4
Run 02	201	Outflow	0.07	21.8	3.99	12	62.5
Run 03	201	Outflow	0.07	21.8	4.7	12	73.4
Run 04	201	Outflow	0.07	21.8	5.58	12	86.7
Run 05	201	Outflow	0.07	21.8	6.32	12	97.8
Run 06	201	Outflow	0.07	21.8	7.07	12	109
Run 01	9	Outflow	0.05	32.2	3.83	12	43.1
Run 02	9	Outflow	0.05	32.2	5.34	12	59.8
Run 03	9	Outflow	0.05	32.2	6.34	12	70.5
Run 04	9	Outflow	0.05	32.2	7.57	12	83.6
Run 05	9	Outflow	0.05	32.2	8.59	12	94.6
Run 06	9	Outflow	0.05	32.2	9.63	12	106

Pond 7

Increase		m3/s	
2-yr	Run 01	0.905	
5-yr	Run 02	1.077	
10-yr	Run 03	1.169	
25-yr	Run 04	1.119	
50-yr	Run 05	1.200	
100-yr	Run 06	1.275	
2-yr	Run 01	0.912	
5-yr	Run 02	1.008	
10-yr	Run 03	1.04	
25-yr	Run 04	0.983	
50-yr	Run 05	1.03	
100-yr	Run 06	1.069	

Pond 7-Stage Storage (VO)

Target		Storage		Release as per VO	
m3/s		ha.m.		m3	
2-yr	Run 01	1.967	0.16	1,600	1.94
5-yr	Run 02	2.909	0.22	2,200	2.814
10-yr	Run 03	3.534	0.256	2,560	3.272
25-yr	Run 04	4.459	0.2991	2,991	4.148
50-yr	Run 05	5.119	0.331	3,310	4.808
100-yr	Run 06	5.793	0.3615	3,615	5.398
checking					
2-yr	Run 01	2.773	-0.149		
5-yr	Run 02	4.007	-0.329		
10-yr	Run 03	4.764	-0.535		
25-yr	Run 04	5.923	-0.667		
50-yr	Run 05	6.998	-0.565		
100-yr	Run 06	7.890	-0.669		

SWM CALCULATION

Pond 8

Existing Condition VO output

Proposed Condition VO output

Pond 8-Stage Storage (VO)

LOCATION	Run	NHYD	FlowType	DT	A	Q	RV	DWF		Run	NHYD	FlowType	DT	A	Q	RV	DWF		Release		Storage	
				(hr)	ha	m3/s	mm	m3/s					(hr)	ha	m3/s	mm	m3/s		m3/s	ha.m.	m3	
HRP4	Run 01		5 Outflow	0.08	47.3	1.43	12.3	22.8 0 0 0 0 0		Run 01		3 Outflow	0.08	39.5	1.18	12.4	22.5 0 0 0 0 0	2-yr	Run 01	1.094	0.070	700
Ex. Ramp	Run 02		5 Outflow	0.08	47.3	2.35	12.3	36.6 0 0 0 0 0		Run 02		3 Outflow	0.08	39.5	1.93	12.4	36.2 0 0 0 0 0	5-yr	Run 02	1.814	0.111	1,110
	Run 03		5 Outflow	0.08	47.3	2.96	12.3	45.9 0 0 0 0 0		Run 03		3 Outflow	0.08	39.5	2.44	12.3	45.4 0 0 0 0 0	10-yr	Run 03	2.234	0.146	1,460
	Run 04		5 Outflow	0.08	47.3	3.73	12.3	57.6 0 0 0 0 0		Run 04		3 Outflow	0.08	39.5	3.08	12.3	57.1 0 0 0 0 0	25-yr	Run 04	2.776	0.201	2,010
	Run 05		5 Outflow	0.08	47.3	4.39	12.3	67.7 0 0 0 0 0		Run 05		3 Outflow	0.08	39.5	3.63	12.3	67.1 0 0 0 0 0	50-yr	Run 05	3.238	0.240	2,400
	Run 06		5 Outflow	0.08	47.3	5.06	12.3	78 0 0 0 0 0		Run 06		3 Outflow	0.08	39.5	4.19	12.3	77.4 0 0 0 0 0	100-yr	Run 06	3.759	0.283	2,830
Increase																						
EC-02	Run 01		22 Outflow	0.05	55.5	1.68	12.3	24 0 0 0 0 0		Run 01		22 Outflow	0.03	55.2	1.77	12.1	25.1 0 0 0 0 0	2-yr	Run 01	0.09		
Hwy 401	Run 02		22 Outflow	0.05	55.5	2.72	12.3	38 0 0 0 0 0		Run 02		22 Outflow	0.03	55.2	2.84	12.1	39.3 0 0 0 0 0	5-yr	Run 02	0.12		
	Run 03		22 Outflow	0.05	55.5	3.43	12.3	47.3 0 0 0 0 0		Run 03		22 Outflow	0.03	55.2	3.63	12.1	48.8 0 0 0 0 0	10-yr	Run 03	0.20		
	Run 04		22 Outflow	0.05	55.5	4.25	12.2	59 0 0 0 0 0		Run 04		22 Outflow	0.03	55.2	4.55	12.1	60.7 0 0 0 0 0	25-yr	Run 04	0.30		
	Run 05		22 Outflow	0.05	55.5	5	12.3	69.1 0 0 0 0 0		Run 05		22 Outflow	0.03	55.2	5.39	12.1	70.9 0 0 0 0 0	50-yr	Run 05	0.39		
	Run 06		22 Outflow	0.05	55.5	5.77	12.2	79.4 0 0 0 0 0		Run 06		22 Outflow	0.03	55.2	6.2	12.1	81.3 0 0 0 0 0	100-yr	Run 06	0.43		
Existing Condition VO output									Proposed Condition VO output- with SWM													
EC-02	Run 01		22 Outflow	0.05	55.5	1.68	12.3	24 0 0 0 0 0		Run 01		22 Outflow	0.03	55.2	1.5	12	25.1 0 0 0 0 0	2-yr	Run 01	-0.18		
Hwy 401	Run 02		22 Outflow	0.05	55.5	2.72	12.3	38 0 0 0 0 0		Run 02		22 Outflow	0.03	55.2	2.38	12	39.3 0 0 0 0 0	5-yr	Run 02	-0.34		
	Run 03		22 Outflow	0.05	55.5	3.43	12.3	47.3 0 0 0 0 0		Run 03		22 Outflow	0.03	55.2	3.05	12	48.8 0 0 0 0 0	10-yr	Run 03	-0.38		
	Run 04		22 Outflow	0.05	55.5	4.25	12.2	59 0 0 0 0 0		Run 04		22 Outflow	0.03	55.2	3.79	12	60.7 0 0 0 0 0	25-yr	Run 04	-0.46		
	Run 05		22 Outflow	0.05	55.5	5	12.3	69.1 0 0 0 0 0		Run 05		22 Outflow	0.03	55.2	4.51	12	70.9 0 0 0 0 0	50-yr	Run 05	-0.50		
	Run 06		22 Outflow	0.05	55.5	5.77	12.2	79.4 0 0 0 0 0		Run 06		22 Outflow	0.03	55.2	5.2	12	81.3 0 0 0 0 0	100-yr	Run 06	-0.58		

SWM CALC

Relocated Pond 1

Existing										Proposed										Relocated Pond1-Stage Storage (VO)			
LOCATION	HYD #	Run	NHYD FlowType	DT	A	Q	RV	DWF											Release		Storage		
Pond 1 Outlet				(hr)	ha	m3/s	mm	m3/s	Existing Pond 1 Storage (model)					WCC					m3/s	ha.m.	m3		
HRP 6.3		Run 01	10 Outflow	0.05	62.3	0.675	13.25	23.646	# # # # #	0.7718	ha.m.	7,718	m3				2-yr	0.675	0.772	7,720			
		Run 02	10 Outflow	0.05	62.3	1.668	12.9	37.575	# # # # #	0.9849	ha.m.	9,849	m3				5-yr	1.668	1.011	10,110			
		Run 03	10 Outflow	0.05	62.3	2.415	12.8	46.907	# # # # #	1.1060	ha.m.	11,060	m3				10-yr	2.415	1.131	11,310			
		Run 04	10 Outflow	0.05	62.3	3.251	12.7	58.577	# # # # #	1.2472	ha.m.	12,472	m3				25-yr	3.251	1.250	12,500			
		Run 05	10 Outflow	0.05	62.3	3.784	12.7	68.613	# # # # #	1.3920	ha.m.	13,920	m3				50-yr	3.784	1.392	13,920			
		Run 06	10 Outflow	0.05	62.3	4.556	12.7	78.879	# # # # #	1.5300	ha.m.	15,300	m3	#####	m3	<< report	3.17	m3/s	100-yr	4.556	1.530	15,300	

Existing

LOCATION	HYD #	Run	NHYD FlowType	DT	A	Q	RV	DWF	
407 Culvert				(hr)	ha	m3/s	mm	m3/s	
		Run 01	11 Outflow	0.05	77.8	0.815	13.1	23.225	# # # # #
		Run 02	11 Outflow	0.05	77.8	2.069	12.7	37.043	# # # # #
		Run 03	11 Outflow	0.05	77.8	3.026	12.65	46.323	# # # # #
		Run 04	11 Outflow	0.05	77.8	4.191	12.55	57.942	# # # # #
		Run 05	11 Outflow	0.05	77.8	4.921	12.45	67.944	# # # # #
		Run 06	11 Outflow	0.05	77.8	5.811	12.55	78.182	# # # # #

SWM CALCULATION

Relocated Pond 6

Existing Condition VO output

LOCATION	Run	NHYD	FlowType	DT (hr)	A ha	Q m3/s	RV mm	DWF m3/s
407 Culv	Run 01	11	Outflow	0.05	77.8	0.82	13.1	23.2
	Run 02	11	Outflow	0.05	77.8	2.07	12.7	37
	Run 03	11	Outflow	0.05	77.8	3.03	12.7	46.3
	Run 04	11	Outflow	0.05	77.8	4.19	12.6	57.9
	Run 05	11	Outflow	0.05	77.8	4.92	12.5	67.9
	Run 06	11	Outflow	0.05	77.8	5.81	12.6	78.2
HRP 6 Ex. Ramp	Run 01	12	Outflow	0.05	84.2	0.85	13.1	24
	Run 02	12	Outflow	0.05	84.2	2.16	12.8	37.9
	Run 03	12	Outflow	0.05	84.2	3.14	12.7	47.2
	Run 04	12	Outflow	0.05	84.2	4.34	12.6	58.8
	Run 05	12	Outflow	0.05	84.2	5.17	12.5	68.8
	Run 06	12	Outflow	0.05	84.2	6.05	12.6	79.1
HRP 6.1	Run 01	20	Outflow	0.05	104	1.74	12	25
	Run 02	20	Outflow	0.05	104	2.75	12	39
	Run 03	20	Outflow	0.05	104	3.41	12	48.3
	Run 04	20	Outflow	0.05	104	4.68	12.7	59.9
	Run 05	20	Outflow	0.05	104	5.73	12.6	70
	Run 06	20	Outflow	0.05	104	6.73	12.6	80.2

Proposed Condition VO output

Run	NHYD	FlowType	DT (hr)	A ha	Q m3/s	RV mm	DWF m3/s
Run 01	11	Outflow	0.03	86.9	1.4	12	26.4
Run 02	11	Outflow	0.03	86.9	2.22	12	40.6
Run 03	11	Outflow	0.03	86.9	2.74	12	50.1
Run 04	11	Outflow	0.03	86.9	3.71	12.6	61.8
Run 05	11	Outflow	0.03	86.9	4.62	12.1	71.9
Run 06	11	Outflow	0.03	86.9	5.72	12.1	82.3
Run 01	12	Outflow	0.03	91.2	1.72	12	26.6
Run 02	12	Outflow	0.03	91.2	2.7	12	40.8
Run 03	12	Outflow	0.03	91.2	3.35	12	50.3
Run 04	12	Outflow	0.03	91.2	4.15	12	62.1
Run 05	12	Outflow	0.03	91.2	5.42	12	72.2
Run 06	12	Outflow	0.03	91.2	6.42	12.1	82.5
Run 01	20	Outflow	0.03	106	2.4	12	27.9
Run 02	20	Outflow	0.03	106	3.78	12	42.2
Run 03	20	Outflow	0.03	106	4.72	12	51.7
Run 04	20	Outflow	0.03	106	5.82	12	63.5
Run 05	20	Outflow	0.03	106	7.03	12	73.7
Run 06	20	Outflow	0.03	106	8.03	12	84.1

Pond 8

Increase	m3/s
2-yr	Run 01 0.582
5-yr	Run 02 0.149
10-yr	Run 03 -0.285
25-yr	Run 04 -0.486
50-yr	Run 05 -0.300
100-yr	Run 06 -0.088
Increase	
2-yr	Run 01 0.663
5-yr	Run 02 1.031
10-yr	Run 03 1.317
25-yr	Run 04 1.141
50-yr	Run 05 1.304
100-yr	Run 06 1.303

Relocated Pond 6-Stage Storage (VO)

Release	Storage
m3/s	ha.m. m3
0.734	0.22 2,200
1.674	0.394 3,940
2.526	0.495 4,950
3.462	0.606 6,060
4.372	0.612 6,120
5.354	0.621 6,210
checking	
0.775	-0.071
1.690	-0.468
2.566	-0.571
3.536	-0.808
4.550	-0.623
5.223	-0.827
1.703	-0.035
2.622	-0.126
3.305	-0.101
4.102	-0.580
4.837	-0.892
5.855	-0.870

SWM CALCULATION

Pond 9

Existing Condition VO output

LOCATION	Run	NHYD	FlowType	DT (hr)	A ha	Q m3/s	RV mm	DWF m3/s
407 Culv	Run 01	21	Outflow	0.028	49.97	1.528	12.25	21.57
	Run 02	21	Outflow	0.028	49.97	2.581	12.25	34.95
	Run 03	21	Outflow	0.028	49.97	3.303	12.25	44.03
	Run 04	21	Outflow	0.028	49.97	4.217	12.22	55.44
	Run 05	21	Outflow	0.028	49.97	5.01	12.22	65.31
	Run 06	21	Outflow	0.028	49.97	5.821	12.22	75.44
Pond 2 in	Run 01	23	Outflow	0.028	60.89	2.132	12.06	24.29
	Run 02	23	Outflow	0.028	60.89	3.428	12.06	37.91
	Run 03	23	Outflow	0.028	60.89	4.296	12.06	47.07
	Run 04	23	Outflow	0.028	60.89	5.392	12.06	58.56
	Run 05	23	Outflow	0.028	60.89	6.342	12.06	68.45
	Run 06	23	Outflow	0.028	60.89	7.321	12.06	78.59
HRP 7 Outlet	Run 01	28	Outflow	0.017	67.87	0.924	12.95	20.23
	Run 02	28	Outflow	0.017	67.87	2.284	12.58	33.85
	Run 03	28	Outflow	0.017	67.87	3.294	12.5	43.03
	Run 04	28	Outflow	0.017	67.87	4.465	12.42	54.54
	Run 05	28	Outflow	0.017	67.87	5.463	12.35	64.45
	Run 06	28	Outflow	0.017	67.87	6.465	12.33	74.61

Proposed Condition VO output

Run	NHYD	FlowType	DT (hr)	A ha	Q m3/s	RV mm	DWF m3/s
Run 01	21	Outflow	0.025	54.02	2.068	12.08	30.42
Run 02	21	Outflow	0.025	54.02	3.211	12.08	44.66
Run 03	21	Outflow	0.025	54.02	4.008	12.08	54.02
Run 04	21	Outflow	0.025	54.02	4.963	12.08	65.6
Run 05	21	Outflow	0.025	54.02	5.899	12.08	75.48
Run 06	21	Outflow	0.025	54.02	6.756	12.08	85.53
Run 01	23	Outflow	0.025	64.94	3.043	12.03	31.48
Run 02	23	Outflow	0.025	64.94	4.583	12.03	45.8
Run 03	23	Outflow	0.025	64.94	5.623	12.03	55.19
Run 04	23	Outflow	0.025	64.94	6.889	12.05	66.81
Run 05	23	Outflow	0.025	64.94	8.089	12.05	76.71
Run 06	23	Outflow	0.025	64.94	9.221	12.05	86.79
Run 01	28	Outflow	0.017	72.36	1.908	8.183	21.98
Run 02	28	Outflow	0.017	72.36	3.373	8.133	32.1
Run 03	28	Outflow	0.017	72.36	4.209	8.133	38.74
Run 04	28	Outflow	0.017	72.36	5.212	8.133	46.95
Run 05	28	Outflow	0.017	72.36	6.147	8.133	53.95
Run 06	28	Outflow	0.017	72.36	7.163	8.117	61.07

Pond 9

Increase

		m3/s	
2-yr	Run 01	0.540	2-yr
5-yr	Run 02	0.630	5-yr
10-yr	Run 03	0.705	10-yr
25-yr	Run 04	0.746	25-yr
50-yr	Run 05	0.889	50-yr
100-yr	Run 06	0.935	100-yr
2-yr	Run 01	0.911	2-yr
5-yr	Run 02	1.155	5-yr
10-yr	Run 03	1.327	10-yr
25-yr	Run 04	1.497	25-yr
50-yr	Run 05	1.747	50-yr
100-yr	Run 06	1.900	100-yr
2-yr	Run 01	0.984	2-yr
5-yr	Run 02	1.089	5-yr
10-yr	Run 03	0.915	10-yr
25-yr	Run 04	0.747	25-yr
50-yr	Run 05	0.684	50-yr
100-yr	Run 06	0.698	100-yr

Pond 9-Stage Storage (VO)

Release m3/s	Storage ha.m.	m3
0.831	0.409	4,090
0.211	0.505	5,050
3.303	0.532	5,320
4.217	0.574	5,740
5.010	0.621	6,210
5.821	0.66	6,600
checking		
2.321	0.189	
2.42	-1.008	
3.803	-0.493	
5.02	-0.372	
6.266	-0.076	
7.224	-0.097	
0.924	0.000	
2.208	-0.076	
3.203	-0.091	
4.302	-0.163	
5.195	-0.268	
6.050	-0.415	

SWM CALCULATION

Pond 3

Existing Condition VO output

LOCATION	Run	NHYD	FlowType	DT (hr)	A ha	Q m3/s	RV mm	DWF m3/s

Proposed Condition VO output

Run	NHYD	FlowType	DT (hr)	A ha	Q m3/s	RV mm	DWF m3/s

Pond 3

Increase

m3/s

Pond 3-Stage Storage (VO)

Release	Storage
m3/s	ha.m. m3

Pond 3 Inflow	Run 01	40 Outflow	0.033	87.75	2.092	12.57	27.55	0	0	0	0	0	0	0	0	0	0	2-yr	Run 01	0.130	25mm	0.076	0.347	3,470
	Run 02	40 Outflow	0.033	87.75	3.437	12.57	42.26	0	0	0	0	0	0	0	0	0	0	5-yr	Run 02	0.101	5-yr	0.389	0.691	6,910
	Run 03	40 Outflow	0.033	87.75	4.404	12.57	52.02	0	0	0	0	0	0	0	0	0	0	10-yr	Run 03	0.050	10-yr	1.731	0.825	8,250
	Run 04	40 Outflow	0.033	87.75	5.635	12.57	64.15	0	0	0	0	0	0	0	0	0	0	25-yr	Run 04	-0.099	25-yr	3.240	0.934	9,340
	Run 05	40 Outflow	0.033	87.75	6.702	12.57	74.53	0	0	0	0	0	0	0	0	0	0	50-yr	Run 05	-0.209	50-yr	4.241	0.9917	9,917
	Run 06	40 Outflow	0.033	87.75	7.749	12.57	85.11	0	0	0	0	0	0	0	0	0	0	100-yr	Run 06	-0.259	100-yr	5.487	1.031	10,310
																						6.493	1.04	10,400
HRP 8	Run 01	35 Outflow	0.017	89.45	1.742	13.07	23.17	0	0	0	0	0	0	0	0	0	0	2-yr	Run 01	0.134	2-yr	7.490	1.08	10,800
	Run 02	35 Outflow	0.017	89.45	3.259	12.8	37.76	0	0	0	0	0	0	0	0	0	0	5-yr	Run 02	0.109	5-yr	checking		
	Run 03	35 Outflow	0.017	89.45	4.286	12.73	47.48	0	0	0	0	0	0	0	0	0	0	10-yr	Run 03	0.070	10-yr	1.737	-0.005	
	Run 04	35 Outflow	0.017	89.45	5.53	12.7	59.57	0	0	0	0	0	0	0	0	0	0	25-yr	Run 04	-0.041	25-yr	3.25	-0.009	
	Run 05	35 Outflow	0.017	89.45	6.588	12.67	69.92	0	0	0	0	0	0	0	0	0	0	50-yr	Run 05	-0.132	50-yr	4.269	-0.017	
	Run 06	35 Outflow	0.017	89.45	7.615	12.67	80.48	0	0	0	0	0	0	0	0	0	0	100-yr	Run 06	-0.167	100-yr	5.525	-0.005	
																						6.543	-0.045	

Existing Pond 3 Storage (model)

25mm	Run 07	0.076	0.3467 ha.m.	3467
2-yr	Run 01	1.731	0.795 ha.m.	7950 m3
5-yr	Run 02	3.24	0.882 ha.m.	8820 m3
10-yr	Run 03	4.259	0.932 ha.m.	9320 m3
25-yr	Run 04	5.495	0.99 ha.m.	9900 m3
50-yr	Run 05	6.544	1.04 ha.m.	10400 m3
100-yr	Run 06	7.566	1.08 ha.m.	10800 m3

Existing Rating Curve in VO

0	0
0.0206	0.1029
0.0461	0.1764
0.0618	0.2539
0.0743	0.3353
0.085	0.4205
0.0945	0.5081
0.1031	0.598
0.1071	0.6438
0.3892	0.6901
1.5621	0.7845
3.2275	0.8811
5.2638	0.9799
7.6097	1.0811
10.2263	1.1844
13.0858	1.29
16.1669	1.3979
19.5735	1.5082
23.5541	1.621
35.0828	1.9135

Pond 1 (Data from WCC)

Elev	Depth	Storage	Storage	Disc l/s
207.3	0	0	0	0
208.3	1	27369	0	0
208.4	1.1	28691	1322	4
208.5	1.2	30041	2671	28
208.6	1.3	31418	4049	39
208.7	1.4	32826	5457	47
208.8	1.5	34374	7005	367
208.9	1.6	35880	8510	1022
209	1.7	37413	10044	1762
209.13	1.83	39589	12220	3161
209.2	1.9	41766	14396	3964
209.3	2	43616	16246	5194
209.4	2.1	45519	18149	6292
209.5	2.2	47469	20100	6617
209.6	2.3	49467	22098	8344
209.7	2.4	51522	24153	9361

VO Rating Curve- Existing Pond 1

Discharge m3/s	ACC. Storage	Active Storage
		0
		2.7369
0.004	2.8691	0.132
0.028	3.0041	0.267
0.039	3.1418	0.405
0.047	3.2826	0.546
0.367	3.4374	0.701
1.022	3.588	0.851
1.762	3.7413	1.004
3.161	3.9589	1.222
3.964	4.1766	1.440
5.194	4.3616	1.625
6.292	4.5519	1.815
6.617	4.7469	2.010
8.344	4.9467	2.210
9.361	5.1522	2.415

Pond 6 (Data from Contours)

VO Rating Curve- Existing Pond 6

Elev	Depth	Area	Inc. Storage (m3)	ACC Storage (m3)	Storage (ha.m)	Disc l/s	Discharge m3/s	Active Storage
206.7	0	3203	0	0	0	0.41	0.000	0
207	0.3	3742	1041.75	1041.75	0.104	781.17	0.781	0.104
207.5	0.5	6166	2477	3518.75	0.352	9,468.57	9.469	0.352

Channel D/S Pond 6 Rating Table

Water

Surface Elevation (m)	Discharge (L/s)	Velocity (m/s)	Flow Area (m²)	Wetted Perimeter (m)	Top Width (m)
206.7	0.41	0.18	0	0.2	0.23
206.8	49.28	0.59	0.1	1.5	1.4
206.9	248.11	0.88	0.3	2.7	2.57
207	781.17	1.12	0.7	4.6	4.33
207.1	1,675.17	1.47	1.1	5	4.62
207.2	2,656.20	1.6	1.7	6.4	5.88
207.3	3,762.88	1.46	2.6	11.3	10.67
207.4	6,005.76	1.57	3.8	14.9	14.26
207.5	9,468.57	1.75	5.4	17.8	17.18

Note:

See Flowmaster: Pond6_Ch.fm08

401 OE info

Orifice		Retangular weir	Stage 1	Stage 2
Invert (m)	208.5	side slope (m)	0	0
Diameter (m)	250	Crest Length (m)	15	6.5
Area, (m ²)	49062.5	Loss Coefficient	1.66	1.66
Loss Coefficient	0.6	Inv.	209.3	210.1

Stage-Storage-Discharge Curve (Existing, Free Flow condition)

Pond 3

Elevation	Accu. Storage	Stage	Storage (ha.m)	Discharge				
				Quality Orifice 250 mm	Quantity Weir Stage 1	Quantity Weir Stage 2	High Flow Stage 2	Discharge
208.5	0	0	0	N/A	0.00	0.00		0.00
208.55	333	-0.75	0.0333	N/A	0.00	0.00		0.00
208.6	676	-0.7	0.0676	N/A	0.00	0.00		0.00
208.65	1029	-0.65	0.1029	0.02	0.00	0.00		0.02
208.7	1392	-0.6	0.1392	0.04	0.00	0.00		0.04
208.75	1764	-0.55	0.1764	0.05	0.00	0.00		0.05
208.8	2147	-0.5	0.2147	0.05	0.00	0.00		0.05
208.85	2539	-0.45	0.2539	0.06	0.00	0.00		0.06
208.9	2941	-0.4	0.2941	0.07	0.00	0.00		0.07
208.95	3353	-0.35	0.3353	0.07	0.00	0.00		0.07
209	3775	-0.3	0.3775	0.08	0.00	0.00		0.08
209.05	4205	-0.25	0.4205	0.09	0.00	0.00		0.09
209.1	4640	-0.2	0.4640	0.09	0.00	0.00		0.09
209.15	5081	-0.15	0.5081	0.09	0.00	0.00		0.09
209.2	5528	-0.1	0.5528	0.10	0.00	0.00		0.10
209.25	5980	-0.05	0.5980	0.10	0.00	0.00		0.10
209.3	6438	0	0.6438	0.11	0.00	0.00		0.11
209.35	6901	0.05	0.6901	0.11	0.28	0.00		0.39
209.4	7370	0.1	0.7370	0.11	0.79	0.00		0.90
209.45	7845	0.15	0.7845	0.12	1.44	0.00		1.56
209.5	8325	0.2	0.8325	0.12	2.22	0.00		2.34
209.55	8811	0.25	0.8811	0.13	3.10	0.00		3.23
209.6	9302	0.3	0.9302	0.13	4.08	0.00		4.20
209.65	9799	0.35	0.9799	0.13	5.13	0.00		5.26
209.7	10302	0.4	1.0302	0.14	6.27	0.00		6.40
209.75	10811	0.45	1.0811	0.14	7.47	0.00		7.61
209.8	11325	0.5	1.1325	0.14	8.74	0.00		8.89
209.85	11844	0.55	1.1844	0.14	10.08	0.00		10.23
209.9	12370	0.6	1.2370	0.15	11.48	0.00		11.63
209.95	12900	0.65	1.2900	0.15	12.94	0.00		13.09
210	13437	0.7	1.3437	0.15	14.45	0.00		14.60
210.05	13979	0.75	1.3979	0.16	16.01	0.00		16.17
210.1	14528	0.8	1.4528	0.16	17.63	0.00		17.79
210.15	15082	0.85	1.5082	0.16	19.29	0.12		19.57
210.2	15643	0.9	1.5643	0.16	21.00	0.34		21.51
210.25	16210	0.95	1.6210	0.17	22.76	0.62		23.55
210.3	16783	1	1.6783	0.17	24.57	0.96		25.70
210.35	17362	1.05	1.7362	0.17	26.42	1.34		27.93
210.4	17947	1.1	1.7947	0.17	28.31	1.76		30.24
210.45	18538	1.15	1.8538	0.18	30.24	2.21		32.62
210.5	19135	1.2	1.9135	0.18	32.21	2.70		35.08

VO Extrapolation Water Elevation at Pond

Stage	Storage	VO Storage	WL	Event
208.5	0.0000			
208.55	0.0333			
208.6	0.0676			
208.65	0.1029			
208.7	0.1392			
208.75	0.1764			
208.8	0.2147			
208.85	0.2539			
208.9	0.2941			
208.95	0.3353	0.3467	208.96	25mm-Ex
209	0.3775			
209.05	0.4205			
209.1	0.4640			
209.15	0.5081			
209.2	0.5528			
209.25	0.5980			
209.3	0.6438			
209.35	0.6901			
209.4	0.7370			
209.45	0.7845	0.795	209.46	2-yr
209.5	0.8325			
209.55	0.8811	0.882	209.55	5
209.6	0.9302	0.932	209.60	10
209.65	0.9799	0.99	209.66	25
209.7	1.0302	1.04	209.71	50
209.75	1.0811	1.08	209.75	100 10,800
209.8	1.1325			
209.85	1.1844			
209.9	1.2370			
209.95	1.2900			
210	1.3437			
210.05	1.3979			
210.1	1.4528			
210.15	1.5082			
210.2	1.5643			
210.25	1.6210			
210.3	1.6783			
210.35	1.7362			
210.4	1.7947			
210.45	1.8538			
210.5	1.9135			

Existing Condition - Pond 3

Extrapolate Water Elevation at Pond

Storm Event	Storage Used (From VO)		Water Level-Storage	WL Depth	Free-board from Top of Pond
	ha.m.	m3			
25mm	0.3467	3467	208.96	1.26	1.54
2-year	0.795	7950	209.46	1.76	1.04
5-year	0.882	8820	209.55	1.85	0.95
10-year	0.932	9320	209.60	1.90	0.90
25-year	0.990	9900	209.66	1.96	0.84
50-year	1.040	10400	209.71	2.01	0.79
100-year	1.080	10800	209.75	2.05	0.75

EP at Ramp	212.50 m
Pond Bottom, designed	206.86 m
Pond Bottom, survey	207.70 m
Top of Pond	210.50 m
Pond Depth, surveyed	2.80 m
Pond Depth, designed	3.64 m
Designed NWL	208.50 m
Designed WL	209.96 m
Permanent Pool Depth, design	1.64 m
Permanent Pool Depth, surveyed	0.80 m
Total Active Storage Depth	2.00 m (designed)
Total Active Storage Depth	2.00 m (actual)
Overflow Weir Elev. Stage 1	209.40 m
Overflow Weir Elev. Stage 2	210.08 m
Note - Weir function at 2-year	

VO Model - Existing

Input to VO	
Discharge	Storage
m3/s	ha.m.
0	0
0.0206	0.102889
0.0461	0.176419
0.0618	0.253899
0.0743	0.335329
0.085	0.420496
0.0945	0.508122
0.1031	0.597994
0.1071	0.643772
0.389205	0.690112
1.562066	0.784476
3.227525	0.881087
5.263803	0.979949
7.609743	1.081063
10.2263	1.184428
13.08577	1.290046
16.16689	1.39794
19.57347	1.508246
23.55415	1.620988
35.08277	1.9135

0.9
1.58

Wet Pond Characteristics GTAW - West Section (Modified Pond 3)

POND OUTLET TO CREEK

Outlet Invert to Creek	208.138	m (calculated)
Length from Pond to Creek	276.0	m
Slope	0.1%	m
Invert Elev. Of Outlet Pipe	208.4	m < NWL ok
Permanent Pool Bottom	206.86	m < match existing

QUALITY CONTROL CELL DESIGN SHEET

Existing External Drainage Area (1050, 1051)	54.83	ha
Proposed ROW Drainage Area	30.50	ha
Total Drainage Area	85.33	ha
Imperviousness	20.00	%
Runoff Volume (from VO 25mm Storm)	7.81	mm
Water Quality Treatment Rate	95	m ³ /ha
Permanent Pool Volume	4,664	m ³ (1)
Extended Detention Volume	3,413	m ³ (2)
Erosion Control, 25mm Storm	6,664	m ³ (3)
Total Extended Detention Volume	6,664	m ³ (4)
Erosion Release Rate, 24 hours = 77.13 l/s		

QUANTITY CONTROL CELL DESIGN SHEET

	Quantity Pond Storage Required ¹ (m ³)	Provided (m ³)	Depth above Permanent Pool (m)	Water Surface Elevations (m)
Active Volume - Top of Pond		17,222	2.0	210.5
Active Volume -100 year	10,800	13,960	1.7	210.2
Extended Detention Volume	6,664	6,664	0.92	209.4
Permanent Pool (NWL)	4,664	8,006		208.5
Pond Bottom	-			206.50
Pond Area		11185	m ²	1.3%

(1) - "Stormwater Management Planning and Design Manual", 2003 - Wetpond with 55% Imp. (190m³/ha - 40m³/ha)

(2) - Extended Detention - 40m³/ha

(3) - Erosion control - Based on runoff from 25mm Storm x Drainage Area

(4) - Determined based on larger of Extended Detention and 25mm Erosion Requirements

Permanent Pool Characteristics

Bottom Area:	1,969	m ² (from CAD)
Permanent Pool - Surface Area:	6,037	m ² (from CAD)
Permanent Pool Depth:	2.00	m
Permanent Pool Volume:	8,006	m ³

Quantity Pond Characteristics, Pond

Permanent Pool - Surface Area:	6,037	m ²	Top of Pond	6,037	m ²
Active Pool Area (100-year WL):	10,387	m ² (from CAD)		11,185	m ² (from CAD)
Quantity Depth:	1.7	m		2.0	m
Quantity Volume:	13,960	m ³		17,222	m ³

Notes:

Accuracy = 0.1m

Enter values in highlighted cells

Wet Pond Characteristics

Relocated Pond 6

POND OUTLET TO CREEK			Culv Outlet to Pond		
Outlet Invert to Culvert	206.28	m	207.78	m	
Length from Pond to Culvert	179.0	m	197.0	m	
Slope	0.004	m/m	0.0040	m/m	
Required Permanent Pool Elev.	207.0	m	207.0	m	
Water Surface Elev. Of Permanent Pool	207.00	m	207.00	m	

QUALITY CONTROL CELL DESIGN SHEET

Total Drainage Area	17.56	ha
Total Drainage Area (ROW)	17.56	ha
Runoff Volume (from VO 25mm Storm)	6.63	mm
Imperviousness	35	%
Water Quality Treatment Rate	140	m ³ /ha
Permanent Pool Volume	1,750	m ³ (1)
Extended Detention Volume	703	m ³ (2)
Erosion Control, 25mm Storm	1,164	m ³ (3)
Total Extended Detention Volume	1,164	m ³ (4)
Erosion Release Rate, 24 hours = 13.48 l/s		

QUANTITY CONTROL CELL DESIGN SHEET

	Quantity Pond Storage		Depth above	Water Surface
	Required ¹	Provided	Permanent Pool	Elevations
	(m ³)	(m ³)	(m)	(m)
Active Volume (Top of Pond)		20,100	1.8	208.8
Active Volume (100-year)	6,210	16,258	1.5	208.5
Extended Detention Volume	1,164	1,164	0.12	207.12
Permanent Pool (NWL)	1,750	8,378	-	207.0
Pond Bottom	-	-	-	206.0
Pond Area with 10m buffer		16781	m ²	9.6%

- (1) - "Stormwater Management Planning and Design Manual", 2003 - Wetpond with 55% Imp. (190m³/ha - 40m³/ha)
 (2) - Extended Detention - 40m³/ha
 (3) - Erosion control - Based on run-off from 25mm storm x Drainage Area
 (4) - Determined based on larger of Extended Detention and 25mm Erosion Requirements

Permanent Pool Characteristics

Bottom Area:	7,453	m ² (from CAD)
Permanent Pool - Surface Area:	9,303	m ² (from CAD)
Permanent Pool Depth:	1.0	m
Permanent Pool Volume:	8,378	m ³

Quantity Pond Characteristics

Permanent Pool - Surface Area:	9,303	m ²	Top of Pond	9,303	m ²
Top of Active Pool Area:	12,374	m ² (from CAD)		13,030	m ² (from CAD)
Quantity Depth:	1.5	m		1.8	m
Quantity Volume:	16,258	m ³		20,100	m ³

Notes:

Accuracy = 0.1m

Enter values in highlighted cells