Quadreal Property Group Limited Partnership & Tribal Partners Canada Inc.

12668 & 12862 Dixie Road - Caledon

Stormwater Management Report

March 01, 2024 ORIGINAL

12668 & 12862 Dixie Road-Caledon

Stormwater Management Report

Quadreal Property Group Limited Partnership & Tribal Partners Canada Inc.

ORIGINAL

Project No.: 201-11545-00
CLIENT REF:
Date: March 01, 2024

WSP
100 Commerce Valley Drive West
Thornhill, ON
Canada L3T 0A1

T: +1 905 882-1100
F: +1 905 882-0055
wsp.com

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Prepared by	Reviewed by	
Jennifer Chan, E.I.T.	Vladimir Nikolic, P.Eng.	

REVISION 1

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Prepared by	Reviewed by	Approved by
Parto Peyvandi, Project Engineer	Vladimir Nikolic, Senior Project Engineer	Vladimir Nikolic, Senior Project Engineer

REVISION 2

FINAL

Signatures

Prepared by

March 1, 2024

Parto Peyvandi, P.Eng.
Project Engineer, Water Resources

Date

Approved[1] by

March 1, 2024

Vladimir Nikolic, P.Eng.
Senior Project Engineer, Water Resources

Date

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Contributors

Client

	Quadreal Property Group Limited Partnership & Tribal Partners Canada Inc.

WSP

Project Engineer, Water Resources	Parto Peyvandi, P.Eng.
Senior Project Engineer, Water Resources	Vladimir Nikolic, P.Eng.
Proof (non-technical) / Format	Melinda Nowak

Subconsultants

N/A

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FIGURES

APPENDICES

1 INTRODUCTION

1.1 Scope

WSP Canada Inc. (WSP) has been retained by QuadReal Property Group Limited Partnership & Tribal Partners Canada Inc. to prepare a Stormwater Management (SWM) Report in support of the proposed development at 12668 & 12862 Dixie Road in the Town of Caledon, Ontario.

The proposed development consists of three large warehouse buildings with surface parking and loading areas. There are four environmental protection areas on-site which include natural channels and a woodlot; these areas will not be developed and will remain unchanged in post development conditions. Appropriate buffers will be provided for these areas as recommended by the ecologist (WSP Canada Inc.).

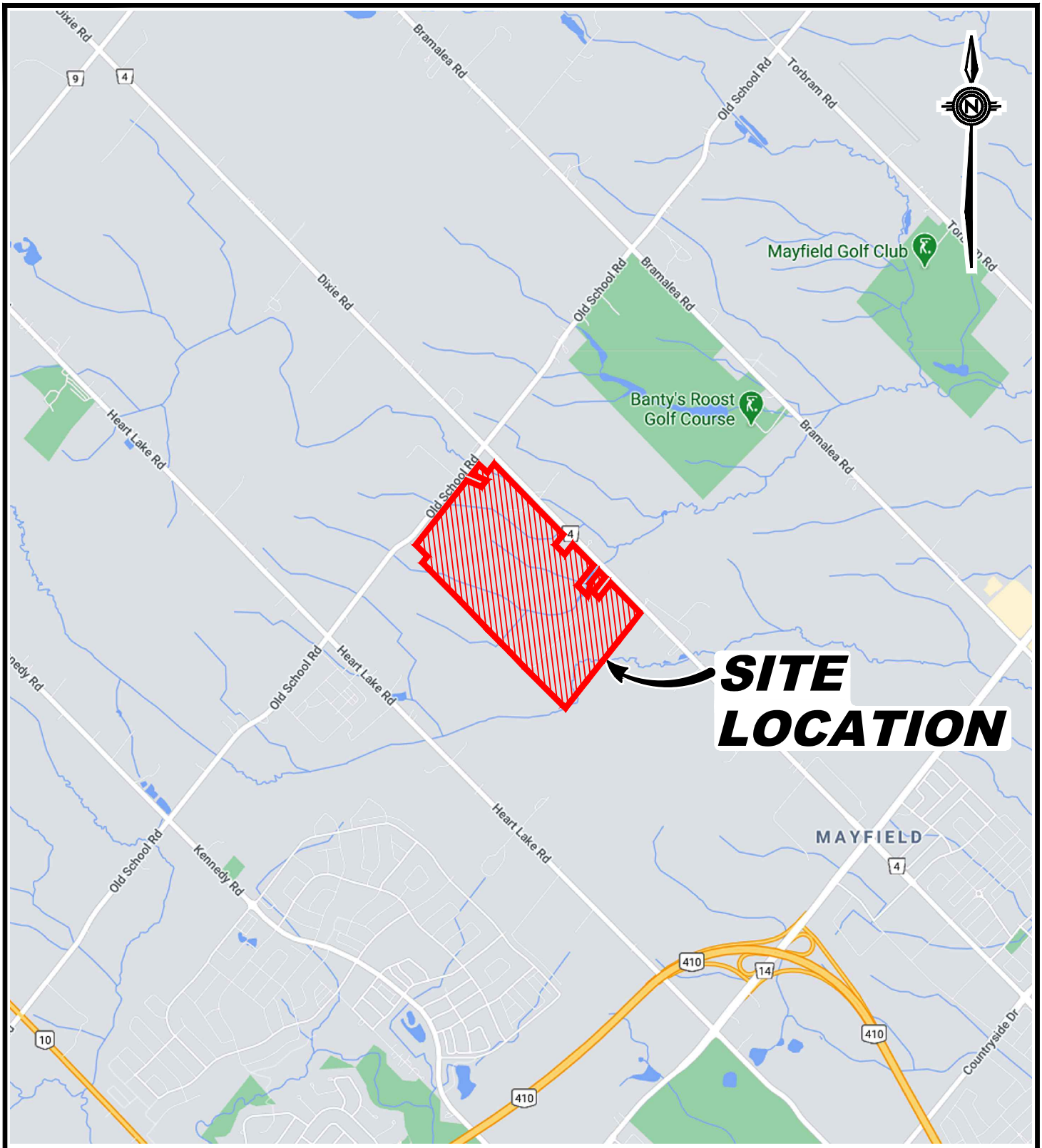
The proposed development will be divided into three catchments. Two catchments will be serviced by a SWM wet pond, and infiltration gallery each, they are proposed to meet the stormwater management requirements for the catchments. For the remaining catchment, an underground storm chamber with stone reservoir underneath is proposed to meet the specific stormwater management requirements.

The development of the SWM strategy has been guided by the Ministry of Environment, Conservation and Parks (MECP, formerly MOE) Stormwater Management Planning and Design (SWMPD) Manual (March 2003), Toronto and Region Conservation Authority (TRCA) Stormwater Management Criteria (August 2012), WSP Humber River SWM Water Quantity Control Criteria Updates (November 2020), and the Region of Peel Public Works Stormwater Design Criteria and Procedural Manual (June 2019).

This SWM report presents the preliminary design information for the three SWM wet facilities and should be read in conjunction with the WSP Functional Servicing Report prepared under separate cover.

1.2 Site Location

The subject site is located at 12668 & 12862 Dixie Road in the Town of Caledon in Ontario. It is bounded by Dixie Road to the east, Old School Road to the north, an industrial distribution facility to the south and agricultural fields to the west. The site location is shown in **Figure 1-1**.



CLIENT
QUADREAL PROPERTY GROUP LIMITED PARTISANSHIP & TRIBAL PARTNERS CANADA INC.

TITLE
12668 & 12862 DIXIE ROAD – CALEDON

SITE LOCATION

Checked V.N.	Drawn AutoCAD/B.K.B.
Date MARCH 2024	Proj. No. 201–11545–00
Scale AS SHOWN	Figure No. 1.1

FIGURE 1.dwg - 12892 Dixie Rd -Caledon - Site Location C:\Users\CAPP078249\DCACCDocs\WSP Canada projects (AMER)\Land Development Ontario\Project Files\201-11545 - 12892 Dixie Road\SWM\FIGURES-\ Mar 01, 2024 - 2:33pm

1.3 Background Documents

The following documents have been reviewed in preparing this SWM report:

- "*Stormwater Management Planning and Design (SWMPD) Manual*", Ontario Ministry of Environment, Conservation and Parks (MECP), March 2003
- "*Low Impact Development Stormwater Management Planning and Design Guide, Version 1.0*", Credit Valley Conservation (CVC) and Toronto and Region Conservation Authority (TRCA), 2010
- *"Stormwater Management Criteria"*, Toronto and Region Conservation Authority (TRCA), August 2012
- *"Humber River SWM Water Quantity Control Criteria Updates"*, WSP, November 2020
- *"Public Works Stormwater Design Criteria and Procedural Manual"*, Region of Peel, June 2019
- *"Final Report Humber River Hydrology Update"*, Civica, June 2015
- *"12892 Dixie Road Proposed Industrial Development Geotechnical Investigation"*, MTE Consultants, January 2021
- *"12892 Dixie Road Proposed Industrial Development Preliminary Hydrogeological Assessment"*, MTE Consultants, February 2021
- *"Guidance for Development Activities in Redside Dace Protected Habitat"*, Ministry of Natural Resources and Forestry, March 2016

1.4 Design Criteria

12668 & 12862 Dixie Road is located within the TRCA's Humber River Watershed and the following stormwater management design criteria have been identified in conformity with the various background documents listed in **Section 1.3**.

Water Quality Control:

Provide Enhanced (Level 1) water quality protection; 80% long-term TSS removal.

Water Quantity Control:

Limit the post-development peak discharges to the corresponding pre-development levels, using Humber River SWM Water Quantity Control Criteria Updates (WSP, 2020) unit flow rates for the West Humber River Watershed for all storms up to and including the 100-year storm. In addition, the proposed water quantity control SWM facilities should have the capacity to convey the Regional storm event.

Water Balance:

As per the MECP's Source Protection Information Atlas, the site is not located in a Source Protection Area. As per the TRCA's Water Balance Tool results, it is also not in a Significant Groundwater Recharge area. Best efforts will be implemented to maintain pre-development recharge in post development conditions.

The development catchments of this site are adjacent to environmentally protected areas; as such a feature-based water balance is required to maintain existing flows to tributaries in the proposed condition. This portion of the stormwater management strategy will be prepared under a separate cover. Note that the results of the feature-based water balance study may impact the overall stormwater management strategy which will be refined through further investigation and detailed design.

Erosion Control:

As per the TRCA SWM Criteria (2012), the minimum erosion control requirement is retention of the first 5 mm of every rainfall event. The extended detention of the 25 mm event for a period of 48 hours is required for SWM ponds.

2 PRE-DEVELOPMENT CONDITIONS

2.1 General

The 79.08 ha mostly pervious site currently consists of agricultural lands and environmental protection areas. The environmental protection areas will be excluded from the development area and will remain unchanged in the post development conditions. As such, only the 49.51 ha that will be developed will be considered in the stormwater management strategy discussed in this report. **Figure 2-1** shows the existing site conditions.

Currently, the site drains to three locations, eastwards (i.e. outlet 1, 2, and 3). and two locations, (i.e. outlet 4, and 5) , towards the south. Runoff is directed to ditch swales adjacent to the right-of-way of Dixie Road, and culverts direct stormwater drainage to the tributaries at the east, and south-east corner of the site. The southern portion of the site drains south towards Kilamanagh Creek. Ultimately, these tributaries will flow into the headwaters of West Humber River. The delineated areas that drain to the site's tributaries are provided based on the Lidar information from Ontario GeoHub website, and the Topographic survey, (by R. Avis Surveying Inc. 2020). The delineated area will also be shown in the feature-based water balance report prepared under separate cover.

There are also three fully pervious external areas that are draining towards the subject site. The external areas will not be developed in the proposed condition. The runoff from these areas will flow into roadside ditches along Old School Road, enter the site from the north and east through culverts, and then drain east towards Dixie Road. For these external areas, bypass routes to Dixie Road will be provided using storm sewers and swales. For more detail on the bypass routes, refer to the FSR provided by WSP, dated February 2024 in a separate cover. As such, these areas will not be included in the SWM analysis.

Regarding the existing site's internal and external area's flows to the protected environmental features, these flows will be maintained in proposed conditions; the feature-based water balance analysis will be submitted under separate cover. The existing condition of the site is shown in **Figure 2-1**.

APPROX. LOCATION OF EX. CULVERT

APPROX. LOCATION OF EX. CULVERT

APPROX. LOCATION OF EX. CULVERT

APPROX. LOCATION OF EX. CULVERT

OLD SCHOOL ROAD

OLD SCHOOL ROAD

DIXIE ROAD

EXT 1
20.33
0

EXT 2
33.85
0

EXT 3
31.52
0

201
4.59
0

202
20.53
0

203
44.83
0

204
6.73
0

205
2.40
0

1

2

3

4

5

LEGEND

- PROPERTY BOUNDARY
- CATCHMENT BOUNDARY
- EXTERNAL CATCHMENT BOUNDARY
- EXT 1 / 19.38 / 0 — CATCHMENT ID. / DRAINAGE AREA (ha) / IMPERVIOUSNESS (%)
- ENVIRONMENTAL PROTECTION AREA
- DRAINAGE DIRECTION

CLIENT
QUADREAL PROPERTY GROUP LIMITED PARTISANSHIP & TRIBAL PARTNERS CANADA INC.

TITLE
12668 & 12862 DIXIE ROAD – CALEDON

EXISTING CONDITIONS

Checked V.N.	Drawn AutoCAD/F.A.
Date MARCH 2024	Proj. No. 201–11545–00
Scale 1:8000	Figure No. 2.1

2.2 Existing Flow Rates

A standard event-oriented modelling approach, the Visual OTTHYMO Model Version 6.2 (VO6), was used to model the existing conditions.

The 6-hour and 12-hour AES storms with 2-year through 100-year return periods from Appendix 14 of the Humber Hydrology Update were used to determine the existing flow rates from the site. The 12-hour Hurricane Hazel storm is used in the hydrologic modelling for the regional storm. SWM calculations and the modelling results can be found in **Appendix A**, and **Appendix B**.

Table 2-1 to **2-6** presents a summary of the existing flow rates for the site.

Table 2-1: Existing Peak Flow Rates to Outlet 1

Catchment	**201**	
Storm Events	**6 Hour AES Total Existing Discharge (m^3/s)**	**12 Hour AES Total Existing Discharge (m^3/s)**
25 mm	0.026	
2-year	0.060	0.063
5-year	0.113	0.107
10-year	0.154	0.140
25-year	0.211	0.185
50-year	0.257	0.220
100-year	0.304	0.256
Regional	0.537	

Table 2-2: Existing Peak Flow Rates to Outlet 2

Catchment	202	
Storm Events	**6 Hour AES Total Existing Discharge (m^3/s)**	**12 Hour AES Total Existing Discharge (m^3/s)**
25 mm	0.150	
2-year	0.301	0.303
5-year	0.512	0.484
10-year	0.671	0.618
25-year	0.883	0.794
50-year	1.049	0.930
100-year	1.219	1.069
Regional	2.224	

Table 2-3: Existing Peak Flow Rates to Outlet 3

Catchment	203	
Storm Events	**6 Hour AES Total Existing Discharge (m^3/s)**	**12 Hour AES Total Existing Discharge (m^3/s)**
25 mm	0.178	
2-year	0.391	0.416
5-year	0.680	0.678
10-year	0.898	0.873
25-year	1.192	1.133
50-year	1.425	1.335
100-year	1.664	1.544
Regional	4.034	

Table 2-4: Existing Peak Flow Rates to Outlet 4

Catchment	204	
Storm Events	**6 Hour AES Total Existing Discharge (m^3/s)**	**12 Hour AES Total Existing Discharge (m^3/s)**
25 mm	0.093	
2-year	0.181	0.153
5-year	0.314	0.241
10-year	0.415	0.305
25-year	0.551	0.389
50-year	0.658	0.453
100-year	0.767	0.518
Regional	0.901	

Table 2-5: Existing Peak Flow Rates to Outlet 5

Catchment	205	
Storm Events	**6 Hour AES Total Existing Discharge (m^3/s)**	**12 Hour AES Total Existing Discharge (m^3/s)**
25 mm	0.041	
2-year	0.073	0.059
5-year	0.124	0.092
10-year	0.162	0.115
25-year	0.213	0.146
50-year	0.253	0.169
100-year	0.293	0.192
Regional	0.325	

Table 2-6: Existing Peak Flow Rates-Total

Storm Event	6 Hour AES Total Existing Discharge* (m^3/s)			12Hour AES Total Existing Discharge* (m^3/s)		
	Total Outlet 1, 2 & 3 East	Total Outlet 4 & 5 Southeast	Total	Total Outlet 1, 2 & 3 East	Total Outlet 4 & 5 Southeast	Total
25 mm	0.318	0.133	0.348	-		
2-yr	0.680	0.253	0.749	0.703	0.212	0.777
5-yr	1.175	0.438	1.287	1.143	0.333	1.256
10-yr	1.547	0.578	1.691	1.470	0.421	1.611
25-yr	2.049	0.764	2.238	1.906	0.535	2.084
50-yr	2.447	0.911	2.669	2.246	0.622	2.452
100-yr	2.854	1.060	3.112	2.596	0.710	2.832
Regional	6.558	1.225	7.428	6.558	1.225	7.428

2.3 Allowable Flow Rates

This site is located within the TRCA's Humber River Watershed, as such, the post-development peak discharges must be controlled to the pre-development levels using the Humber River SWM Water Quantity Control Criteria Updates (WSP, 2020) unit flow rates for all storms up to and including the 100-year storm. In addition, each of the proposed SWM facilities should be designed to convey the post development flow rates for the Regional event.

As stated in **Section 2.1**, the external areas will bypass the site in future conditions; therefore, they were not considered in the modelling or calculations. External Area 1 (EXT 1), External Area 2 (EXT 2) and External Area 3 (EXT 3) drain to the north and north east of the site via three existing culverts along Old School Road. The flow from EXT 1 conveys to Outlet 2, while the flow from EXT 2 and EXT 3 conveys to Outlet 3. These external area's flows to the protected environmental features will be maintained in proposed conditions using swales and storm sewers; the feature-based water balance analysis will be submitted under separate cover.

Table 2-7 presents a summary of the quantity control targets, and the unit flow rates for the proposed development. The proposed condition of the site is shown in **Figure 3-1**.

Table 2-7: Allowable Peak Flow Rates

Storm Events	Unit Flow Rates for Area <35 ha UFR 6 L/s/ha	Catchment 1100+Uncon (30.86 ha) Outlet 2 (m^3/s)	Catchment 1200 (12.32 ha) Outlet 4 (m^3/s)	Catchment 1300 Outlet 4 (6.33 ha) (m^3/s)	Total Site (m^3/s)
2-year	1.193	0.037	0.015	0.008	0.06
5-year	2.329	0.072	0.029	0.015	0.12
10-year	13.076	0.404	0.161	0.083	0.65
25-year	16.449	0.508	0.203	0.104	0.81
50-year	19.164	0.591	0.236	0.121	0.95
100-year	21.678	0.669	0.267	0.137	1.07
Regional	93.518	2.886	1.152	0.592	4.63

3 HYDROLOGIC MODELLING OF PROPOSED CONDITIONS

3.1 Overview

A standard event-oriented modelling approach, the Visual OTTHYMO Model Version 6.0 (VO6), was used to estimate the minimum required storage volume for erosion and quantity control, and to confirm the preliminary performance of the SWM wet ponds.

3.2 Low Impact Development Strategies

Low impact development (LID) strategies will be implemented on-site to mitigate impacts of increased runoff and stormwater pollution by managing runoff as close to its source as possible. LID strategies seek to minimize runoff and mimic pre-development hydrology. Ultimately, LIDs strive to reduce volume and intensity of stormwater flows in proposed conditions.

For this site, infiltration galleries and catchbasin shields will be included in the stormwater management strategy. Infiltration galleries will be sized to meet water balance requirements for Catchments, 1100, 1200 and 1300; best practices will be implemented to maintain post to pre-development infiltration.

3.3 Rainfall Data

The 6-hour and 12-hour AES storms with 2-year through 100-year return periods have been used in the Visual OTTHYMO modelling. The 12-hour Hurricane Hazel is used in the hydrologic modelling for the Regional Storm. The 25 mm, 4-hour Chicago rainfall event is used to evaluate the erosion control performance of the SWM wet ponds.

3.4 Proposed Drainage Plan

The subject site, and its external areas are represented by ten catchments, as shown in **Figure 3-1**. Note that the areas identified as environmental protection areas will not be developed and will remain unchanged in the proposed conditions. The external areas (EXT 1, EXT 2, and EXT 3) will bypass the site via storm sewers and swales to convey the flow to the environmental areas. For more details on the bypass sewers and swales,

see the Functional Servicing Report (February 2024) prepared by WSP under separate cover.

As a result, the environmental protection areas and external areas will be omitted from the stormwater management strategy and are outside of the development boundary. Regarding the site's existing flows to the protected environmental features, these flows will be maintained in proposed conditions; the feature-based water balance analysis will be submitted under separate cover.

Catchments 1100, 1200 and 1300 are the catchments within the property line that will be developed. The following presents an overview of how each catchment will be serviced:

- Catchment 1100: Building 3 will provide roof storage, which will discharge to an infiltration gallery for water balance purposes. The overflow and the at-grade stormwater runoff will be directed to SWM Pond A. Controlled flow from Pond A will discharge to outlet 2.
- Catchment 1200: Building 1 will provide roof storage, which will discharge to an infiltration gallery for water balance purposes. The overflow and the at-grade stormwater runoff will be directed to SWM Pond B. Controlled flow from Pond B will discharge to outlet 4.
- Catchment 1300: Building 2 will provide roof storage, and all at-grade stormwater runoff will be directed to an open-bottom underground storm chamber. Within the void space a layer of clear stone will be provided underneath this underground chamber for water balance purposes. Controlled flow from the underground storm chamber will discharge to outlet 4.
- Uncontrolled Area: Consist of a private road which is located east of catchment 1100, and will be discharged to outlet 2 without control.

A value of 81 for the SCS curve number (CN), Hydrologic soil group C (Clay loam) and cover type of lawns from the Humber River Hydrology Update, (Civica, 2015) is used to model the infiltration potential of the native soil. A typical Initial Abstraction (IA) of 5 mm and 1 mm is assigned to the pervious and impervious areas, respectively. Soil type is determined based on the preliminary Geotechnical Investigation (MTE, 2021).

A weighted imperviousness is calculated for the development blocks (1100, 1200, 1300) based on various land use in the current site plan. Note that the permanent pool of the proposed SWM wet ponds is considered impervious area while the perimeter area above the permanent pool elevation is considered pervious area.

OLD SCHOOL ROAD

OLD SCHOOL ROAD

DIXIE ROAD

APPROX. LOCATION OF EX. CULVERT

APPROX. LOCATION OF EX. CULVERT

APPROX. LOCATION OF EX. CULVERT

APPROX. LOCATION OF EX. CULVERT

EXT 1
20.33
0

EXT 2
33.85
0

EXT 3
31.52
0

INFILTRATION GALLERY A
PROVIDED VOLUME: 1543 m^3
FOOTPRINT AREA: 11,481 m^2
DEPTH OF STONE: 0.34 m
DRAW DOWN TIME: 48 hr

POND A
BOTTOM: 266.10 m
PERMANENT POOL: 267.10 m
EXTENDED DETENTION: 267.50 m
SAFETY PLATFORM: 267.60 m
100 YR LEVEL: 268.00 m
REGIONAL: 268.30 m
TOP OF THE POND: 268.60 m
TARGET VOLUMES:
PERMANENT POOL: 6,755 m^3
EXTENDED DETENTION: 6,658 m^3
100 YR: 15,582 m^3
REGIONAL: 23,840 m^3

SWM POND A

1100
30.63
88

BUILDING 3

Un.Con
0.23
100

ENVIRONMENTAL AREA

ENV.1
4.52
0

ENVIRONMENTAL AREA

ENV.2
4.56
0

GREEN BELT

GREEN BELT

GREEN BELT

1

2

3

4

BUILDING 1

1200
12.32
93

INFILTRATION GALLERY B
PROVIDED VOLUME: 616 m^3
FOOTPRINT AREA: 4583.3 m^2
DEPTH OF STONE: 0.34 m
DRAW DOWN TIME: 48 hr

ENVIRONMENTAL AREA

ENV.3
16.98
0

POND B
BOTTOM: 264.30 m
PERMANENT POOL: 265.30 m
SAFETY PLATFORM: 265.80 m
EXTENDED DETENTION: 266 m
100 YR LEVEL: 266.30 m
REGIONAL: 266.45 m
TOP OF POND: 266.75 m
TARGET VOLUMES:
PERMANENT POOL: 2,851 m^3
EXTENDED DETENTION: 2,788 m^3
100 YR: 5,308 m^3
REGIONAL: 6,575 m^3

GREEN BELT
SWM POND B

ENV.4
3.51
0

ENVIRONMENTAL AREA

BUILDING 2

1300
6.33
87

GREEN BELT

PROP. UNDERGROUND STORM CHAMBER MC-4500
PROVIDED QUANTITY CONTROL VOLUME: 3,467 m^3
PROVIDED WATER BALANCE VOLUME :317 m^3
FOOTPRINT AREA: 3,865 m^2
DEPTH OF STONE AT THE BOTTOM: 0.20 m
DRAW DOWN TIME: 29 hr

LEGEND

- PROPERTY BOUNDARY
- DEVELOPMENT CATCHMENT BOUNDARY
- EXTERNAL CATCHMENT BOUNDARY
- 1000 — CATCHMENT ID.
- 20.28 — DRAINAGE AREA (ha)
- 98.4 — IMPERVIOUSNESS (%)
- IMPERVIOUS ROOF
- SWM POND
- ENVIRONMENTAL PROTECTION AREA
- INFILTRATION GALLERY
- DRAINAGE DIRECTION

CLIENT
QUADREAL PROPERTY GROUP LIMITED PARTISANSHIP & TRIBAL PARTNERS CANADA INC.

TITLE
12668 & 12862 DIXIE ROAD – CALEDON

PROPOSED CONDITIONS

wsp

Checked V.N.	Drawn AutoCAD/B.K.B.
Date MARCH 2024	Proj. No. 201–11545–00
Scale 1:8000	Figure No. 3.1

The model parameters for the post-development catchments are summarized in **Table** 3-1. Refer to **Appendix A** for detailed calculations.

Table 3-1: Catchment Parameters under Proposed Development Conditions

Catchment	Area (ha)	IMP (%)	CN*	IA*	Tp (hr)	Land Use	Outlet No.
1100	30.63	86.4	81	5.0	StandHyd	Industrial Development	2
1200	12.32	92.8	81	5.0	StandHyd	Industrial Development	4
1300	6.33	92.8	81	5.0	StandHyd	Industrial Development	4
Un.Con	0.23	100.0	81	5.0	StandHyd	Industrial Development	2
Total	49.51	88.9	-	-	-	-	-

**IA and CN are used for pervious section in VO model.*

The subject property will be serviced by a conventional storm sewer system designed in accordance with the Town's standards. The storm sewers will be sized using a 5-year return frequency and the current Town's IDF curves. All major storm runoff from the development areas will be conveyed to the proposed SWM facilities via overland flow. The collected runoff will be treated for water quality and quantity control with extended detention for erosion control.

3.5 Hydrologic Modelling Results

The VO6 model was created to establish the required quantity control volumes for the 2-year up to 100-year events and conveyance of the Regional flow. The required volume for erosion control is 48 hours extended detention of the 25 mm, 4-hour Chicago storm event. Quality control for catchments with a SWM pond facility (i.e. catchments 1100 and 1200) will be provided by the permanent pool and the active storage of the erosion control / quality control. Quality control for catchment 1300 will be provided through an underground storm chamber, and an isolated row, as a result of sedimentation, filtering, and soil adsorption. The minimum required SWM volumes for Pond A, Pond B, and the underground storm chamber are provided in **Section 4** to **6**.

4 WATER BALANCE

4.1 Overview

As indicated in **Section 1.4**, best efforts will be implemented to maintain pre-development recharge rates in post development conditions for the developed catchments.

Section 4.5.8 of the MECP's Stormwater Management Planning & Design Manual (hereafter MECP Manual) provides guidance on the design of the infiltration chamber. The information provided in the Geotechnical Investigation, and Preliminary Hydrogeological Assessment by MTE Consultants (February 2021), is used in the preliminary feasibility evaluation and configuration of the infiltration chamber.

MTE's Geotech-Investigation indicates that the native soils on-site are clayey silt, silt and sandy silt fill. Groundwater levels were measured in monitoring wells at depths of 5.5 to 8.8 m BGS. The total proposed depth of the underground chamber, located at catchment 1300, including the cover and stone layer at the bottom, is 2.80 meters. In the MECP Manual, Table 4.9 states that a minimum 1.0 m clearance is required between the bottom of the infiltration gallery and the water table. At this site, the bottom of the infiltration gallery system would be 2.7 m above the water table. It should be noted the groundwater elevations are based on recorded data for two months only (i.e. November and December) and might vary significantly in high rainy seasons. The estimated infiltration rate is estimated to be 7 mm/hr based on the lowest reported hydraulic conductivity (i.e. $8*10^{-8}$ m/s) in Preliminary Hydrogeological Assessment (MTE, 2021). The water balance calculation can be found in **Appendix A**.

The method used for analysis is based on the examples provided in Section 3.2.3 of the MECP Manual. For each type of surface proposed on the site, the relationship between rainfall, evapotranspiration, runoff, and infiltration is determined, and the results are then weighted based on area coverage to calculate the site-wide water balance relationship.

General assumptions used in the calculations include:

- The average annual precipitation volume in Caledon is 877 mm (based on the TRSPA Water Balance Tool).
- The impervious area can accept 1.0 mm rainfall for subsequent evaporation due to shallow depression.

4.2 Catchment 1100

Stormwater runoff from the roof of Building 3 will contribute to the infiltration gallery while runoff from the at-grade areas will be piped directly into the SWM Pond A.

An infiltration gallery will provide 1543 m^3 of storage in total; the system shall have a footprint of 11,480 m^2. The depth of infiltration storage was accounted for in water infiltration calculation and can infiltrate within 48 hours in the site's soil conditions. The details of the infiltration gallery will be provided in the detailed design stage. A water balance analysis was carried out to demonstrate that pre-development recharge is maintained in post development conditions with the proposed infiltration chamber.

Table 4-1 shows that, under the existing conditions, of the total average annual rainfall, infiltration accounts for approximately 36.0%, evapotranspiration (ET) accounts for approximately 46.8%, and there is approximately 17.2% runoff.

Under the proposed condition, with the mitigation measure in place, of the total average annual rainfall, infiltration accounts for approximately 21.3%, ET accounts for approximately 14.3%, and there is approximately 64.4% runoff. Therefore, a total 35.6% of annual rainfall shall be retained on-site for infiltration or evapotranspiration. Under proposed conditions, the infiltration is lower than in pre-development conditions. As only the stormwater from the roof will be contributing to the infiltration gallery, there is a limited volume of water that can be reasonably captured and piped to the infiltration gallery. More landscape, and LID mitigations are recommended in the detailed design stage to compensate the infiltration deficits.

Therefore, the proposed development shall enhance the groundwater recharge and satisfy the water balance design criteria. Detailed calculations for the water balance analysis can be found in **Appendix A**.

Table 4-1: Water Balance Analysis Catchment 1200

Hydrologic Cycle Components	Pre-Development Conditions		Post-Development Conditions	
	Annual Depth (mm)	% of Annual Precipitation	Annual Depth (mm)	% of Annual Precipitation
Infiltration	316.0	**36.0**	186.5	21.3%
Evapotranspiration	410.0	46.8	125.6	14.3%
Runoff	151.0	17.2	564.9	64.4%
Precipitation	877.0	100.0	877.0	100.0%

4.3 Catchment 1200

Stormwater runoff from the roof of Building 1 will contribute to the infiltration gallery while runoff from the at-grade areas will be piped directly into SWM Pond B.

The infiltration gallery system will provide 616 m^3 of storage in total and shall have a footprint of 4583 m^2. The depth of infiltration storage was accounted for in water infiltration calculation and can infiltrate within 48 hours in the site's soil conditions. The details of the infiltration gallery will be provided in the detailed design stage. A water balance analysis was carried out to demonstrate that pre-development recharge is maintained to the extent practicable in post development conditions with the proposed infiltration chamber.

Table 4-2 shows that, under the existing conditions, of the total average annual rainfall, infiltration accounts for approximately 36.0%, evapotranspiration (ET) accounts for approximately 46.8%, and there is approximately 17.2% runoff.

Under the proposed condition, with the mitigation measure in place, of the total average annual rainfall, infiltration accounts for approximately 33.6%, ET accounts for approximately 12.4%, and there is approximately 54% runoff. Therefore, a total 46% of annual rainfall shall be retained on-site for infiltration or evapotranspiration. Under proposed conditions, the infiltration is slightly lower than in pre-development conditions. As only the stormwater from the roof will be contributing to the infiltration gallery, there is a limited volume of water that can be reasonably captured and piped to the infiltration gallery. More landscape, and LID features are recommended in detailed design stage to compensate the infiltration deficits.

Therefore, the proposed development shall enhance the groundwater recharge and satisfy the water balance design criteria. Detailed calculations for the water balance analysis can be found in **Appendix A**.

Table 4-2: Water Balance Analysis Catchment 1300

Hydrologic Cycle Components	Pre-Development Conditions		Post-Development Conditions	
	Annual Depth (mm)	% of Annual Precipitation	Annual Depth (mm)	% of Annual Precipitation
Infiltration	316.0	36.0	294.9	33.6%
Evapotranspiration	410.0	46.8	89.1	12.4%
Runoff	151.0	17.2	493.0	54.0%
Precipitation	877.0	100	877.0	100.0%

4.4 Catchment 1300

Stormwater runoff from the from the entire catchment will contribute to the infiltration gallery.

The StormTech MC-4500 chamber system will provide 3784 m^3 of storage for quantity control and water balance volume in total; the clear stone base will provide 317 m^3 of sump for infiltration; the system shall have a footprint of 3,865 m^2. The depth of infiltration storage was accounted for in the water infiltration calculation and can infiltrate within 29 hours in the site's soil conditions. A water balance analysis was carried out to demonstrate that pre-development recharge is maintained in post development conditions with the proposed infiltration chamber.

Table 4-3 shows that, under the existing conditions, of the total average annual rainfall, infiltration accounts for approximately 36.0%, evapotranspiration (ET) accounts for approximately 46.8%, and there is approximately 17.2% runoff.

Under the proposed condition, with the mitigation measure in place, of the total average annual rainfall, infiltration accounts for approximately 38.3%, ET accounts for approximately 13.6%, and there is approximately 48.3% runoff. Therefore, a total 51.7% of annual rainfall shall be retained on-site for infiltration or evapotranspiration. Therefore, the proposed development shall enhance the groundwater recharge and satisfy the water balance design criteria. Detailed calculations for the water balance analysis can be found in **Appendix A**.

Table 4-3: Water Balance Analysis Catchment 1300

Hydrologic Cycle Components	Pre-Development Conditions		Post-Development Conditions	
	Annual Depth (mm)	% of Annual Precipitation	Annual Depth (mm)	% of Annual Precipitation
Infiltration	316.0	**36.0**	571.1	38.1%
Evapotranspiration	410.0	46.8	100.1	13.6%
Runoff	151.0	17.2	205.9	48.3%
Precipitation	877.0	100	877.0	100.0%

5 SWM POND A DESIGN

5.1 Overview

SWM Pond A shall be designed to provide quality (Enhanced Level Protection), erosion (Extended Detention) and quantity control for Catchment 1100 for the 2- through 100-year events as directed by the TRCA Humber River Hydrology Report. The pond will also have the capacity to convey the Regional event to pre-development levels and is classified as a wet pond.

Under the proposed development scenario, the 6.10 ha building roof area will provide roof storage before discharging to Pond A. The remaining at-grade areas will discharge directly to the pond.

5.2 Storage Requirements

The proposed SWM Pond A shall provide quality, erosion, and quantity control for runoff for Catchment 1100 which is 30.62 ha. An area of 0.23 ha is uncontrolled and discharges to the pond A outlet (i.e. outlet 2). As a result, the required storage volume was determined by considering the uncontrolled area following the MECP Manual.

In addition to the storage volumes required for SWM Pond A, roof storage is also provided for Building 3. As this project is in the high-level design stage, it was assumed that 80% of the roof surface area would be available for roof storage with a ponding depth of 0.10 m.

Based on the Zurn control flow chart and considering the discharge curve, there is an available roof storage volume of 1659 m^3. This storage volume is to be discharged via roof drains to the infiltration gallery and the overflow will drain to SWM Pond A. The details are provided in **Appendix A**.

5.2.1 Water Quality Control

SWM Pond A shall provide an Enhanced Level of Protection for Catchment 1100. Based on Table 3.2 in the 2003 MECP's SWMPD Manual and a lumped imperviousness of 88%, a wet pond will require 259 m^3/ha of storage volume to provide an "Enhanced Level of Protection" or 80% TSS removal, of which 40 m^3/ha will be extended detention storage and the remaining 219 m^3/ha will be permanent pool storage. Based on a contributing drainage area of 30.86 ha, these objectives translate

to a volume of 7989 m^3, of which 6755 m^3 is the permanent pool volume and 1234 m^3 is the extended detention storage.

Note that the extended detention volume required for the quality control (1234 m^3) is less than that for erosion control (6658 m^3) and shall be combined with the latter to be controlled with an orifice plate / tube.

5.2.2 Erosion Control

Pond A will provide extended detention of the 25 mm event for a period of 48 hours. The erosion control volume calculated in Section 4.1.1 of **Appendix A**, for Catchment 1100 is 6658 m^3 with a target release rate of 0.077 m^3/s.

Note that the extended detention volume for water quality control is smaller than that for the erosion control. As such, the extended detention volume shall be combined with the larger quality control volume to be released at the maximum allowable release rate for erosion control.

5.2.3 Water Quantity Control

Hydrologic modelling was carried out for 6-hour and 12-hour AES storms to determine the required storage volume for quantity control up to and including the 100-year event. As shown in **Table 5-1**, the storage volume required for water quantity control is approximately 23,840 m^3 to limit the 100-year peak to allowable discharge rates and convey the Regional storm. The capacity of the existing culvert and the corresponding swales is to be verified in the detailed design stage..

Table 5-1: Quantity Control Storage Requirements for SWM Pond A to Outlet 2

Storm Event	Allowable Peak Flow Rates (m^3/s)	Uncontrolled Peak Flow Rates 6 hr AES (m^3/s)	Uncontrolled Peak Flow Rates 12 hr AES (m^3/s)	Target Release Flow Rates from Pond (m^3/s)	Required Active Storage (m^3)		
					6 hr AES	12 hr AES	Minimum
25 mm	0.077	0.039	0.038	0.038	---	---	6,658
2-year	0.037	0.021	0.012	0.016	8,925	10,612	10,612
5-year	0.072	0.028	0.016	0.044	11,554	13,455	13,455
10-year	0.404	0.033	0.018	0.371	11,796	13,468	13,468
25-year	0.508	0.039	0.021	0.469	12,877	13,973	13,973
50-year	0.591	0.043	0.024	0.548	13,960	14,665	14,665
100-year	0.669	0.047	0.026	0.622	15,142	15,582	15,582
Regional	2.886	0.034	0.034	2.852	---	---	23,840

5.3 Pond Grading

The preliminary layout of SWM Pond A is shown in **Figure 3-1**. The wet pond is designed to provide the required permanent pool and active storage volumes, and to conform to the grading of the site.

At this stage, the pond grading is preliminary. The grading for the forebay and main cell, will be provided in the detailed design stage, once the detailed proposed site wide grading is available.

Per Town design criteria, the minimum length-to-width ratio shall be 4:1. Baffles and berms should be used to maximize the length-to-width ratio.

The maximum slope requirements for the various components of the facility are as follows:

— 4:1 (H:V) from the bottom of the permanent pool to up to 0.5 m below the normal water level (NWL)

— 7:1 above the 4:1 sloping zone up to the berm / maintenance access road

— 4:1 where the slope backs on to the rear yard lot line, adjacent road system or valley

A summary of required storage volumes and provided storage for water quality, erosion control and quantity control are provided in **Table 5-2**.

Table 5-2: Storage Summary for Pond A

		Required Storage (m^3)	Storage Provided (m^3)
Permanent Pool Storage	Water Quality	**6,755**	**14,632**
Active Storage**	Water Quality*	1,234	**7,177**
	Erosion Control	**6,658**	
	Water Quantity (100-year)	**15,582**	**17,472**
	Water Quantity (Regional)	**23,840**	**24,141**
Total****			**31,143**

* *Extended detention storage for water quality and erosion control will be combined.*

** *Extended detention storage is part of the active storage for water quantity control up to 100-year event.*

*** *Storage above the design high water level for 100-year storm shall be used for Regional Storm control.*

**** *A 0.30 m freeboard is provided above the design high water level for Regional Storm.*

SWM Pond A will provide 14,632 m^3 of total permanent pool storage at the elevation 267.10 m. The permanent pool storage is provided with a depth of 1.0 m at the forebay and the main cell.

An extended detention volume of 7,177 m^3 is provided at the elevation 267.50 m, with a maximum depth of 0.40 m above the permanent pool elevation. Total 17,472 m^3 active storage is available for quantity control up to 100-year event. Active volume of 24,141 m^3 for regional storm is available to convey the regional flow. A 0.30 m freeboard is provided above the Regional Storm elevation and an emergency spillway shall be incorporated at the downstream of pond to safety convey the inflow from the 100-year event or regional storm, whichever is greater.

5.4 Sediment Forebay

SWM Pond A has an inlet to convey the minor system flow to the wet Pond A. The major system flow shall be conveyed to the pond via overland flow route to Pond A. The details of the servicing and overland flow route will be provided at the detailed design stage.

A sediment forebay is required at the inlet of the wet pond to settle out the majority of the sediment load within an area that can be conveniently accessed for maintenance. The forebay for the proposed wet pond is sized according to the guidelines given in the Stormwater Management Planning and Design Manual (SWMPDM, MECP, 2003). The forebay length is determined based on calculations of the dispersion and settling lengths, as shown in Section 4.2 of **Appendix A**.

5.5 Outlet Structure

The proposed outlet structures for SWM Pond A consist of the following components:

- **Low Flow Control for Extended Detention**

  A 450 Ø mm reverse slope pipe configured with a 250 Ø mm orifice plate (invert = 267.10 m) is proposed to achieve the target flow rate of 0.03 m^3/s with an extended detention volume of 7,177.13 m^3 at 267.50 m.

- **Flow Control up to 100-year Storm Event**

  A minimum 600 x 600 mm or 600 x 1200 mm precast concrete ditch inlet catch basin (DICB) (OPSD 705.040) / (OPSD 7005.030) with slope 4:1 will be proposed to convey the flow (up to 100-year event) into the DICB. Then the inflow from the grating of DICB will be controlled by an orifice tube or orifice plate. The size and details of the elevations and the high flow control devices will be provided in the detailed design stage.

- **Outlet Pipe**

  Flow from the above control structures shall discharge to a control manhole which will pipe the flow to an existing swale and then roadside ditch at Dixie Road, (i.e. outlet 2), see servicing drawings in the Functional Servicing Report for more details.

— **Emergency Spillway**

In case of blockage to the outlet structure, an emergency overflow spillway, at the 100-year level will be proposed for Pond A, to safely convey the peak flow rate from a 100-year event outlet 2. The elevation and size of the spillway will be provided in the detailed design stage. A natural channel with required erosion measurements will be provided up to the existing swale upstream of outlet 2. The capacity of the swale and the culvert at location 2 will be verified in the detailed design stage.

Table 5-3 shows the stage – storage relationship for the proposed wet pond. The detailed calculations are included in **Appendix A**.

Table 5-3: Stage – Storage Relationships for SWM Pond A

Description	Elevation (m)	Total Volume (m^3)	Active Storage (m^3)
Pond Bottom	266.10	0	0
Permanent Pool	267.10	14632	0
Extended Detention	267.50	21809	7177
Safety Platform	267.60	23776	9144
	267.70	25798	11166
	267.80	27860	13228
	267.90	29962	15330
100-Yr	268.00	32104	17472
	268.10	34286	19655
Regional	268.30	38772	24141
Pond Top	268.60	45774	31143

5.6 Operation Performance

The Hydrologic model was simulated for the 6-hour and 12-hour AES storms to determine the preliminary operation performance of SWM Pond A based on allowable release rates. The water elevations are preliminary and will be updated based on detailed pond grading and outlet structures at the detailed design stage. The modelling

results are summarized in **Table 5-4**. Detailed hydrologic modelling (VO6) outputs are included in **Appendix B**.

Table 5-4: Quantity Control Performance of SWM Pond A

Storm Event	Inflow Rate (m^3/s)	Outflow Rate (m^3/s)	Utilized Storage (m^3)	Water Elevation (m)
Erosion Control Event				
25 mm	2.581	0.038	6658.22	267.47
6-hour AES Storm				
2-year	1.954	0.016	8925.00	267.59
5-year	2.681	0.044	11554.00	267.72
10-year	3.170	0.371	11796.00	267.73
25-year	3.804	0.469	12877.00	267.78
50-year	4.285	0.548	13960.00	267.83
100-year	4.751	0.622	15142.00	267.89
12-hour AES Storm				
2-year	1.246	0.016	10612.00	267.67
5-year	1.648	0.044	13455.00	267.81
10-year	1.921	0.354	13468.00	267.81
25-year	2.263	0.469	13973.00	267.84
50-year	2.517	0.548	14665.00	267.87
100-year	2.775	0.622	15582.00	267.91
Hurricane Hazel				
Regional	3.856	2.852	24140.56	268.30
Top of the Pond	-	-	-	268.60

6 SWM POND B DESIGN

6.1 Overview

SWM Pond B shall be designed to provide quality (Enhanced Level Protection), erosion (Extended Detention) and quantity control for Catchment 1200 for the 2- through 100-year events as directed by the TRCA Humber River Hydrology Report. The pond will also have the capacity to convey the regional event to pre-development levels and is classified as a wet pond.

Under the proposed development scenario, the 5.56 ha building roof area will provide roof storage before discharging to Pond B. The remaining at-grade areas will discharge directly to the pond.

6.2 Storage Requirements

The proposed SWM Pond A shall provide quality, erosion, and quantity control for runoff for Catchment 1200 which is 12.32 ha. The required storage volume was determined following the MECP's SWMPD Manual.

In addition to the storage volumes required for SWM Pond B, roof storage is also provided for Building 1. As this project is in the high-level design stage, it was assumed that 80% of the roof surface area would be available for roof storage with a ponding depth of 0.10 m.

Based on the Zurn control flow chart and considering the discharge curve, there is an available roof storage volume of 1513 m^3. This storage volume is to be discharged via roof drains to infiltration gallery and the overflow will drain to SWM Pond B. The details are provided in **Appendix A**.

6.2.1 Water Quality Control

SWM Pond A shall provide an Enhanced Level of Protection for Catchment 1100. Based on Table 3.2 in the 2003 MECP's SWMPD Manual and a lumped imperviousness of 93%, a wet pond will require 271.5 m^3/ha of storage volume to provide an "Enhanced Level of Protection" or 80% TSS removal, of which 40 m^3/ha will be extended detention storage the remaining 231.5 m^3/ha will be permanent pool storage. Based on a contributing drainage area of 12.32 ha, these objectives translate

to a volume of 3,344 m^3, of which 2,851 m^3 is the permanent pool volume and 493 m^3 is the extended detention storage.

Note that the extended detention volume required for the quality control (493 m^3) is less than that for erosion control (2788 m^3) and shall be combined with the latter to be controlled with an orifice plate / tube.

6.2.2 Erosion Control

Pond A will provide extended detention of the 25 mm event for a period of 48 hours. The erosion control volume calculated in Section 5.1.1 of **Appendix A**, for Catchment 1200 is 2788 m^3 with a target release rate of 0.032 m^3/s.

Note that the extended detention volume for water quality control is smaller than that for the erosion control. As such, the extended detention volume shall be combined with the larger quality control volume to be released at the maximum allowable release rate for erosion control.

6.2.3 Water Quantity Control

Hydrologic modelling was carried out for the 6-hour and 12-hour AES storms to determine the required storage volume for quantity control up to and including the 100-year event. As shown in **Table 5-1**, the storage volume required for water quantity control is approximately 5,308 m^3 to limit the 100-year peak to allowable discharge rates and convey the regional storm.

Table 6-1: Quantity Control Storage Requirements for SWM Pond B to Outlet 4

Storm Event	Allowable Peak Flow Rates (m^3/s)	Required Active Storage (m^3)		
		6 hr AES	12 hr AES	Minimum
25 mm	0.032	---	---	2,788
2-year	0.015	3,342	4,008	4,008
5-year	0.029	4,309	5,050	5,050
10-year	0.161	4,312	5,054	5,054
25-year	0.203	4,395	5,091	5,091
50-year	0.236	4,580	5,166	5,166
100-year	0.267	4,832	5,308	5,308

Storm Event	Allowable Peak Flow Rates (m^3/s)	Required Active Storage (m^3)		
		6 hr AES	12 hr AES	Minimum
Regional	1.152	---	---	6,575

6.3 Pond Grading

The layout of SWM Pond B is shown in **Figure 3-1**. The wet pond is designed to provide the required permanent pool and active storage volumes, and to conform to the grading of the site.

At this stage, the pond grading is preliminary. The grading for the forebay and main cell, will be provided in the detailed design stage, once the detailed proposed grading is available.

Per the Town's design criteria, the minimum length-to-width ratio shall be 4:1. Baffles and berms should be used to maximize the length-to-width ratio.

The maximum slope requirements for the various components of the facility are as follows:

- 4:1 (H:V) from the bottom of the permanent pool to up to 0.5 m below the normal water level (NWL)
- 7:1 above the 4:1 sloping zone up to the berm / maintenance access road
- 4:1 where the slope backs on to the rear yard lot line, adjacent road system or valley

A summary of required storage volumes and provided storage for water quality, erosion control and quantity control are provided in **Table 5-2**.

Table 6-2: Storage Summary for Pond B

		Required Storage (m^3)	Storage Provided (m^3)
Permanent Pool Storage	Water Quality	**2,851**	**4,015**
Active Storage**	Water Quality*	493	**3,818**
	Erosion Control	**2,788**	
	Water Quantity (100-year)	**5,308**	**5,720**
	Water Quantity (Regional)	**6,575**	**6,720**
Total****			**7,770**

* *Extended detention storage for water quality and erosion control will be combined.*

** *Extended detention storage is part of the active storage for water quantity control up to 100-year event.*

**** *A 0.30 m freeboard is provided above the design high water level for Regional Storm.*

SWM Pond B will provide 4,015 m^3 of total permanent pool storage at an elevation of 265.30 m. The permanent pool storage is provided with a depth of 1.0 m at the forebay and the main cell.

An extended detention volume of 3,818 m^3 is provided at an elevation of 266.00 m, with a maximum depth of 0.70 m above the permanent pool elevation. A total 5,730 m^3 and 6,720 m^3 of active storage is available for quantity control up to 100-year event and convenance of the Regional flow. A 0.30 m freeboard is provided above the Regional storm elevation. An emergency spillway shall be incorporated at the downstream of the pond to safely convey the inflow from the 100-year event or regional storm, whichever is larger.

6.4 Sediment Forebay

SWM Pond A has an inlet to convey the minor system flow to the wet pond at the south end of Pond B. The major system flow shall be conveyed to the pond via an overland flow route at the south side of Pond B. The details of the servicing and overland flow route will be provided at the detailed design stage.

A sediment forebay is required at the inlet of the wet pond to settle out the majority of the sediment load within an area that can be conveniently accessed for maintenance. The forebay for the proposed wet pond is sized according to the guidelines given in the

Stormwater Management Planning and Design Manual (SWMPDM, MOECP, 2003). The forebay length is determined based on calculations of the dispersion and settling lengths, as shown in Section 5.2 of **Appendix A**.

6.5 Outlet Structure

The proposed outlet structures for SWM Pond A consist of the following components:

- **Low Flow Control for Extended Detention**

  A 450 mm Ø reverse slope pipe configured with a 125 mm Ø orifice plate (invert = 265.30 m) is proposed to achieve the target flow rate of 0.03 m^3/s with an extended detention volume of 3,818 m^3 at 266.0 m.

- **Flow Control up to 100-year Storm Event**

  A minimum 600 x 600 mm or 600 x 1200 mm precast concrete ditch inlet catch basin (DICB) (OPSD 705.040) / (OPSD 7005.030) with slope 4:1 will be proposed to convey the flow (up to 100-year event) into the DICB. Then the inflow from the grating of the DICB will be controlled by an orifice tube or orifice plate. The size and details of the elevations and the high flow control devices will be provided in the detailed design stage.

- **Outlet Pipe**

  Flow from the above control structures shall discharge to a control manhole which will pipe the flow to the Kilmanagh Creek, south of the site (i.e. outlet 4); see servicing drawings in the Functional Servicing Report for more details.

- **Emergency Spillway**

  In case of blockage to the outlet structure, an emergency overflow spillway at the 100-year level elevation, will be proposed for Pond B, to safely convey the peak flow rate from a 100-year event. The elevation and size of the spillway will be provided in the detailed design stage. A natural channel with required erosion measures will be provided up to Kilmanagh Creek.

Table 5-3 shows the stage – storage relationship for the proposed wet pond. The detailed calculations are included in **Appendix A**.

Table 6-3: Stage – Storage Relationships for SWM Pond B

Description	Elevation (m)	Total Volume (m^3)	Active Storage (m^3)
Pond Bottom	264.30	0.00	0
Permanent Pool	265.30	4015.03	0
Safety Platform	265.80	6636.58	2622
Extended Detention	266.00	7833.02	3818
	266.10	8452.59	4438
	266.20	9086.56	5072
100-Yr	266.30	9735.03	5720
	266.45	10735.13	6720
Pond Top	266.75	11785.35	7770

6.6 Operation Performance

The Hydrologic model was simulated for the 6-hour and 12-hour AES storms to determine the preliminary operation performance of SWM Pond B based on allowable release rates. The water elevations are preliminary and will be updated based on detailed pond grading and outlet structures in the detailed design stage. The modelling results are summarized in **Table 5-4**. Detailed hydrologic modelling (VO6) outputs are included in **Appendix B**.

Table 6-4: Quantity Control Performance of SWM Pond B

Storm Event	Inflow Rate (m^3/s)	Outflow Rate (m^3/s)	Utilized Storage (m^3)	Water Elevation (m)
Erosion Control Event				
25 mm	0.903	0.032	2788.23	265.83
6-hour AES Storm				
2-year	0.614	0.015	3342.00	265.92
5-year	0.830	0.029	4309.00	266.08
10-year	0.981	0.123	4312.00	266.08

Storm Event	Inflow Rate (m^3/s)	Outflow Rate (m^3/s)	Utilized Storage (m^3)	Water Elevation (m)
25-year	1.168	0.203	4395.00	266.09
50-year	1.308	0.236	4580.00	266.12
100-year	1.446	0.267	4832.00	266.16
12-hour AES Storm				
2-year	0.400	0.015	4008.00	266.03
5-year	0.527	0.029	5050.00	266.20
10-year	0.611	0.125	5054.00	266.20
25-year	0.719	0.203	5091.00	266.20
50-year	0.798	0.236	5166.00	266.21
100-year	0.878	0.267	5308.00	266.24
Hurricane Hazel				
Regional	1.264	1.152	6575.00	266.43
Top of the Pond			7770	266.75

7 UNDERGROUND CHAMBER FOR CATCHMENT 1300

7.1 Overview

The underground chamber system for Catchment 1300 shall be designed to provide quality (Enhanced Level Protection), erosion (Extended Detention), catchment water balance and quantity control for Catchment 1300 for the 2- through 100-year events as directed by the TRCA Humber River Hydrology Report. The infiltration gallery will also have the capacity to convey the regional event to pre-development levels.

Note that the water balance calculations and discussion will be completed by the hydrogeological consultant.

7.2 Water Quality Control

Stormwater runoff from at-grade vehicular and impervious areas will require water quality treatment to an 80% TSS removal on an annual loading basis, to achieve an “Enhanced” level of protection as defined by the MECP’s SWM Planning and Design Manual.

Isolator rows within the subsurface infiltration gallery are proposed to provide stormwater quality treatment. The separator rows are wrapped entirely in geotextile to ensure water entering the system is filtered through the cloth. The StormTech Isolator Row is ETV Certified to achieve an 82% removal efficiency. Certification and product specifications can be found in **Appendix C**.

7.3 Erosion Control

As noted in **Section 1.4**, the minimum erosion control requirement is retention of the first 5 mm of every rainfall event. The 5 mm volume calculated as per the site plan properties is 317 m^3. This volume will be provided in the sump of the infiltration gallery. Moreover, an underground chamber will provide extended detention of the 25 mm event for a period of 48 hours.

7.4 Water Quantity Control

Section 4.5.8 of the MECP's Stormwater Management Planning & Design Manual (hereafter MECP Manual) provided guidance on the design of the infiltration chamber. The information provided in the Geotechnical Study, and preliminary Hydrogeology assessment, prepared by MTE Consultants (February 2021) is used in the preliminary feasibility evaluation and configuration of the infiltration chamber.

The geotechnical study indicates that the native soils just west of the proposed location of the infiltration gallery is clayey silt to sandy silt. The groundwater levels were measured to be 5.5 m to 8.8 m BGS (as per monitoring wells MW101-20 to MW107-20); 5.5 m BGS will be used as a conservative design groundwater level. The total underground chamber including cover and stone layer at the bottom is 2.80 m. In the MECP Manual, Table 4.9 states that a minimum 1.0 m clearance is required between the bottom of the infiltration gallery and the water table. At this site, the bottom of the infiltration gallery system would be 2.7 m above the water table. It needs to be noted that the groundwater elevations are based on recorded data in only two month (i.e. November and December) and might vary significantly in high rainy seasons.

Quantity control shall be provided with an underground chamber for Catchment 1300; this catchment is 6.33 ha and with 87% imperviousness. The underground chamber has a footprint of 3865 m^2 and a storage volume of 3,865 m^3. The flow will be controlled by the orifice tubes to the allowable flow rates in a control manhole. The controlled flow will eventually discharge to outlet 4. The details for the orifice tube, and erosion measurements will be provided in the detailed design stage.

The infiltration gallery will be installed at the southeast area of the site and discharge to the adjacent creek west of the gallery. The product used in the modelling for the infiltration chamber is the ADS StormTech MC-4500. The product sheet can be found in **Appendix C**.

A standard event-oriented modelling approach, the Visual OTTHYMO Model Version 6.0 (VO), was used to estimate the required storage volume for erosion and quantity control, to size the outlet structures, and to confirm the performance of the underground storm chamber.

Table 7-1 presents a summary of the of the modelling results for the infiltration chamber. Refer to **Appendix B** for model outputs.

Table 7-1: Quantity Control Performance of the Infiltration Gallery

Storm Event	Inflow Rate (m^3/s)	Outflow Rate (m^3/s)	Utilized Storage (m^3)
Erosion Control Event			
25 mm	0.502	0.017	1192
6-hour AES Storm			
2-year	0.327	0.008	1711
5-year	0.442	0.015	2214
10-year	0.520	0.069	2217
25-year	0.617	0.104	2272
50-year	0.692	0.121	2380
100-year	0.765	0.137	2516
12-hour AES Storm			
2-year	0.211	0.008	2052
5-year	0.277	0.015	2593
10-year	0.322	0.063	2595
25-year	0.378	0.104	2621
50-year	0.420	0.121	2666
100-year	0.462	0.137	2747
Hurricane Hazel			
Regional	0.660	0.592	3467

The modelling results demonstrate that the post-development peak flow rates for all events up to the regional storm are lower than the allowable release rates established in **Section 2.3**. The entire storage volume is used in the underground storm chamber for the regional event; excess flows will exit the chamber from the emergency overflow.

Note that the storage volume provided includes the erosion control volume discussed in **Section 7.3**.

8 EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION

The following erosion and sediment controls are proposed for implementation during construction to minimize erosion potential and soil migration from the site to adjacent lands and/or receiving waters:

- Install silt fence at the downslope side of disturbed areas and snow fence (if necessary) along the perimeter of the development site, prior to the start of construction.
- Install stone mud mats at all construction entrances.
- Stockpile topsoil at designated locations and at least 15 m away from the top bank of the watercourse. Stockpiles will be contained by silt fences on the downslope side.
- Accumulated silt shall be removed from all sediment control devices as required during construction and disposed of in locations approved by the Town of Caledon and TRCA.
- All exposed soils are to be stabilized and vegetated as soon as possible using seed and mulch application on 100 mm of topsoil, as directed by the Engineer.
- All catch basins are to be fitted with sediment control devices as directed by the Engineer and in accordance with Town of Caledon's standard requirements.
- Half bulkhead to be installed in storm manholes immediately upstream from outfall structures and removed after all building construction and landscaping activity has been completed.
- Additional erosion / sediment controls may be required on-site as determined by the Engineer.
- No construction activity / machinery shall intrude beyond the silt / snow fence or property limit. All construction vehicles shall enter and leave the site via designated entrances.
- All regraded areas that are not occupied by dwellings, roads, sidewalks, driveways, park, and other services shall be covered by 100 mm topsoil and sodded / seeded immediately after completion of final grading operations, as directed by the Engineer.

- All temporary erosion and sediment controls must be installed prior to the commencement of site grading, must be inspected on a regular basis and after every rainfall event, and must be cleaned and maintained as required to prevent the migration of sediment from the site.
- All sediment and erosion control facilities are to remain in place until finalization of construction activity.
- All temporary erosion and sediment controls must be removed after construction and once the site has been stabilized to the Town of Caledon’s satisfaction. All areas disturbed by erosion / sediment control devices are to be restored with 100 mm topsoil and sodded / seeded after construction.
- The Contractor shall keep public roadways free of debris during construction. Any material tracked from the site shall be promptly removed from roadways at the contractor's expenses.
- All material and workmanship shall conform to the current OPSD and standards endorsed by the Town of Caledon, the TRCA and other regulatory agencies.
- The Contractor is responsible to locate and protect all existing utilities and municipal services, and to make arrangement with utility companies prior to construction.
- All excavations shall be in accordance with the Ontario "Occupational Health and Safety Act", and other federal and provincial regulations related to construction projects.

9 CONCLUSIONS

The preliminary design of the two proposed SWM ponds and infiltration galleries on the 12668 & 12862 Dixie Road site has been completed in order to meet the requirements set out in the Humber River Hydrology Update (June 2015). The designs include the following features:

Water Balance

Site based water balance will be met by installing infiltration galleries for each of the proposed catchments. A best practices approach has been used to maintain the pre-development infiltration in post development conditions to the extent practicable.

Existing flows to the environmental protection areas will be maintained in the proposed condition; however, this is part of the feature-based water balance strategy. Note that the feature-based water balance will be provided under a separate cover. Refer to the feature-based water balance report by MTE Consultants for more details.

Water Quality

Sufficient permanent pool and extended detention volumes are provided in the SWM Ponds in order to meet the requirements for Enhanced Level protection as per the MECP's Stormwater Management Planning and Design Manual.

Extended Detention (Erosion Control)

For the catchments with a SWM pond facility, a reversed slope pipe configurated with diameter plate is proposed as flow control to achieve the target flow rate for 25 mm rainfall event. For Catchment 1300, a sump at the bottom of the infiltration gallery will retain the first 5 mm of every rainfall. By meeting the erosion control requirements, no erosion is anticipated in the receiving watercourses.

Water Quantity Control (2 ~ 100-year Events)

Sufficient storage is provided in each SWM facility to detain runoff and control discharge rates down to the allowable rates set out in the Humber River Hydrology Update for the 2- to 100-year storm events and the Regional event.

Water Quantity Control (Regional)

In addition to the 2- to 100-year discharge requirements, additional active storage and flow control is provided in each pond to limit outflow rates during the Regional storm event in accordance with the requirements of the TRCA and Humber River Hydrology Update.

APPENDIX

A Stormwater Management Calculations

	Project	12892 Dixie Road	No.	201-11545-00	
	By	Parto Peyvandi	Date	2024-03-01	Page
	Checked	Vladimir Nikolic	Checked		1
Subject	SWM Design Criteria				

1.0 Introduction

12892 Dixie Road is part of the Tribal Caledon industrial development.
SWM design is guided by the MECP's Stormwater Management Planning and Design (March 2003) and the TRCA's Stormwater Management Criteria (August 2012), and Humber River SWM Water Quantity Control Criteria Updates by WSP, 2020

1.1 Design Criteria & SWM Strategies

SWM Design Criteria has been outlined in Secion 1.4 in the 12892 Dixie Road Stormwater Management Report.
Three SWM Wet Ponds (A and B) have been proposed to achieve the SWM quality, erosion, and quantity control. For Catchment 1300, an underground chamber will provide water quality, balance, quantity and erosion control.

1.1.1 Water Quality Controls

SWM Pond A ,and B, and the underground chamber for Catchment 1300 must provide water quality control at Enhanced Protection Level.
Storage requirements for permanent pool and extended detention for quality treatment shall follow Table 3.2 in "Stormwater Management Planning and Design Manual" (MOE, 2003)

1.1.2 Quantity Control

Limit the post-development peak discharges to the corresponding pre-development levels, using Humber River SWM Water Quantity Control Criteria Updates by WSP, 2020, for the West Humber River Watershed, UFR6, Area less than 35 ha, for all storms up to and including the 100-year storm and Regional Event.

Storm Event	Allowable Flow Rates from Catchments (m^3/s)			
	1100+Uncon 30.86 ha Outlet 2	1200 12.32 ha Outlet 4	1300 6.33 ha Outlet 4	Total
2-yr	0.037	0.015	0.008	0.06
5-yr	0.072	0.029	0.015	0.12
10-yr	0.404	0.161	0.083	0.65
25-yr	0.508	0.203	0.104	0.81
50-yr	0.591	0.236	0.121	0.95
100-yr	0.669	0.267	0.137	1.07
Regional	2.886	1.152	0.592	4.63

1.1.3 Erosion Control

As per the TRCA SWM Criteria, the minimum erosion control requirement is retention of the first 5 mm of every rainfall event. For sites with a SWM Pond, extended detention of the 25 mm event for a period of 48 hours is required.

1.2 Design Storm

25 mm rainfall event for erosion control.
6 hour AES storm for Quantity Control for 2-year up to 100-year events.
12 hour AES storm for Quantity Control for 2-year up to 100-year events.
Regional Storm (12 hour Hazel Hurricane) for Quantity Control for regional storm.

2.0 Existing Conditions

Currently, site drains to three (3) locations,laong Dixie road and two (2) locations, south to Kilamanagh creek. Runoff is directed to ditch swales adjacent to the right of way, and culverts direct stormwater drainage to the tributaries at the east, and south-east corner of the site. Ultimately, these tributaries will flow into the West Humber River

2.1 Catchment Parameters

The subject development and its external area are delineated into four sub-catchments.

The hydrologic parameters used in Visual OTTHYMO model are summarized in following table.

Sub-Catchment	Area (ha)	IMP (%)	CN*	IA (mm)	Command	Land Use*	Tp (hr)	Outlet No.
201	4.59	0.0	77	8	NasHyd	Cultivated	0.41	1
202	20.53	0.0	82	5	NasHyd	Cultivated	0.71	2
203	44.83	0.0	80	6	NasHyd	Cultivated	1.26	3
204	6.73	0.0	81	6	NasHyd	Cultivated	0.19	4
205	2.40	0.0	82	5	NasHyd	Cultivated	0.18	5
Total	79.08	0.00		-	-	-	-	-

Catchment 201 includes wood lot area of 2.63 ha, the rest of the site is assumed as cultivated

Catchment 202 includes wood lot area of 0.73 ha, the rest of the site is assumed as cultivated

Catchment 203 includes wood lot area of 10.03 ha, the rest of the site is assumed as cultivated area

Catchment 204 includes wood lot area of 0.94 ha, the rest of te iste is assumed as cultivated area

Catchment 205 is assumed as cultivated area.

CN for thehydrologic soul groups clay loam/C for Woods: 73

CN for thehydrologic soul groups clay loam/C for cultivated area: 82

CN numbers are based on final Report Humber River Hydrology Update, Table 2.3, and MTE geotechnical report, , Feb 2021

Sub-Catchment	Land use	Area (ha)	CN	CN	IA	IA
201	Cultivated	1.96	82	77	5.0	8
	Wood lot	2.63	73		10.0	
202	Cultivated	19.80	82	82	5.0	5
	Wood lot	0.73	73		10.0	
203	Cultivated	34.80	82	80	5.0	6
	Wood lot	10.03	73		10.0	
204	Cultivated	5.79	82	81	5.0	6
	Wood lot	0.94	73		10.0	
205	Cultivated	2.40	82	82	5.0	5
	Wood lot	0.00	73		10.0	
Total	-	79.08	-	-	-	-

2.1.2 SCS CN Numbers

2.1.3 Initial Abstraction (IA)

Initial Abstraction for various land use are as either taken from TRCA's hydrologic model or confirmed by TRCA.

Land use	IA (mm)	Comments
Woodlot	10.0	Confirmed by TRCA
Agricultural Area	5.0	Typical value for pervious area
Urban Lawn	5.0	Typical value for pervious area
Impervious Surface	1.0	Typical value for impervious area

2.1.4 Time of Concentration (T_C) and Time to Peak (T_P) for rural catchment

Time of concentration (tc) was calculated using Upland Method, then time to peak (tp) was determined using Equation tp=2/3*Tc. With Upland Method, the average overland flow velocity is determined for a catchment based on the catchment slope and ground type. Once the velocity has been determined, then the time of concentration is determined by dividing the catchment length by the overland flow velocity.

The velocity can be either read from a figure for Velocity vs. Slope or calculated from the following equation:

$$V = K\sqrt{S}$$

Where, V is average velocity;
S is slope in percentage (%); and
K (m/s) is an intercept Coefficient as shown in following table.

Flow Type	K
Overland Flow: Forest with Heavy Litter; Hay Meadow	0.8
Overland Flow: Woodland; Fallow or Minimum Tillage Cultivation, Contour or Strip Crop	1.5
Overland Flow: Pasture	2.1
Overland Flow: Cultivated Straight Row	2.7
Overland Flow: Nearly Bare Soil, Untilled	3.1
Grassed Waterway	4.6

Catchment	Flow Pattern & Ground Cover	L (m)	E_1 (m)	E_2 (m)	Sw	V (m/s)	Tc (min)	Tp hr)
201	Overland, Pasture	399.0095	262.69	260.24	0.61	0.18	36.9	0.41
202	Overland, Pasture	852.6176	270.38	262.43	0.93	0.22	64.0	0.71
203	Overland, Pasture	1380.9776	272.79	262.01	0.78	0.20	113.3	1.26
204	Overland, Pasture	369.9988	270.01	260.89	2.46	0.36	17.1	0.19
205	Overland, Pasture	338.6178	267.52	259.98	2.23	0.34	16.4	0.18

2.2 Existing Peak Flow Rates

Storm Event	6 Hour AES Total Existing Discharge* (m3/s)					12Hour AES Total Existing Discharge* (m3/s)				
	201 Outlet 1	202 Outlet 2	203 Outlet 3	204 Outlet 4	205 Outlet 5	201 Outlet 1	202 Outlet 2	203 Outlet 3	204 Outlet 4	205 Outlet 5
25 mm	0.026	0.150	0.178	0.093	0.041	-				
2-yr	0.060	0.301	0.391	0.181	0.073	0.063	0.303	0.416	0.153	0.059
5-yr	0.113	0.512	0.680	0.314	0.124	0.107	0.484	0.678	0.241	0.092
10-yr	0.154	0.671	0.898	0.415	0.162	0.140	0.618	0.873	0.305	0.115
25-yr	0.211	0.883	1.192	0.551	0.213	0.185	0.794	1.133	0.389	0.146
50-yr	0.257	1.049	1.425	0.658	0.253	0.220	0.930	1.335	0.453	0.169
100-yr	0.304	1.219	1.664	0.767	0.293	0.256	1.069	1.544	0.518	0.192
Regional	0.542	2.224	4.034	0.901	0.325	0.542	2.224	4.034	0.901	0.325

Storm Event	6 Hour AES Total Existing Discharge* (m3/s)			12Hour AES Total Existing Discharge* (m3/s)		
	Total Outlet 1 & 2 & 3 East	Total Outlet 4 & 5 SouthEast	Total	Total Outlet 1 & 2 & 3 East	Total Outlet 4 & 5 SouthEast	Total
25 mm	0.318	0.133	0.348	-		
2-yr	0.680	0.253	0.749	0.703	0.212	0.777
5-yr	1.175	0.438	1.287	1.143	0.333	1.256
10-yr	1.547	0.578	1.691	1.470	0.421	1.611
25-yr	2.049	0.764	2.238	1.906	0.535	2.084
50-yr	2.447	0.911	2.669	2.246	0.622	2.452
100-yr	2.854	1.060	3.112	2.596	0.710	2.832
Regional	6.558	1.225	7.428	6.558	1.225	7.428

3.0 Proposed Development

The proposed development consists of a four large warehouse buildings with extensive surface parking.
Two SWM wet ponds are proposed at the west and southwest edge of the site to provide quality, erosion and quantity control for runoff from the development site.

3.1 Catchment Parameters

The subject development and its external area are delineated into nine sub-catchments.
The runoff from the two external area (i.e EXT 1, EXT 2) will flow into roadside ditches along Old School Road, enter the site through culverts, and then drain towards east and Dixie Road. For these external areas, bypass routes to Dixie Road will be provided using storm sewers and swales . As such, these areas will not be included in the SWM analysis
The hydrologic parameters used in Visual OTTHYMO model are summarized in following table.CN value of 81 based on hydrologic soil group C (clay loam) for lawns, stated in table 2.3, of Hydrology Update, ,Civica, 2015.

Sub-Catchment	Area (ha)	IMP (%)	CN	IA (mm)	Command	Land Use	Tp (hr)	Outlet No.
1100	30.63	86.4	81	5	StandHyd	Industrial Development	-	2
1200	12.32	92.8	81	5	StandHyd	Industrial Development	-	4
1300	6.33	92.8	81	5	StandHyd	Industrial Development	-	4
Un.Con	0.23	100.0	81	5	StandHyd	Industrial Development	-	2
Total	**49.51**	**88.9**	**-**	**-**	**-**	**-**	**-**	**-**
ENV.1	4.52	0.00	77	8	NasHyd	Environmental	0.41	1
ENV.2	4.56	0.00	82	5	NasHyd	Environmental	0.22	2
ENV.3	16.98	0.00	80	6	NasHyd	Environmental	0.60	3
ENV.4	3.51	0.00	81	6	NasHyd	Environmental	0.09	4
Total	**79.08**	**55.65**	**-**	**-**	**-**	**-**	**-**	**-**

3.1.1 Imperviousness

Weighted imperviousness is calculated for catchment 1100, 1200 and 1300, based on current site plan.

Sub- Catchment	Land Use	Area (ha)	IMP (%)	Outlet No.
1100	Warehouse Building	6.10	100	2
	At-grade Impervious Area	18.42	100	
	At-grade Pervious Area	3.24	0	
	SWM Block*	2.86	75	
	Total Controlled	**30.62**	**87**	
Un.Con	Uncontrolled Area	0.23	100	
	Total	**30.86**	**86**	
1200	Warehouse Building	5.56	100	4
	At-grade Impervious Area	4.98	100	
	At-grade Pervious Area	0.59	0	
	SWM Block*	1.19	75	
	Total	**12.32**	**93**	
1300**	Warehouse Building	2.76	100	4
	At-grade Impervious Area	3.12	100	
	Art-grade Pervious Area	0.45	0	
	SWM Block*	0.00	75	
	Total	**6.33**	**93**	
Total		**49.51**	**89**	-

** Permanent pool is considered impervious area.*
***Catchment 1300 will utlize an underground storm chamber*

3.1.2 SCS CN Numbers

CN = 81 Catchment 1100, Claye Silt Till, BH 126-20, HSG C, Lawns
CN = 81 Catchment 1200, Clayey Silt Till, BH 137-20, HSG C, Lawns
CN = 81 Catchment 1300, mostly Clayay Silt Till, BH 141-20, BH 156-21, HSG C, Lawns

CN numbers are based on final Report Humber River Hydrology Update, Table 2.3, and MTE geotechnical report, , Feb 2021

3.1.3 Initial Abstraction (IA)

Initial Abstraction for various land use are as either taken from TRCA's hydrologic model or confirmed by TRCA.

Land use	IA (mm)	Comments
Woodlot	10.0	Confirmed by TRCA
Agricultural Area	5.0	Typical value for pervious area
Urban Lawn	5.0	Typical value for pervious area
Impervious Surface	1.0	Typical value for impervious area

3.1.4 Time of Concentration (T_C) and Time to Peak (T_P) for rural catchment

Time of concentration (tc) was calculated using Upland Method, then time to peak (tp) was determined using Equation tp=2/3*Tc. With Upland Method, the average overland flow velocity is determined for a catchment based on the catchment slope and ground type. Once the velocity has been determined, then the time of concentration is determined by dividing the catchment length by the overland flow velocity.

The velocity can be either read from a figure for Velocity vs. Slope or calculated from the following equation:

Where,
V is average velocity;
S is slope in percentage (%); and
K (m/s) is an intercept Coefficient as shown in following table.

Flow Type	K
Overland Flow: Forest with Heavy Litter; Hay Meadow	0.8
Overland Flow: Woodland; Fallow or Minimum Tillage Cultivation, Contour or Strip Crop	1.5
Overland Flow: Pasture	2.1
Overland Flow: Cultivated Straight Row	2.7
Overland Flow: Nearly Bare Soil, Untilled	3.1
Grassed Waterway	4.6

Proposed Catchments under rural conditions(used in VO model to estimate the existing Regional Flow Rate)

Catchment	Outlet	Flow Pattern °	L (m)	E_1 (m)	E_2 (m)	Sw	V (m/s)	Tc (min)	Tp hr)
Env.1	1	Overland, Pasture	399.0095	262.69	260.24	0.61	0.18	36.9	0.41
Env.2	2	Overland, Pasture	359.1968	268.47	262.43	1.68	0.30	20.1	0.22
Env.3	3	Overland, Pasture	701.07	268.19	262.01	0.88	0.22	54.1	0.60
Env.4	4	Overland, Pasture	169.8997	264.47	260.89	2.11	0.33	8.5	0.09

4.0 Pond A

4.1 Design Criteria and Required Storage

4.1.1 Water Quality Controls

Pond A must provide water quality control at Enhanced Protection Level

Refer to Table 3.2 in "Stormwater Management Planning and Design Manual" (MOE, 2003)

Protection Level	SWMP Type	Storage Volume (m^3/ha) for Impervious Level			
		35%	55%	70%	85%
Enhanced 80% long-term S.S. removal	Infiltration	25	30	35	40
	Wetlands	80	105	120	140
	Hybrid Wet Pond/Wetland	110	150	175	195
	Wet Pond	140	190	225	250

Sub- Catchment 1100	Area (ha)	Imperviousness (%)
Warehouse Building	6.10	100.0
At-grade Impervious Area	18.42	100.0
At-grade Pervious Area	3.24	0.0
SWM Block*	2.86	75.0
Total at Grade	**24.52**	**83.9**
Un.con	0.23	100.0
Total	**30.86**	**87.2**

Total Drainage Area	30.86	ha			
Imperviousness	87.2	%			
SWMP Type	Wet Pond				
Enhanced Level Protection:	80	% TSS Removal			
Storage Volume per ha	258.9	m^3/ha	or	7,989	m^3
Extended Detention Volume	40.0	m^3/ha	or	1,234	m^3
Permanent Pool Storage	218.9	m^3/ha	or	**6,755**	m^3

4.1.2 Erosion Control

Runoff Volume for 25 mm event	21.578	mm
Extended Detention (Erosion Control)	**6658**	m^3

4.1.3 Quantity Control Target to Outlet 2

The target flow rate is calculated using the Humber River SWM Water Quantity Control Criteria Updates by WSP, 2020

Storm Event	Target Release Flow Rate from Pond A (m^3/s)	Minimum Storage Requirement (from VO Model) (m^3)		Minimum Design Storage Requirement (m^3)
		6 hour AES	12 hour AES	
25 mm*	0.038	---	---	6,658
2-Yr	0.016	8,925	10,612	10,612
5-Yr	0.044	11,554	13,455	13,455
10-Yr	0.371	11,796	13,468	13,468
25-Yr	0.469	12,877	13,973	13,973
50-Yr	0.548	13,960	14,665	14,665
100-Yr	0.622	15,142	15,582	15,582
Regional	2.852	---	---	**23,840**

**48 hr detention for erosion control volume*

Furthermore, the regional flow from Pond A shall be conveyed by the emergency spillway.

Allowable Release Rates to Outlet 2

Outlet Name	Area (ha)	Storm Events	m3/s
2 (Pond A)	30.86	25mm	0.077
		2-yr	0.037
		5-yr	0.072
		10-yr	0.404
		25-yr	0.508
		50-yr	0.591
		100-yr	0.669
		Regional	2.886

Peak flows from Uncontrolled Areas to Outlet 2

Outlet Name	Area (ha)	Storm Events	6 hour AES (m3/s)	12 hour AES (m3/s)
2 (Pond A)	0.23	25mm	0.039	0.039
		2-yr	0.021	0.012
		5-yr	0.028	0.016
		10-yr	0.033	0.018
		25-yr	0.039	0.021
		50-yr	0.043	0.024
		100-yr	0.047	0.026
		Regional	0.034	0.034

4.2 Forebay Length Sizing Calculation

4.2.1 Forebay Sizing Calculaion

Settling Length Calculation (HW1)			
$Dist = \sqrt{\frac{rQ_p}{V_s}}$	Forebay		
Dist - Forebay Length	15.9	m	
Q - Peak Design Flow Rate (25mm - Pond Outflow)	0.038	m^3/s	Extended Detention Volume / (48*3600)
r - Length to width ratio	2.0		Minimum r = 2:1, Recommended 4:1 to 5:1
V_s - Settling Velocity	0.0003	m/s	Recommended value as per MOE Manual
Dispersion Length Calculation (HW1)			
$Dist = \frac{8Q}{dV_f};\ Width = \frac{Dist}{8}$	Forebay		
Dist - Forebay Length	42.9	m	Length of forebay (N-S direction)
Q - Inlet Rate*	2.68	m^3/s	5 yr- 6hr AES
d - Depth of Permanent Pool	1.00	m	Minimum 1.0m as stipulated in MOE Manual
V_f - Desired Velocity in Forebay	0.50	m/s	Max. permissible velocity in the forebay

Required Adjusted Forebay Length: **42.9** **m**
Required Minimum Bottom Width: **5.4** **m**

4.2.2 Forebay Configuration

Description	Forebay	
	Required	Provided*
Depth (m)	1.0	1.0
Settling Length (m)	15.9	40.0
Dispersion Length (m)	42.9	
Minimum Bottom Width of Forebay Deep Zone (m)	5.4	20.0
Minimum Top Width of Forebay (m)	13.4	28.0

4.2.3 Average Flow Velocity in the forebay

A check should be made using the entire forebay cross-sectional area to ensure that the average velocity in the forebay is less than, or equal to, 0.15 m/s which is empirically recognized as the maximum permissible velocity before which erosion will occur in a channel.

Where,	V_{avg} =	Average velocity in the forebay	**0.112**	m/s
	Q =	Inlet flow rate from design storm (5-year)	2.68	m^3/s
		(Chicago storm results are selected as it gives the larger flows.)		
	A =	Entire forebay cross-sectional area	24.00	m^2
	d =	Depth of permanent pool in the forebay	1.0	m
	W_b =	Forebay Deep Zone Bottom Width	20.0	m
	W_t =	Forebay Deep Zone Top Width at Permanent Pool Elevation	28.0	m

Average velocities at the forebay is less than 0.15 m/s.

4.3. Stage Storage Relationship for the SWM pond

Description	Depth (m)	Elevation (m)	Surface Area (m^2)	Total Volume (m^3)	Active Volume (m^3)
Pond Bottom	0.00	266.10	12700.34	0	0
Permanent Pool	1.00	267.10	16563.02	14632	0
Extended Detention	0.40	267.50	19322.62	21809	7177
Safety Platform	0.10	267.60	20019.68	23776	9144
	0.10	267.70	20419.22	25798	11166
	0.10	267.80	20819.53	27860	13228
	0.10	267.90	21220.65	29962	15330
100-Yr	0.10	268.00	21622.58	32104	17472
	0.10	268.10	22025.32	34286	19655
Regional	0.20	268.30	22833.38	38772	24141
Pond Top	0.30	268.60	23848.23	45774	31143

	Required	Provided	
Permanent Pool (m^3)	6,755	**14,632**	
Extended Detention Storage (m^3)	6,658	**7,177**	(required storage per VO6 modelling + quality requirements for extended detention)

4.4 Qaulity Control, Orific Sizing

Low Flow Outlet Design - Orifice Sizing

Orifice Discharge Equation is used to calculate the release rate from the 250 mm orifice plate:

$$Q = CA\sqrt{2gh}$$

Where,	Q = Orifice Plate Flow Rate (m^3/s)	0.07	m^3/s
	C = Flow Coefficient for Orifice Plate	0.63	
	d = Diameter of orifice (mm)	250	mm
	A = Cross-section Area of Orifice Plate (m^2)	0.0491	m^2
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2
	h = Water Head above Centerline of Orifice Plate (m)	0.27	
	Invert of the orifice is set at:	267.10	m

4.9 Detention Drawdown Time

A detention time of 24 hours should be targeted in all instances, unless the outlet is susceptible to clogging.

If the outlet may be prone to clogging, the detention time can be reduced to a minimum of 12 hours.

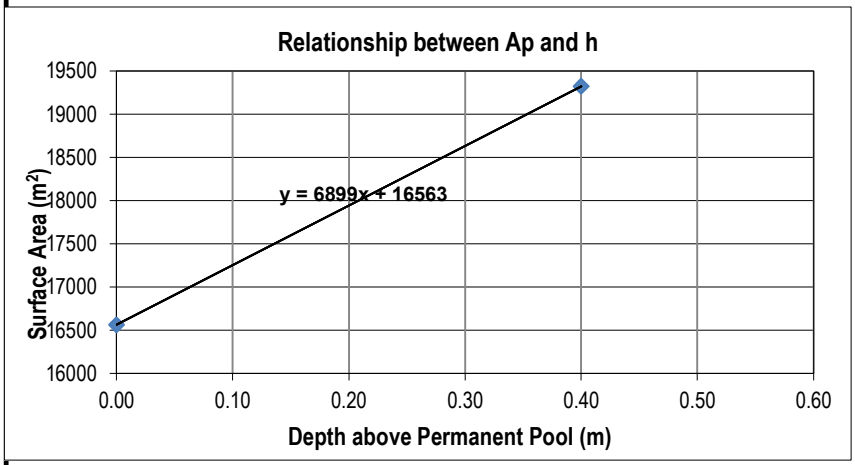
The smallest diameter orifice accepted by the municipalities to ensure that clogging does not occur in a stormwater system is 75 mm.

The detention time is approximated by the drawdown time which is estimated using the Falling Head Orifice Equation.

$$t = \frac{0.66C_2h^{1.5} + 2C_3h^{0.5}}{2.75A_0}$$

Where,	C_2 =	Slope coefficient from the area-depth linear regression	6899.0	
	C_3 =	Intercept from the area-depth linear regression	16563.0	
	h =	Maximum water elevation above the orifice (m)	0.70	m
		WSE from 25 mm storm less PP elevation		
	d =	Diameter of orifice plate (mm)	250	mm
	A_0 =	Cross-section area of the orifice plate (m^2)	0.0491	m^2
	t =	Drawdown time in seconds	225068	s, or
		or	62.5	hrs

Description	Ele. (m)	$D_{to\ PP}$ (m)	A (m^2)	V_{act} (m^3)
Permanent Pool	267.10	0.00	16563	0
Extended Detention	267.50	0.40	19323	7177



$$t = \frac{2 A_p}{C A_o (2g)^{0.5}} \left(h_1^{0.5} - h_2^{0.5} \right)$$ **Equation 4.10: Drawdown Time**

or if a relationship between A_p and h is known (i.e., $A = C_2 h + C_3$)

$$t = \frac{0.66 C_2 h^{1.5} + 2 C_3 h^{0.5}}{2.75 A_o}$$ **Equation 4.11**

where
- t = drawdown time in seconds
- A_p = surface area of the pond (m^2)
- C = discharge coefficient (typically 0.63)
- A_o = cross-sectional area of the orifice (m^2)
- g = gravitational acceleration constant (9.81 m/s^2)
- h_1 = starting water elevation above the orifice (m)
- h_2 = ending water elevation above the orifice (m)
- h = maximum water elevation above the orifice (m)
- C_2 = slope coefficient from the area-depth linear regression
- C_3 = intercept from the area-depth linear regression

5.0 Pond B

5.1 Design Criteria and Required Storage

5.1.1 Water Quality Controls

Pond B must provide water quality control at Enhanced Protection Level

Refer to Table 3.2 in "Stormwater Management Planning and Design Manual" (MOE, 2003)

Protection Level	SWMP Type	Storage Volume (m^3/ha) for Impervious Level			
		35%	55%	70%	85%
Enhanced 80% long-term S.S. removal	Infiltration	25	30	35	40
	Wetlands	80	105	120	140
	Hybrid Wet Pond/Wetland	110	150	175	195
	Wet Pond	140	190	225	250

Sub- Catchment 1200	Area (ha)	Imperviousness (%)
Warehouse Building	5.56	100.0
At-grade Impervious Area	4.98	100.0
At-grade Pervious Area	0.59	0.0
SWM Block*	1.19	75.0
Total at grade	**6.76**	**86.9**
Total	**12.32**	**92.8**

Total Drainage Area	12.32	ha			
Imperviousness	92.8	%			
SWMP Type	Wet Pond				
Enhanced Level Protection:	80	% TSS Removal			
Storage Volume per ha	271.5	m^3/ha	or	3,344	m^3
Extended Detention Volume	40.0	m^3/ha	or	493	m^3
Permanent Pool Storage	231.5	m^3/ha	or	**2,851**	m^3

5.1.2 Erosion Control

Runoff Volume for 25 mm event	22.636	mm	*(Refer to VO output)*
Extended Detention (Erosion Control)	**2788**	m^3	

5.1.3 Quantity Control Target

The target flow rate is calculated using the Humber River SWM Water Quantity Control Criteria Updates by WSP, 2020

Storm Event	Allowable Flow Rate (m^3/s)	Minimum Storage Requirement ((from VO Model) I) (m^3)		Minimum Design Storage Requirement (m^3)
		6 hour AES	12 hour AES	
25 mm*	0.032	---	---	2,788
2-Yr	0.015	3,342	4,008	4,008
5-Yr	0.029	4,309	5,050	5,050
10-Yr	0.161	4,312	5,054	5,054
25-Yr	0.203	4,395	5,091	5,091
50-Yr	0.236	4,580	5,166	5,166
100-Yr	0.267	4,832	5,308	5,308
Regional	1.152	---	---	**6,575**

**48 hr detention for erosion control volume*

Furthermore, the regional flow from Pond B shall be conveyed by the emergency spillway.

5.2 Forebay Length Sizing Calculation

5.2.1 Forebay Sizing Calculaion

Settling Length Calculation (HW1)			
$Dist = \sqrt{\frac{rQ_p}{V_s}}$	Forebay		
Dist - Forebay Length	14.7	m	
Q - Peak Design Flow Rate (25mm - Pond Outflow)	0.032	m^3/s	Extended Detention Volume / (48*3600)
r - Length to width ratio	2.0		Minimum r = 2:1, Recommended 4:1 to 5:1
V_s - Settling Velocity	0.0003	m/s	Recommended value as per MOE Manual
Dispersion Length Calculation (HW1)			
$Dist = \frac{8Q}{dV_f};\ Width = \frac{Dist}{8}$	Forebay		
Dist - Forebay Length	13.3	m	Length of forebay (N-S direction)
Q - Inlet Rate*	0.8	m^3/s	5 yr-AES 6 hr
d - Depth of Permanent Pool	1.00	m	Minimum 1.0m as stipulated in MOE Manual
V_f - Desired Velocity in Forebay	0.50	m/s	Max. permissible velocity in the forebay

Required Adjusted Forebay Length: **14.7** **m**
Required Minimum Bottom Width: **1.8** **m**

5.2.2 Forebay Configuration

Description	Forebay	
	Required	Provided*
Depth (m)	1.0	1.0
Settling Length (m)	14.7	16.0
Dispersion Length (m)	13.3	
Minimum Bottom Width of Forebay Deep Zone (m)	1.8	8.0
Minimum Top Width of Forebay (m)	9.8	16.0

5.2.3 Average Flow Velocity in the forebay

A check should be made using the entire forebay cross-sectional area to ensure that the average velocity in the forebay is less than, or equal to, 0.15 m/s which is empirically recognized as the maximum permissible velocity before which erosion will occur in a channel.

Where,	V_{avg} =	Average velocity in the forebay	**0.069**	m/s
	Q =	Inlet flow rate from design storm (5-year)	0.83	m^3/s
		(Chicago storm results are selected as it gives the larger flows.)		
	A =	Entire forebay cross-sectional area	12.00	m^2
	d =	Depth of permanent pool in the forebay	1.0	m
	W_b =	Forebay Deep Zone Bottom Width	8.0	m
	W_t =	Forebay Deep Zone Top Width at Permanent Pool Elevation	16.0	m

Average velocities at the forebay is less than 0.15 m/s.

5.3 Stage Storage Relationship for the SWM pond

Description	Depth (m)	Elevation (m)	Surface Area (m^2)	Total Volume (m^3)	Active Volume (m^3)
Pond Bottom	0.00	264.30	3384.12	0.00	0
Permanent Pool	1.00	265.30	4645.93	4015.03	0
Safety Platform	0.50	265.80	5840.28	6636.58	2622
Extended Detention	0.20	266.00	6124.08	7833.02	3818
	0.10	266.10	6267.49	8452.59	4438
	0.10	266.20	6411.91	9086.56	5072
100-Yr	0.10	266.30	6557.33	9735.03	5720
	0.15	266.45	6777.34	10735.13	6720
Pond Top	0.30	266.75	224.15	11785.35	7770

	Required	Provided	
Permanent Pool (m^3)	2,851	**4,015**	
Extended Detention Storage (m^3)	2,788	**3,818**	(required storage per VO6 modelling + quality requirements for extended detention)

5.4 Qaulity Control, Orific Sizing

Low Flow Outlet Design - Orifice Sizing

Orifice Discharge Equation is used to calculate the release rate from the 125 mm orifice plate:

$$Q = CA\sqrt{2gh}$$

Where,	Q = Orifice Plate Flow Rate (m^3/s)	0.03	m^3/s
	C = Flow Coefficient for Orifice Plate	0.63	
	d = Diameter of orifice (mm)	125	mm
	A = Cross-section Area of Orifice Plate (m^2)	0.0123	m^2
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2
	h = Water Head above Centerline of Orifice Plate (m)	0.64	
	Invert of the orifice is set at:	265.30	m

4.9 Detention Drawdown Time

A detention time of 24 hours should be targeted in all instances, unless the outlet is susceptible to clogging.

If the outlet may be prone to clogging, the detention time can be reduced to a minimum of 12 hours.

The smallest diameter orifice accepted by the municipalities to ensure that clogging does not occur in a stormwater system is 75 mm.

The detention time is approximated by the drawdown time which is estimated using the Falling Head Orifice Equation.

$$t = \frac{0.66C_2h^{1.5} + 2C_3h^{0.5}}{2.75A_0}$$

Where,	C_2 =	Slope coefficient from the area-depth linear regression	2111.6	
	C_3 =	Intercept from the area-depth linear regression	4645.9	
	h =	Maximum water elevation above the orifice (m)	0.90	m
		WSE from 25 mm storm less PP elevation		
	d =	Diameter of orifice plate (mm)	125	mm
	A_0 =	Cross-section area of the orifice plate (m^2)	0.0123	m^2
	t =	Drawdown time in seconds	296465	s, or
		or	82.4	hrs

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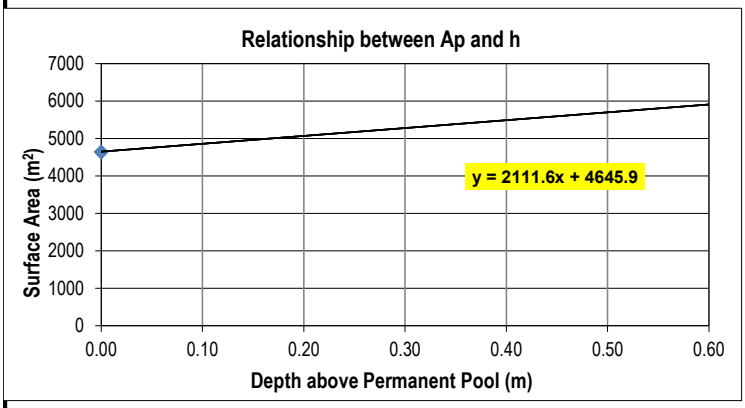
Subject: **Pond B Design- Drawdown Time Relationship**

Description	Ele. (m)	$D_{to\ PP}$ (m)	A (m^2)	V_{act} (m^3)
Permanent Pool	265.30	0.00	4646	0
Extended Detention	266.00	0.70	6124	3818



$$t = \frac{2\,A_p}{C\,A_o(2g)^{0.5}}\left(h_1^{0.5} - h_2^{0.5}\right)$$ **Equation 4.10: Drawdown Time**

or if a relationship between A_p and h is known (i.e., $A = C_2 h + C_3$)

$$t = \frac{0.66\,C_2 h^{1.5} + 2\,C_3 h^{0.5}}{2.75\,A_o}$$ **Equation 4.11**

where
- t = drawdown time in seconds
- A_p = surface area of the pond (m^2)
- C = discharge coefficient (typically 0.63)
- A_o = cross-sectional area of the orifice (m^2)
- g = gravitational acceleration constant (9.81 m/s^2)
- h_1 = starting water elevation above the orifice (m)
- h_2 = ending water elevation above the orifice (m)
- h = maximum water elevation above the orifice (m)
- C_2 = slope coefficient from the area-depth linear regression
- C_3 = intercept from the area-depth linear regression

6.0 Underground Storage Chamber

Sub- Catchment 1300	Area (ha)	Imperviousness (%)
Warehouse Building	2.76	100.0
At-grade Impervious Area	3.12	100.0
At-grade Pervious Area	0.45	0.0
SWM Block*	0.00	75.0
Total at Grade	**3.57**	**87.3**
Total	**6.33**	**92.8**

6.1.1 Erosion Control

Runoff Volume for 25 mm event	22.62	mm	*(Refer to VO output)*
Extended Detention (Erosion Control)	**1432**	m^3	

6.1.2 Quantity Control Target

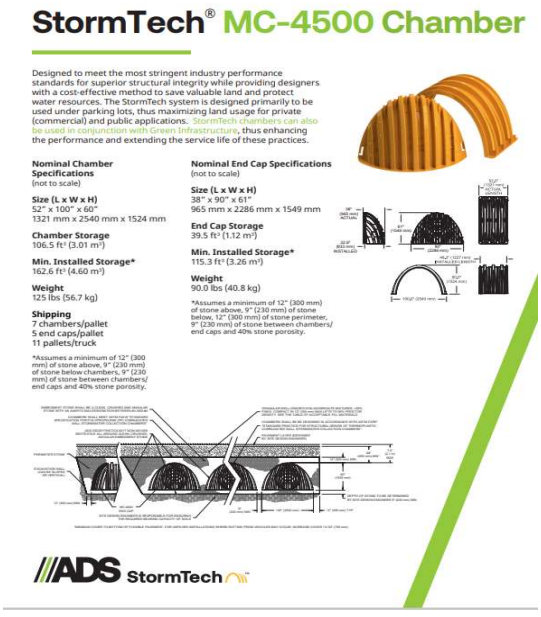
The target flow rate is calculated using the Humber River SWM Water Quantity Control Criteria Updates by WSP, 2020

Storm Event	Allowable Flow Rate (m^3/s)	Minimum Storage Requirement ((from VO Model) I) (m^3)		Minimum Design Storage Requirement (m^3)
		6 hour AES	12 hour AES	
25 mm*	0.017	---	---	1,432
2-Yr	0.008	1,711	2,052	2,052
5-Yr	0.015	2,214	2,593	2,593
10-Yr	0.083	2,217	2,595	2,595
25-Yr	0.104	2,272	2,621	2,621
50-Yr	0.121	2,380	2,666	2,666
100-Yr	0.137	2,516	2,747	2,747
Regional	0.592	---	---	**3,467**

Recommended Underground chamber MC-4500
Size of module chmbaer: 1321mm X 2540mm X 1524mm
Chmaber Storage 3.01 m^3

Number of module chamber:	**1,152**	
Area od module chamber:	**3**	m^2
Required Area:	**3,865**	m^2

Required stone under the module:	**205**	**mm**
Min5mm required infitration storage from water balance ana	**317**	m^3
Void Ratio	**0.40**	
Drawdown time	**29**	**hr**
Infitration rate	**7**	**mm/hr**



7.0 Quantity Control
7.1.1 Roof Control

Zurn Control-Flo roof drains shall be used to provide quantity control on the roof top structure, reference
https://www.zurn.ca/media-library/web_documents/pdfs/root/zil-control-flo-bro-form-81-31-pdf

80% of the roof area is assumed to provide storage. This is a total of 48803.42 m² of roof area in the north/ Building 3
and 44492.65 m² of roof area in the south/Building 1
22091.29 m² of roof area in the south/Building 2

The roof has a maximum rise of 102 mm (4").
Flow rate per notch area, 104.5 L/min or 1.74 L/s
Notch area ratning of 929 m2 in Toronto

Step 1) Determine total roof area
Step 2) Divide roof area by Zurn Notch Rating
Step 3) Determine total number of drains required by not exceeding maximum spacing dimensions.

	A	B	C	D		
Area	Total Roof Area (m^2)	Notch Rating (102mm Rise)	Total # Notches	Flow (L/s)		
Building Roof 3	48,803	929	53	92.220	0.092	0.165932
Building Roof 1	44,493	929	48	83.520	0.084	0.151275
Building Roof 2	22,091	929	24	41.760	0.042	0.07511

A) Total canopy area
B) Zurn notch area raing selected for Toronto = 929 m² from "Selecta-Drain Chart". See Appendix C for details.
C) Total Roof Area (Col A)/ Notch Raing (Col B)
D) Total flow from the roof

Roof Stage-Discharge Curve

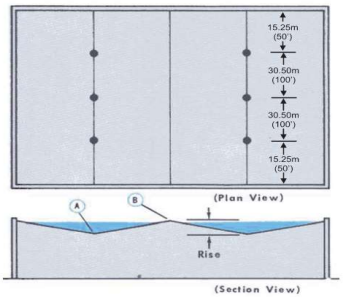
Depth (m)	Head on Orifice (m)	Provided Storage (m^3)	Controlled Flow (m^3/s)
0.10	0.10	1659	0.092
0.10	0.10	1513	0.084
0.10	0.10	751	0.042

Storage per drain calculated by using a triangular prism formula. Area of prism = roof area providing storage, height = maximum rise.

SLOPED ROOFS

DIAGRAM "B"

A sloped roof is one designed commonly with a shallow slope. The Zurn "Control-Flo" drainage system can be applied to any slope which results in a total rise up to 152mm (6").
The total rise of a roof as calculated for "Control-Flo" application is defined as the vertical increase in height in inches, from the low point or valley of a sloping roof (A) to the top of the sloping section (B). (Example: a roof that slopes 3mm (1/8") per foot having a 7.25m (24') span would have a rise of 7.25m x 3mm or 76mm (24' x 1/8" or 3")).
Measurements shown are for maximum distances.



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		Water Recharge Analysis _ Pre-Development Conditions			

Water Balance - Catchment 1100+ Un.con

1. Design Criteria and SWM Strategies

The site is not located in a Source Water Protection vulnerable area nor in a Significant Ground Water Recharge Area.

The implementation of best management practices is recommended to maintain pre-development recharge.

It is proposed best effort to conserve the hydrologic cycle.

LID measures such as an infiltration gallery is proposed to retain runoff to maximize water recharge

2 Pre-development Catchment Water Balance Analysis

The TRCA's online water balance tool gives the approximate recharge amount of the site location (see below).

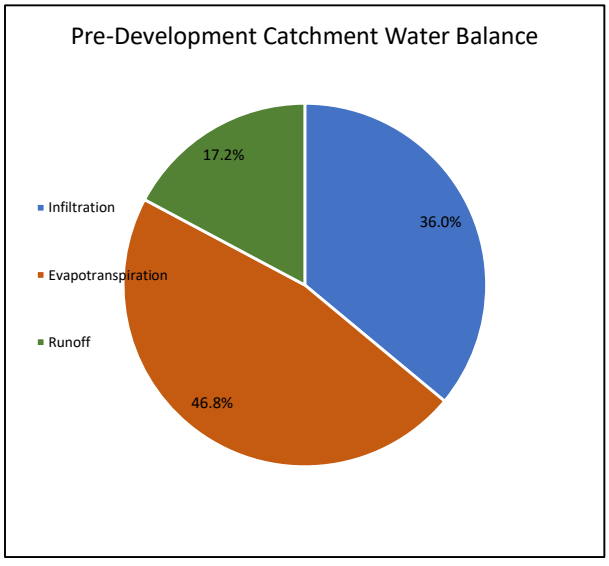
Annual Water Balance Average Function

TRCA tool

	(%)	(mm)
Infiltration	36.0	316.0
Evapotranspiration	46.8	410.0
Runoff	17.2	151.0
Precipitation	100.0	877.0

Pre-development Catchment Water Balance Relationship

Water Budget (mm/hr)	Impervious Area	Pervious Area	Catchment - Wide
% Land-Use Coverage	0.0%	100.0%	100.0%
Infiltration		316.0	36.0%
Evapotranspiration		410.0	46.8%
Runoff		151.0	17.2%
Precipitation		877.0	100%



3. Post-development Catchment Water Balance Analysis _ without Mitigation Measures

Water balance analysis for post-development conditions without mitigation measures is carried out to evaluate the impacts due to the proposed development. It follows the procedure illustrated in the pre-development water balance analysis.

3.1 Water Balance Relationship for the Impervious Area

26.54 ha or 86.0%

	(%)	(mm)	Comments/Assumptions:
Infiltration	0.0	0.0	…
Evapotranspiration*	10.0	87.7	*1 mm abstraction of total rainfall depth assumed to evaporate*
Runoff	90.0	789.3	
Precipitation	100.0	877.0	

*** 1mm of IA on impervious area to be evaporated, based on Figure 1A of WWFM, 1 mm of annual rainfall is roughly equivalent to 10% of the annual rainfall depth**

3.2 Water Balance Relationship for the Pervious Area

Under proposed conditions, the catchment pervious area is grassed area.

4.32 ha or 14.0%

	(%)	(mm)	
Infiltration*	23.7	207.6	*Infiltration is calculated based on Thornthwaite and Mather (1957) approch*
Evapotranspiration	60.5	531.0	*Based on Tabe 3.1 MOE, 2003, For urban Lawn and clay loam*
Runoff	15.8	138.4	
Precipitation	100.0	877.0	

* Infiltration is calculated based on Thornthwaite and Mather (1957) approch:

$WS = P - ET \qquad I = WS \times IF \qquad RO = WS - I$

Where

WS: Water Surplus

P: Percipitation

ET: Evapotranspiration

RO: Runoff

IF: Infiltration factor based on Table 3.1 MOE, 2003, The infiltration factor is detrmined by summing a factor for topography, soils and cover

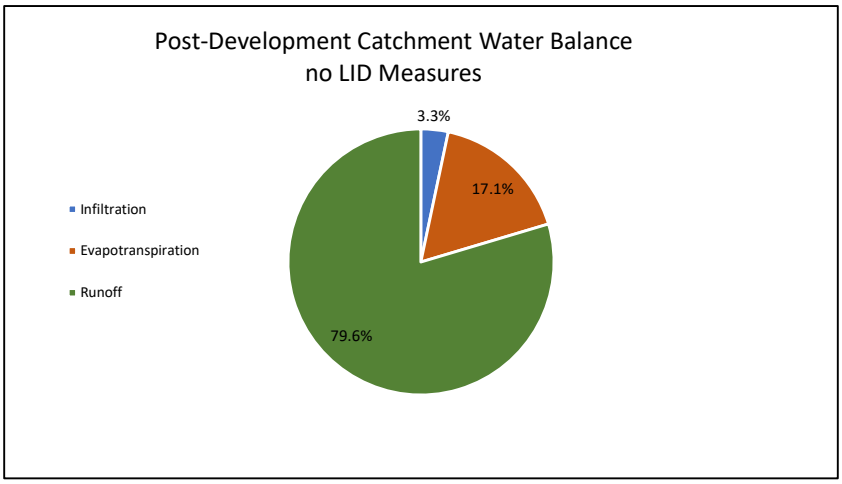
Topgraphy: Flat Land, Average slope< 0.6m/km, IF of 0.3

Soils: Medium Combinations of clay and loam, IF of 0.2

Cover, Cultivated Land, IF of 0.1

3.3 Catchment Water Balance Relationship _ Post-development without Mitigation Measures

	Impervious Area	Pervious Area	Catchment - Wide	
% Land-Use Coverage	86.0%	14.0%	100.0%	
Infiltration (mm)	0.0	207.6	29.1	3.3%
Evapotranspiration (mm)	87.7	531.0	149.8	17.1%
Runoff (mm)	789.3	138.4	698.2	79.6%
Precipitation (mm)	877.0	877.0	877.0	100.0%



4. Post-development Catchment Water Balance Analysis

Under proposed development conditions, the current pervious area will be mainly impervious area.

Therefore, LID measures shall be incorporated into the site plan to make best effort for groundwater recharge.

4.1 Water Retention Strategies

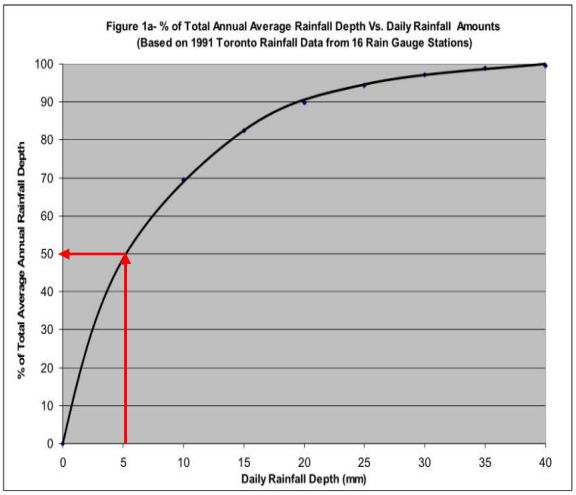
The proposed LID measures includes infiltration base of chamber system, and placement of minimum 300 mm deep absorbent soil at at-grade pervious areas.

The following assumptions are applied in the analysis.

1) All pervious area will have an initial abstraction of 5 mm.

2) All impervious area shall accept 1 mm rainfall prior to runoff generation due to shallow depressions.

Figure 1a in City of Toronto WWFMGs presents the relationship of the % of the total annual rainfall depth vs. the daily rainfall amounts. This relationship will be used to conduct the water balance analysis for the subject site from an annual basis. 36% of the rainfall equivalent to 4 mm to be infiltrated, based on TRCA comment, 5mm infiltration and evaporation in total equivalent to 50% of annual rainfall depth.



4.2 Define Individual Plan per Land Use

Proposed Catchment Area

At Grade Impervious Area	184,300	m^2	60%
Impervious Uncontrolled	2,300	m^2	1%
At Grade pervious Area	32,400	m^2	10%
Roof Area to Chamber System	61,000	m^2	20%
SWM Block	28,600	m^2	9%
Total Site Area	**308,600**	**m^2**	**100%**

1) At Grade Imervious Area - flows directly to pond

		21.29	ha	or	69.0%
	(%)	(mm)	*Comments/Assumptions:*		
Infiltration	0.0	0.0	*No infiltration for at-grade areas*		
Evapotranspiration	10.0	87.7	*1 mm depression*		
Runoff	90.0	789.3	...		
Precipitation	100.0	877.0			

Runoff from Impervious Area to be retained through Infiltration Base

The required Infiltration Storage	1,543.0	m^3	*Eq 4.2, MOE SWM guideline ,2033*
Minimum Required Area For infiltration Gallery	11,480.7	m^2	$A = \frac{1{,}000\,V}{Pn\Delta t}$
Required Depth	134.4	mm	
Required stone depth	336.0	mm	$d = \frac{PT}{1{,}000}$
Provided Drawdown time	48.0	hr	
Maximum allowable Depth of infiltration Gallery including stone	840.0	mm	
Drawdown time	48.0	hr	$d_{r\,max} = i * t_s / V_r$
Voide Ratio	0.4		
Infitration rate for soil with hydraulic conductictivity 8 *10^-8 m/s, &	7.0	mm/hr	

MTE Hydrology, 2021 & considering factor of safety 3.5

Surface	Area (m^2)	Rainfall Depth (mm)	Initial Abstraction (mm)	Runoff Depth (mm)	Required Retention Volume (m^3)
Total Catchment Area	308,600	5.0	1.3	3.7	1543.0

2) Roof Impervious Area-flows directly to underground infitration gallery

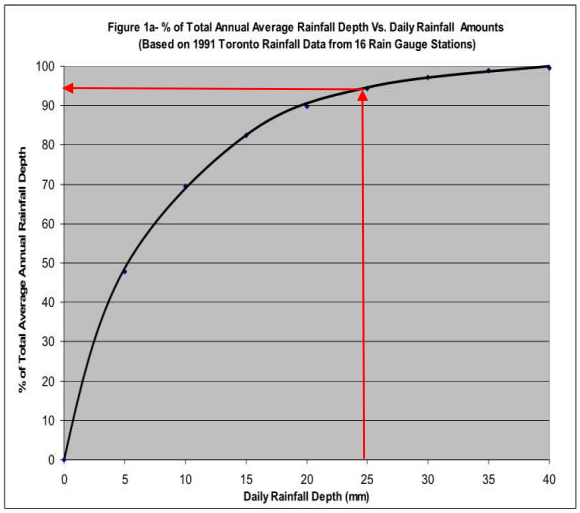
6.10 ha or 20%

Surface	Area (m^2)	Rainfall Depth (mm)**	Initial Abstraction (mm)	Runoff Depth (mm)	Retention Volume (m^3)
Roof Area	61,000	25.3	1.0	24.3	1482.0

	(%)	(mm)	Comments/Assumptions:
Infiltration**	95.0	833.2	*Based on Equivalent to rainfall depth captured by infiltration gallery*
Evapotranspiration*	5.0	43.9	*1 mm depression*
Runoff	0.0	0.0	…
Precipitation	100.0	877.0	

*** 1mm of IA on impervious area to be evaporated, based on Figure 1A of WWFM, 1 mm of annual rainfall is roughly equivalent to 10% of the annual rainfall depth or less**

**** Based on rainfall depth at roof captured by infiltration gallery & Figure 1A of WWFM**



3) Uncontrolled Area

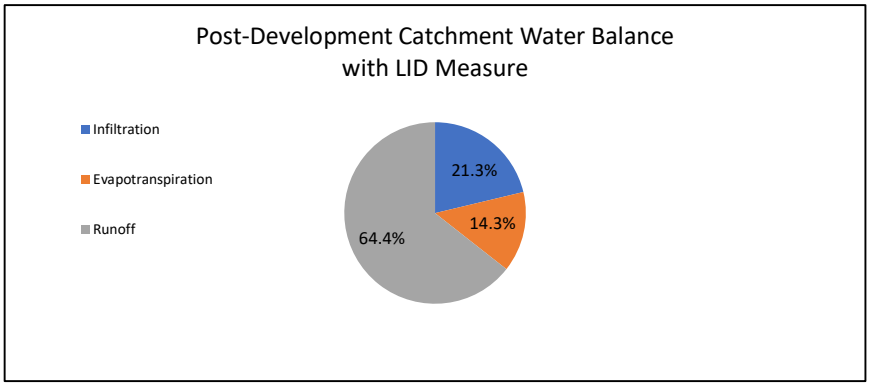
0.23 ha or 1%

	(%)	(mm)	Comments/Assumptions:
Infiltration	0.0	0.0	*No infiltration for at-grade areas*
Evapotranspiration*	10.0	87.7	*1 mm depression*
Runoff	90.0	789.3	…
Precipitation	100.0	877.0	

*** 1mm of IA on impervious area to be evaporated, based on Figure 1A of WWFM, 1 mm of annual rainfall is roughly equivalent to 10% of the annual rainfall depth**

4.3 Catchment Water Balance Relationship _ Post-development Conditions with Mitigation Measures

	At grade Impervious to Pond	Roof Area to Chamber System	Uncontrolled Area	Pevious Area	Catchment Water Balance Relationship	
% Land-Use Coverage	69%	20%	1%	10%	100%	
Infiltration	0.0	833.2	0.0	207.6	186.5	21.3%
Evapotranspiration	87.7	43.9	87.7	531.0	125.6	14.3%
Runoff	789.3	0.0	789.3	138.4	564.9	64.4%
Precipitation	877.0	877.0	877.0	877.0	877.0	100.0%



5. Post-development vs Pre-Development Water Balance

Hydrologic Cycle Components	Pre-Development Conditions		Post-Development Conditions without Mitigation Measures		Post-Development Conditions with Mitigation Measures	
	mm	%	mm	%	mm	%
Infiltration	316.0	***36.0%***	29.1	3.3%	186.5	***21.3%***
Evapotranspiration	410.0	46.8%	149.8	17.1%	125.6	***14.3%***
Runoff	151.0	17.2%	698.2	79.6%	564.9	***64.4%***
Precipitation	877.0	100.0%	877.0	100.0%	877.0	***100.0%***

The comparison of water balance reveals that the water recharge under post-development with LID measure will be greater than the pre-development level, though the runoff volume will increase due to the decrease of evapotranspiration.

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		Water Recharge Analysis _ Pre-Development Conditions			

Water Balance - Catchment 1200

1. Design Criteria and SWM Strategies

The site is not located in a Source Water Protection vulnerable area nor in a Significant Ground Water Recharge Area.

The implementation of best management practices is recommended to maintain pre-development recharge.

It is proposed best effort to conserve the hydrologic cycle.

LID measures such as an infiltration gallery is proposed to retain runoff to maximize water recharge

2 Pre-development Catchment Water Balance Analysis

The TRCA's online water balance tool gives the approximate recharge amount of the site location (see below).

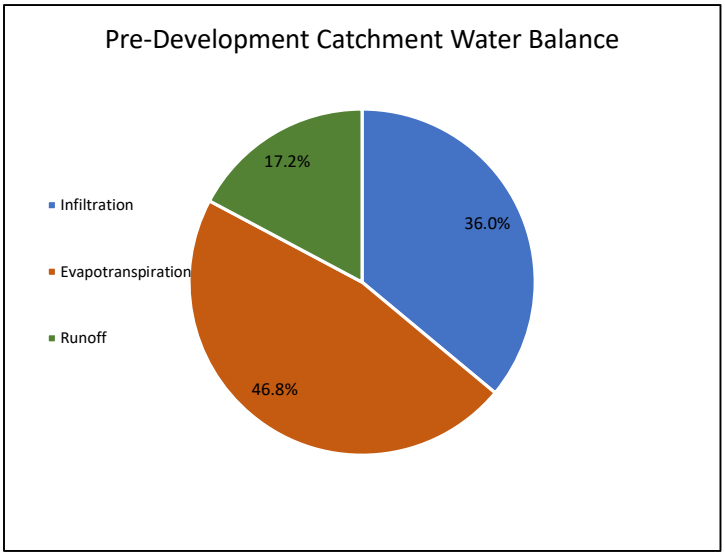
Annual Water Balance Average Function

TRCA tool

	(%)	(mm)
Infiltration	36.0	316.0
Evapotranspiration	46.8	410.0
Runoff	17.2	151.0
Precipitation	100.0	877.0

Pre-development Catchment Water Balance Relationship

Water Budget (mm/hr)	Impervious Area	Pervious Area	Catchment - Wide
% Land-Use Coverage	0.0%	100.0%	100.0%
Infiltration		316.0	36.0%
Evapotranspiration		410.0	46.8%
Runoff		151.0	17.2%
Precipitation		877.0	100%



3. Post-development Catchment Water Balance Analysis _ without Mitigation Measures

Water balance analysis for post-development conditions without mitigation measures is carried out to evaluate the impacts due to the proposed development. It follows the procedure illustrated in the pre-development water balance analysis.

3.1 Water Balance Relationship for the Impervious Area

11.46 ha or 93.0%

	(%)	(mm)	Comments/Assumptions:
Infiltration	0.0	0.0	...
Evapotranspiration*	10.0	87.7	*1 mm abstraction of total rainfall depth assumed to evaporate*
Runoff	90.0	789.3	
Precipitation	100.0	877.0	

*** 1mm of IA on impervious area to be evaporated, based on Figure 1A of WWFM, 1 mm of annual rainfall is roughly equivalent to 10% of the annual rainfall depth**

3.2 Water Balance Relationship for the Pervious Area

Under proposed conditions, the catchment pervious area is grassed area.

0.86 ha or 7.0%

	(%)	(mm)	
Infiltration*	23.7	207.6	*Infiltration is calculated based on Thornthwaite and Mather (1957) approch*
Evapotranspiration	60.5	531.0	*Based on Tabe 3.1 MOE, 2003, For urban Lawn and clay loam*
Runoff	15.8	138.4	
Precipitation	100.0	877.0	

* Infiltration is calculated based on Thornthwaite and Mather (1957) approch:

$$WS = P - ET \qquad I = WS \times IF \qquad RO = WS - I$$

Where

WS: Water Surplus

P: Percipitation

ET: Evapotranspiration

RO: Runoff

IF: Infiltration factor based on Table 3.1 MOE, 2003, The infiltration factor is detrmined by summing a factor for topography, soils and cover

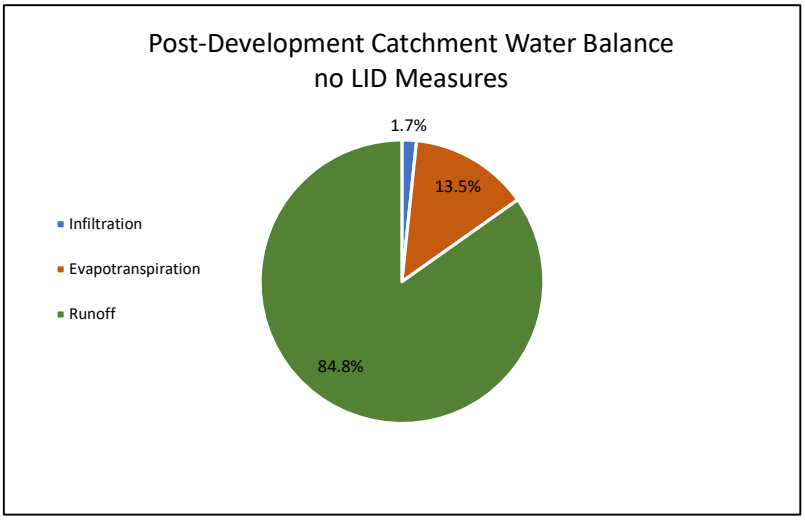
Topgraphy: Flat Land, Average slope< 0.6m/km, IF of 0.3

Soils: Medium Combinations of clay and loam, IF of 0.2

Cover, Cultivated Land, IF of 0.1

3.3 Catchment Water Balance Relationship _ Post-development without Mitigation Measures

	Impervious Area	Pervious Area	Catchment - Wide	
% Land-Use Coverage	93.0%	7.0%	100.0%	
Infiltration (mm)	0.0	207.6	14.5	1.7%
Evapotranspiration (mm)	87.7	531.0	118.7	13.5%
Runoff (mm)	789.3	138.4	743.7	84.8%
Precipitation (mm)	877.0	877.0	877.0	100.0%



4. Post-development Catchment Water Balance Analysis

Under proposed development conditions, the current pervious area will be mainly impervious area.

Therefore, LID measures shall be incorporated into the site plan to make best effort for groundwater recharge.

4.1 Water Retention Strategies

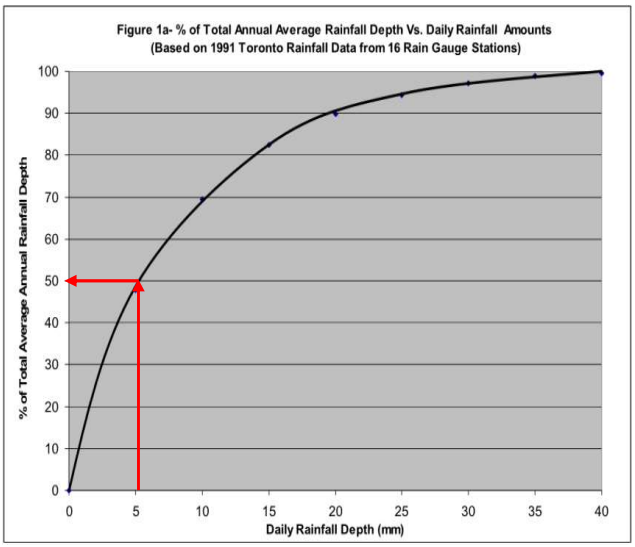
The proposed LID measures includes infiltration base of chamber system, and placement of minimum 300 mm deep absorbent soil at at-grade pervious areas.

The following assumptions are applied in the analysis.

1) All pervious area will have an initial abstraction of 5 mm.

2) All impervious area shall accept 1 mm rainfall prior to runoff generation due to shallow depressions.

Figure 1a in City of Toronto WWFMGs presents the relationship of the % of the total annual rainfall depth vs. the daily rainfall amounts. This relationship will be used to conduct the water balance analysis for the subject site from an annual basis. 36% of the rainfall equivalent to 4 mm to be infitrated, based on TRCA comment, 5mm infitration and evaporation in total equivalent to 50% of annual rainfall depth.



4.2 Define Individual Plan per Land Use

Proposed Catchment Area

At Grade Impervious Area	49,800	m^2	40%
Impervious Uncontrolled	0	m^2	0%
At Grade pervious Area	5,900	m^2	5%
Roof Area to Chamber System	55,600	m^2	45%
SWM Block	11,900	m^2	10%
Total Site Area	**123,200**	**m^2**	**100%**

1) At Grade Imervious Area - flows directly to pond

6.17 ha or 50.1%

	(%)	(mm)	Comments/Assumptions:
Infiltration	0.0	0.0	*No infiltration for at-grade areas*
Evapotranspiration*	10.0	87.7	*1 mm depression*
Runoff	90.0	789.3	*...*
Precipitation	100.0	877.0	

*** 1mm of IA on impervious area to be evaporated, based on Figure 1A of WWFM, 1 mm of annual rainfall**

Runoff from Impervious Area to be retained through Infiltration Base

The required Infiltration Storage	616.0	m^3	*Eq 4.2, MOE SWM guideline ,2033*
Required Area For infiltration Gallery	4,583.3	m^2	$A = \frac{1{,}000V}{Pn\Delta t}$
Required Depth	134.4	mm	$d = \frac{PT}{1{,}000}$
Required stone depth	336.0	mm	
Provided Drawdown time	48.0	hr	
Maximum Depth of infiltration Gallery including stone	840.0	mm	$d_{r\,max} = i * t_s / V_r$
Drawdown time	48.0	hr	
Voide Ratio	0.4		
Infitration rate for soil with hydraulic conductictivity 8 *10^-8 m/s,	7.0	mm/hr	

MTE Hydrology, 2021 & considering factor of safety 3.5

Surface	Area (m^2)	Rainfall Depth (mm)	Initial Abstraction (mm)	Runoff Depth (mm)	Required Retention Volume (m^3)
Total Catchment Area	123,200	5.0	1.1	3.9	616.0

2) Roof Impervious Area-flows directly to underground infitration gallery

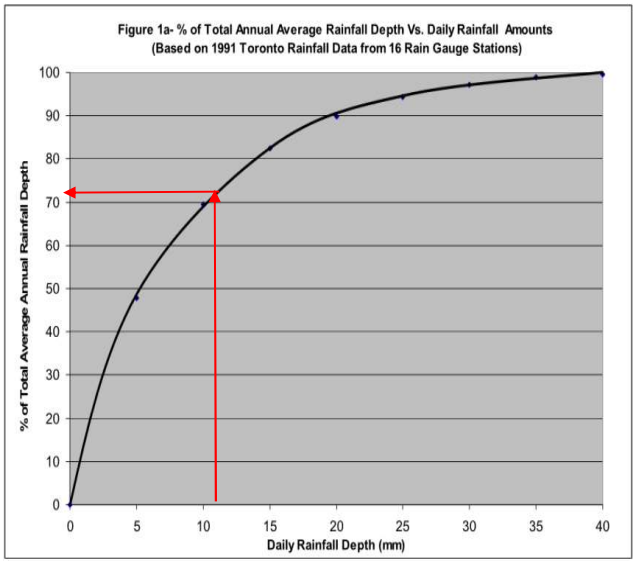
5.56 ha or 45%

Surface	Area (m^2)	Rainfall Depth (mm)**	Initial Abstraction (mm)	Runoff Depth (mm)	Retention Volume (m^3)
Roof Area	55,600	11.1	1.0	10.1	560.4

	(%)	(mm)	Comments/Assumptions:
Infiltration**	72.0	631.4	*Based on Equivalent to rainfall depth captured by infiltration gallery*
Evapotranspiration*	10.0	87.7	*1 mm depression*
Runoff	18.0	157.9	*...*
Precipitation	100.0	877.0	

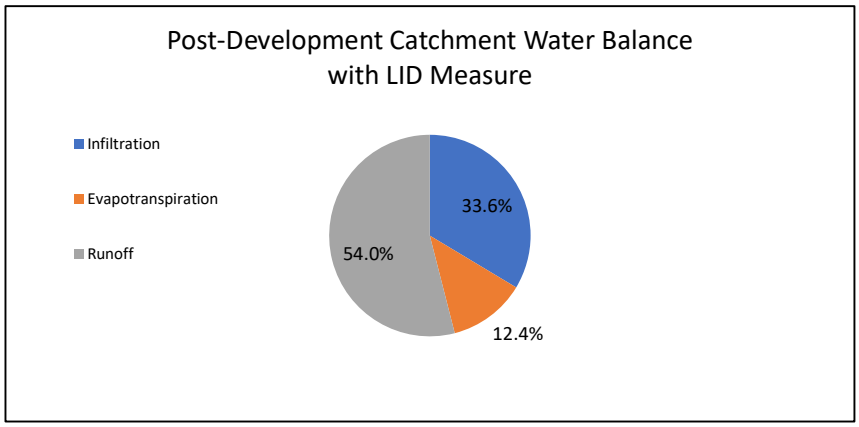
*** 1mm of IA on impervious area to be evaporated, based on Figure 1A of WWFM, 1 mm of annual rainfall is roughly equivalent to 10% of the annual rainfall depth or less**

**** Based on rainfall depth at roof captured by infiltration gallery & Figure 1A of WWFM**



4.3 Catchment Water Balance Relationship _ Post-development Conditions with Mitigation Measures

	At grade Impervious to Pond	Roof Area to Chamber System	Uncontrolled Area	Pevious Area	Catchment Water Balance Relationship	
% Land-Use Coverage	50%	45%	0%	5%	100%	
Infiltration	0.0	631.4	0.0	207.6	294.9	33.6%
Evapotranspiration	87.7	87.7	87.7	531.0	108.9	12.4%
Runoff	789.3	157.9	789.3	138.4	473.2	54.0%
Precipitation	877.0	877.0	877.0	877.0	877.0	100.0%



5. Post-development vs Pre-Development Water Balance

Hydrologic Cycle Components	Pre-Development Conditions		Post-Development Conditions without Mitigation Measures		Post-Development Conditions with Mitigation Measures	
	mm	%	mm	%	mm	%
Infiltration	316.0	***36.0%***	14.5	1.7%	294.9	***33.6%***
Evapotranspiration	410.0	46.8%	118.7	13.5%	108.9	***12.4%***
Runoff	151.0	17.2%	743.7	84.8%	473.2	***54.0%***
Precipitation	877.0	100.0%	877.0	100.0%	877.0	***100.0%***

The comparison of water balance reveals that the water recharge under post-development with LID measure will be greater than the pre-development level, though the runoff volume will increase due to the decrease of evapotranspiration.

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		Water Recharge Analysis _ Pre-Development Conditions			

Water Balance - Catchment 1300

1. Design Criteria and SWM Strategies

The site is not located in a Source Water Protection vulnerable area nor in a Significant Ground Water Recharge Area.

The implementation of best management practices is recommended to maintain pre-development recharge.

It is proposed best effort to conserve the hydrologic cycle.

LID measures such as an infiltration gallery is proposed to retain runoff to maximize water recharge

2 Pre-development Catchment Water Balance Analysis

The TRCA's online water balance tool gives the approximate recharge amount of the site location (see below).

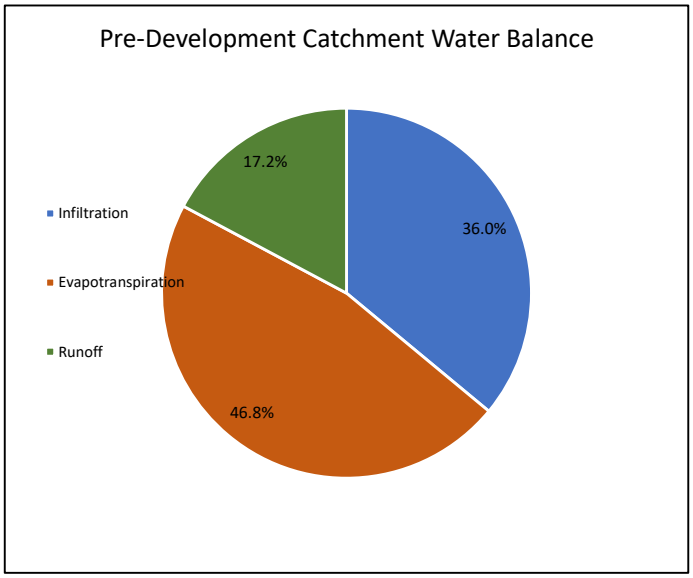
Annual Water Balance Average Function

TRCA tool

	(%)	(mm)
Infiltration	36.0	316.0
Evapotranspiration	46.8	410.0
Runoff	17.2	151.0
Precipitation	100.0	877.0

Pre-development Catchment Water Balance Relationship

Water Budget (mm/hr)	Impervious Area	Pervious Area	Catchment - Wide
% Land-Use Coverage	0.0%	100.0%	100.0%
Infiltration		316.0	36.0%
Evapotranspiration		410.0	46.8%
Runoff		151.0	17.2%
Precipitation		877.0	100%



3. Post-development Catchment Water Balance Analysis _ without Mitigation Measures

Water balance analysis for post-development conditions without mitigation measures is carried out to evaluate the impacts due to the proposed development. It follows the procedure illustrated in the pre-development water balance analysis.

3.1 Water Balance Relationship for the Impervious Area

5.57 ha or 88.0%

	(%)	(mm)	Comments/Assumptions:
Infiltration	0.0	0.0	…
Evapotranspiration*	10.0	87.7	*1 mm abstraction of total rainfall depth assumed to evaporate*
Runoff	90.0	789.3	
Precipitation	100.0	877.0	

*** 1mm of IA on impervious area to be evaporated, based on Figure 1A of WWFM, 1 mm of annual rainfall is roughly equivalent to 10% of the annual rainfall depth**

3.2 Water Balance Relationship for the Pervious Area

Under proposed conditions, the catchment pervious area is grassed area.

0.76 ha or 12.0%

	(%)	(mm)	
Infiltration*	23.7	207.6	*Infiltration is calculated based on Thornthwaite and Mather (1957) approch*
Evapotranspiration	60.5	531.0	*Based on Tabe 3.1 MOE, 2003, For urban Lawn and clay loam*
Runoff	15.8	138.4	
Precipitation	100.0	877.0	

* Infiltration is calculated based on Thornthwaite and Mather (1957) approch:

$$WS = P - ET \qquad I = WS \times IF \qquad RO = WS - I$$

Where

WS: Water Surplus

P: Percipitation

ET: Evapotranspiration

RO: Runoff

IF: Infiltration factor based on Table 3.1 MOE, 2003, The infiltration factor is detrmined by summing a factor for topography, soils and cover

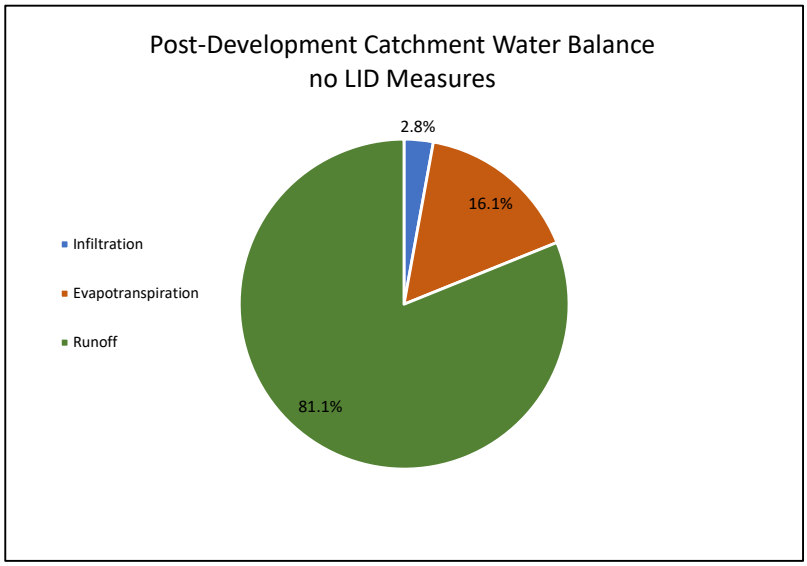
Topgraphy: Flat Land, Average slope< 0.6m/km, IF of 0.3

Soils: Medium Combinations of clay and loam, IF of 0.2

Cover, Cultivated Land, IF of 0.1

3.3 Catchment Water Balance Relationship _ Post-development without Mitigation Measures

	Impervious Area	Pervious Area	Catchment - Wide	
% Land-Use Coverage	88.0%	12.0%	100.0%	
Infiltration (mm)	0.0	207.6	24.9	2.8%
Evapotranspiration (mm)	87.7	531.0	140.9	16.1%
Runoff (mm)	789.3	138.4	711.2	81.1%
Precipitation (mm)	877.0	877.0	877.0	100.0%



4. Post-development Catchment Water Balance Analysis

Under proposed development conditions, the current pervious area will be mainly impervious area.

Therefore, LID measures shall be incorporated into the site plan to make best effort for groundwater recharge.

4.1 Water Retention Strategies

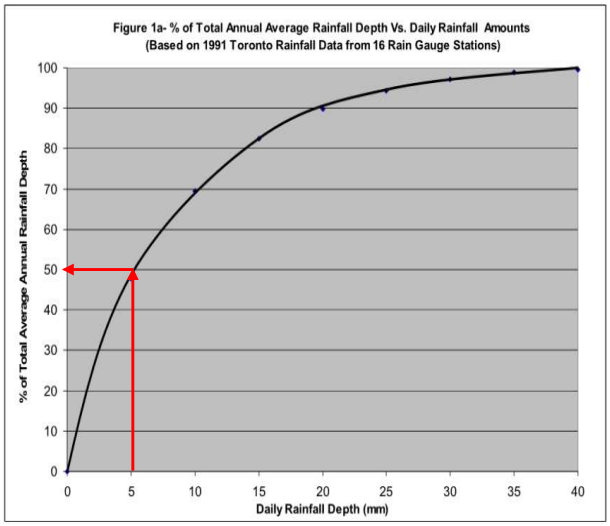
The proposed LID measures includes infiltration base of chamber system, and placement of minimum 300 mm deep absorbent soil at at-grade pervious areas.

The following assumptions are applied in the analysis.

1) All pervious area will have an initial abstraction of 5 mm.

2) All impervious area shall accept 1 mm rainfall prior to runoff generation due to shallow depressions.

Figure 1a in City of Toronto WWFMGs presents the relationship of the % of the total annual rainfall depth vs. the daily rainfall amounts. This relationship will be used to conduct the water balance analysis for the subject site from an annual basis. 36% of the rainfall equivalent to 4 mm to be infiltrated, based on TRCA comment, 5mm infiltration and evaporation in total equivalent to 50% of annual rainfall depth.



4.2 Define Individual Plan per Land Use

Proposed Catchment Area

At Grade Impervious Area	31,200	m^2	49%
Impervious Uncontrolled	0	m^2	0%
At Grade pervious Area	4,500	m^2	7%
Roof Area to Chamber System	27,600	m^2	44%
SWM Block	0	m^2	0%
Total Site Area	**63,300**	**m^2**	**100%**

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Water Recharge Analysis _ Post-Development with Mitigation Measures- Catchment 1300

1) At Grade Imervious Area - flows directly to underground chamber

3.12 ha or 49.3%

	(%)	(mm)	Comments/Assumptions:
Infiltration*	65.0	570.1	*65% of rainfall will be captured by underground chamber*
Evapotranspiration	10.0	87.7	*1 mm depression*
Runoff	25.0	219.3	*...*
Precipitation	100.0	877.0	

* volume of chamber/area at grade= daily rainfall depth, captured by area, the equilvalent percentage of annual rainfall is estimated on Figure 1a of WWFM, accoridngly. Depth of 10mm of daily rainfall and 65% of annual rainfall is estimated.

Runoff from Impervious Area to be retained through Infiltration Base

The required Infiltration Storage	316.5	m^3	*Eq 4.2, MOE SWM guideline ,2033*
Minimm Required Area For infiltration Gallery	2,354.9	m^2	$A = \frac{1{,}000\,V}{Pn\Delta t}$
Required depth excluding void:	134.4	mm	$d = \frac{PT}{1{,}000}$
Required depth including the void:	336.0	mm	
Provided Drawdowntime	48.0	hr	
Maximum Allowable Depth of infiltration Gallery including stone	840.0	mm	$d_{r\,max} = i * t_s / V_r$
Drawdown time	48.0	hr	
Voide Ratio	0.4		
Infitration rate for soil with hydraulic conductictivity 8 *10^-8 m/s, ł	7.0	mm/hr	

MTE Hydrology, 2021 & considering factor of safety 3.5

Surface	Area (m^2)	Rainfall Depth (mm)	Initial Abstraction (mm)	Runoff Depth (mm)	Required Retention Volume (m^3)
Total Catchment Area	63,300	5.0	1.3	3.7	316.5

2) Roof Impervious Area-flows directly to underground chamber

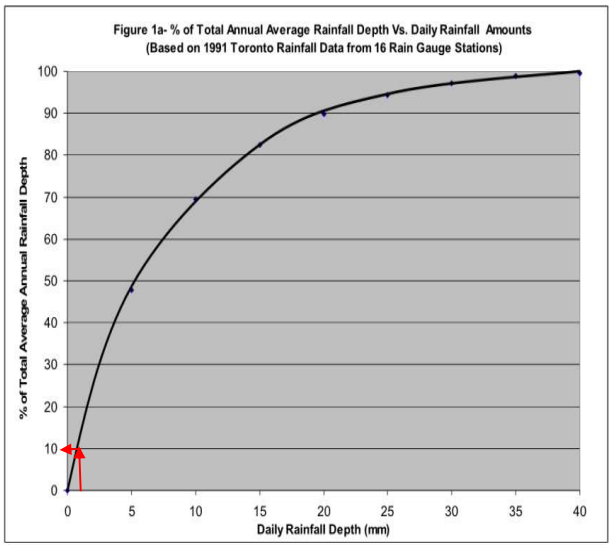
2.76 ha or 44%

Surface	Area (m^2)	Rainfall Depth (mm)**	Initial Abstraction (mm)	Runoff Depth (mm)	Retention Volume (m^3)
Roof Area	27,600	1.5	1.0	0.5	12.9

	(%)	(mm)	Comments/Assumptions:
Infiltration**	10.0	87.7	
Evapotranspiration*	10.0	87.7	*1 mm depression*
Runoff	80.0	701.6	*...*
Precipitation	100.0	877.0	

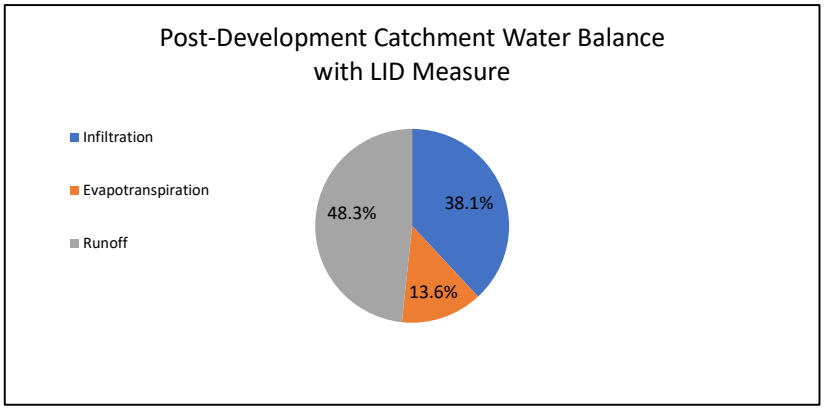
*** 1mm of IA on impervious area to be evaporated, based on Figure 1A of WWFM, 1 mm of annual rainfall is roughly equivalent to 10% of the annual rainfall depth or less**

**** Based on rainfall depth at roof captured by infiltration gallery & Figure 1A of WWFM, The 10mm rainfall captured by at grade area mentioned above is excluded**



4.3 Catchment Water Balance Relationship _ Post-development Conditions with Mitigation Measures

	At grade Impervious to Pond	Roof Area to Chamber System	Uncontrolled Area	Pevious Area	Catchment Water Balance Relationship	
% Land-Use Coverage	49%	44%	0%	7%	100%	
Infiltration	570.1	87.7	0.0	207.6	334.0	38.1%
Evapotranspiration	87.7	87.7	87.7	531.0	119.2	13.6%
Runoff	219.3	701.6	789.3	138.4	423.8	48.3%



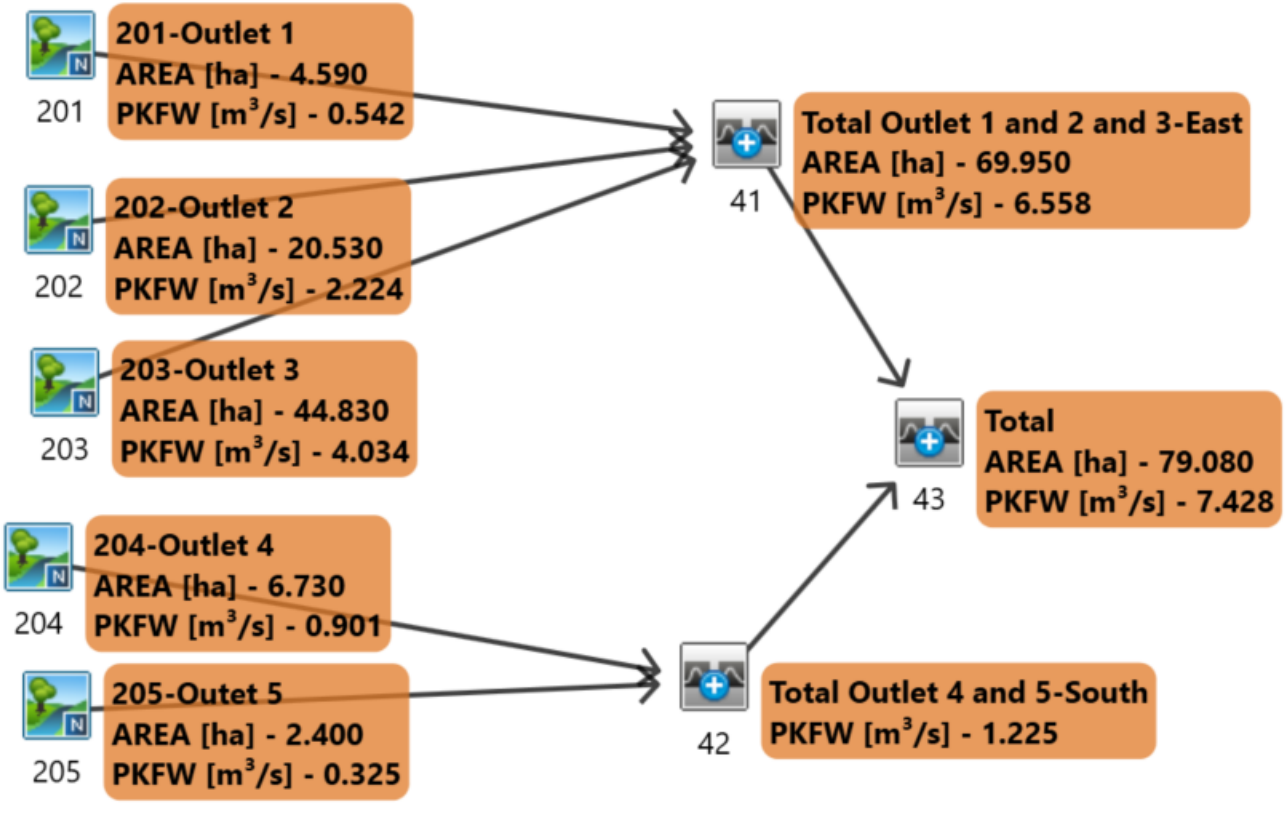
5. Post-development vs Pre-Development Water Balance

Hydrologic Cycle Components	Pre-Development Conditions		Post-Development Conditions without Mitigation Measures		Post-Development Conditions with Mitigation Measures	
	mm	%	mm	%	mm	%
Infiltration	316.0	***36.0%***	24.9	2.8%	334.0	***38.1%***
Evapotranspiration	410.0	46.8%	140.9	16.1%	119.2	***13.6%***
Runoff	151.0	17.2%	711.2	81.1%	423.8	***48.3%***
Precipitation	877.0	100.0%	877.0	100.0%	877.0	***100.0%***

The comparison of water balance reveals that the water recharge under post-development with LID measure will be greater than the pre-development level, though the runoff volume will increase due to the decrease of evapotranspiration.

APPENDIX

B Hydrologic Modelling Output


201-Outlet 1
AREA [ha] - 4.590
PKFW [m³/s] - 0.542
201
202-Outlet 2
AREA [ha] - 20.530
PKFW [m³/s] - 2.224
202
203-Outlet 3
AREA [ha] - 44.830
PKFW [m³/s] - 4.034
203
204-Outlet 4
AREA [ha] - 6.730
PKFW [m³/s] - 0.901
204
205-Outet 5
AREA [ha] - 2.400
PKFW [m³/s] - 0.325
205
Total Outlet 1 and 2 and 3-East
AREA [ha] - 69.950
PKFW [m³/s] - 6.558
41
Total
AREA [ha] - 79.080
PKFW [m³/s] - 7.428
43
Total Outlet 4 and 5-South
PKFW [m³/s] - 1.225
42

```
==========================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\2f52daf6
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\2f52daf6


DATE: 03-01-2024                          TIME: 01:29:08

USER:



COMMENTS: _____________________________________________________________

----------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 01 2yr 6hr AES           **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              7de6ddff-3c07-4357-ba13-cd6f425c5b71\f4a7b4fa
| Ptotal= 36.00 mm |    Comments: 2yr/6hr
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.75   12.24 |  3.50    5.04 |  5.25    0.72
                0.25    0.72 |  2.00   12.24 |  3.75    2.88 |  5.50    0.72
                0.50    0.72 |  2.25   33.12 |  4.00    2.88 |  5.75    0.72
                0.75    0.72 |  2.50   33.12 |  4.25    1.44 |  6.00    0.72
                1.00    0.72 |  2.75    9.36 |  4.50    1.44 |
                1.25    4.32 |  3.00    9.36 |  4.75    0.72 |
                1.50    4.32 |  3.25    5.04 |  5.00    0.72 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (  0201)|   Area    (ha)=   4.59   Curve Number   (CN)= 77.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.41

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    4.32 | 3.250    9.36 |  4.83    0.72
               0.167    0.00 | 1.750    4.32 | 3.333    5.04 |  4.92    0.72
               0.250    0.00 | 1.833   12.24 | 3.417    5.04 |  5.00    0.72
               0.333    0.72 | 1.917   12.24 | 3.500    5.04 |  5.08    0.72
               0.417    0.72 | 2.000   12.24 | 3.583    5.04 |  5.17    0.72
               0.500    0.72 | 2.083   12.24 | 3.667    5.04 |  5.25    0.72
               0.583    0.72 | 2.167   12.24 | 3.750    5.04 |  5.33    0.72
               0.667    0.72 | 2.250   12.24 | 3.833    2.88 |  5.42    0.72
               0.750    0.72 | 2.333   33.12 | 3.917    2.88 |  5.50    0.72
               0.833    0.72 | 2.417   33.12 | 4.000    2.88 |  5.58    0.72
               0.917    0.72 | 2.500   33.12 | 4.083    2.88 |  5.67    0.72
               1.000    0.72 | 2.583   33.12 | 4.167    2.88 |  5.75    0.72
               1.083    0.72 | 2.667   33.12 | 4.250    2.88 |  5.83    0.72
               1.167    0.72 | 2.750   33.12 | 4.333    1.44 |  5.92    0.72
```

1.250	0.72	2.833	9.36	4.417	1.44	6.00	0.72
1.333	4.32	2.917	9.36	4.500	1.44	6.08	0.72
1.417	4.32	3.000	9.36	4.583	1.44	6.17	0.72
1.500	4.32	3.083	9.36	4.667	1.44	6.25	0.72
1.583	4.32	3.167	9.36	4.750	1.44		

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.060 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 7.547
TOTAL RAINFALL (mm)= 36.000
RUNOFF COEFFICIENT = 0.210

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

CALIB NASHYD (0202)	Area (ha)= 20.53	Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.71	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	4.32	3.250	9.36	4.83	0.72
0.167	0.00	1.750	4.32	3.333	5.04	4.92	0.72
0.250	0.00	1.833	12.24	3.417	5.04	5.00	0.72
0.333	0.72	1.917	12.24	3.500	5.04	5.08	0.72
0.417	0.72	2.000	12.24	3.583	5.04	5.17	0.72
0.500	0.72	2.083	12.24	3.667	5.04	5.25	0.72
0.583	0.72	2.167	12.24	3.750	5.04	5.33	0.72
0.667	0.72	2.250	12.24	3.833	2.88	5.42	0.72
0.750	0.72	2.333	33.12	3.917	2.88	5.50	0.72
0.833	0.72	2.417	33.12	4.000	2.88	5.58	0.72
0.917	0.72	2.500	33.12	4.083	2.88	5.67	0.72
1.000	0.72	2.583	33.12	4.167	2.88	5.75	0.72
1.083	0.72	2.667	33.12	4.250	2.88	5.83	0.72
1.167	0.72	2.750	33.12	4.333	1.44	5.92	0.72
1.250	0.72	2.833	9.36	4.417	1.44	6.00	0.72
1.333	4.32	2.917	9.36	4.500	1.44	6.08	0.72
1.417	4.32	3.000	9.36	4.583	1.44	6.17	0.72
1.500	4.32	3.083	9.36	4.667	1.44	6.25	0.72
1.583	4.32	3.167	9.36	4.750	1.44		

Unit Hyd Qpeak (cms)= 1.104

PEAK FLOW (cms)= 0.301 (i)
TIME TO PEAK (hrs)= 3.500
RUNOFF VOLUME (mm)= 11.077
TOTAL RAINFALL (mm)= 36.000
RUNOFF COEFFICIENT = 0.308

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

CALIB NASHYD (0203)	Area (ha)= 44.83	Curve Number (CN)= 80.0
ID= 1 DT= 5.0 min	Ia (mm)= 6.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 1.26	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	4.32	3.250	9.36	4.83	0.72
0.167	0.00	1.750	4.32	3.333	5.04	4.92	0.72
0.250	0.00	1.833	12.24	3.417	5.04	5.00	0.72
0.333	0.72	1.917	12.24	3.500	5.04	5.08	0.72
0.417	0.72	2.000	12.24	3.583	5.04	5.17	0.72
0.500	0.72	2.083	12.24	3.667	5.04	5.25	0.72
0.583	0.72	2.167	12.24	3.750	5.04	5.33	0.72
0.667	0.72	2.250	12.24	3.833	2.88	5.42	0.72
0.750	0.72	2.333	33.12	3.917	2.88	5.50	0.72
0.833	0.72	2.417	33.12	4.000	2.88	5.58	0.72
0.917	0.72	2.500	33.12	4.083	2.88	5.67	0.72
1.000	0.72	2.583	33.12	4.167	2.88	5.75	0.72

1.083	0.72	2.667	33.12	4.250	2.88	5.83	0.72
1.167	0.72	2.750	33.12	4.333	1.44	5.92	0.72
1.250	0.72	2.833	9.36	4.417	1.44	6.00	0.72
1.333	4.32	2.917	9.36	4.500	1.44	6.08	0.72
1.417	4.32	3.000	9.36	4.583	1.44	6.17	0.72
1.500	4.32	3.083	9.36	4.667	1.44	6.25	0.72
1.583	4.32	3.167	9.36	4.750	1.44		

Unit Hyd Qpeak (cms)= 1.359

PEAK FLOW (cms)= 0.391 (i)
TIME TO PEAK (hrs)= 4.250
RUNOFF VOLUME (mm)= 9.626
TOTAL RAINFALL (mm)= 36.000
RUNOFF COEFFICIENT = 0.267

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

ADD HYD (0041)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0201):	4.59	0.060	3.08	7.55
+ ID2= 2 (0202):	20.53	0.301	3.50	11.08
ID = 3 (0041):	25.12	0.354	3.42	10.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0041)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0041):	25.12	0.354	3.42	10.43
+ ID2= 2 (0203):	44.83	0.391	4.25	9.63
ID = 1 (0041):	69.95	0.680	3.83	9.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0204)
ID= 1 DT= 5.0 min

Area (ha)= 6.73 Curve Number (CN)= 81.0
Ia (mm)= 6.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.19

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	4.32	3.250	9.36	4.83	0.72
0.167	0.00	1.750	4.32	3.333	5.04	4.92	0.72
0.250	0.00	1.833	12.24	3.417	5.04	5.00	0.72
0.333	0.72	1.917	12.24	3.500	5.04	5.08	0.72
0.417	0.72	2.000	12.24	3.583	5.04	5.17	0.72
0.500	0.72	2.083	12.24	3.667	5.04	5.25	0.72
0.583	0.72	2.167	12.24	3.750	5.04	5.33	0.72
0.667	0.72	2.250	12.24	3.833	2.88	5.42	0.72
0.750	0.72	2.333	33.12	3.917	2.88	5.50	0.72
0.833	0.72	2.417	33.12	4.000	2.88	5.58	0.72
0.917	0.72	2.500	33.12	4.083	2.88	5.67	0.72
1.000	0.72	2.583	33.12	4.167	2.88	5.75	0.72
1.083	0.72	2.667	33.12	4.250	2.88	5.83	0.72
1.167	0.72	2.750	33.12	4.333	1.44	5.92	0.72
1.250	0.72	2.833	9.36	4.417	1.44	6.00	0.72
1.333	4.32	2.917	9.36	4.500	1.44	6.08	0.72
1.417	4.32	3.000	9.36	4.583	1.44	6.17	0.72
1.500	4.32	3.083	9.36	4.667	1.44	6.25	0.72
1.583	4.32	3.167	9.36	4.750	1.44		

Unit Hyd Qpeak (cms)= 1.353

PEAK FLOW (cms)= 0.181 (i)
TIME TO PEAK (hrs)= 2.833
RUNOFF VOLUME (mm)= 10.023
TOTAL RAINFALL (mm)= 36.000
RUNOFF COEFFICIENT = 0.278

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0205)|   Area    (ha)=   2.40   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    4.32 | 3.250    9.36 |  4.83    0.72
               0.167    0.00 | 1.750    4.32 | 3.333    5.04 |  4.92    0.72
               0.250    0.00 | 1.833   12.24 | 3.417    5.04 |  5.00    0.72
               0.333    0.72 | 1.917   12.24 | 3.500    5.04 |  5.08    0.72
               0.417    0.72 | 2.000   12.24 | 3.583    5.04 |  5.17    0.72
               0.500    0.72 | 2.083   12.24 | 3.667    5.04 |  5.25    0.72
               0.583    0.72 | 2.167   12.24 | 3.750    5.04 |  5.33    0.72
               0.667    0.72 | 2.250   12.24 | 3.833    2.88 |  5.42    0.72
               0.750    0.72 | 2.333   33.12 | 3.917    2.88 |  5.50    0.72
               0.833    0.72 | 2.417   33.12 | 4.000    2.88 |  5.58    0.72
               0.917    0.72 | 2.500   33.12 | 4.083    2.88 |  5.67    0.72
               1.000    0.72 | 2.583   33.12 | 4.167    2.88 |  5.75    0.72
               1.083    0.72 | 2.667   33.12 | 4.250    2.88 |  5.83    0.72
               1.167    0.72 | 2.750   33.12 | 4.333    1.44 |  5.92    0.72
               1.250    0.72 | 2.833    9.36 | 4.417    1.44 |  6.00    0.72
               1.333    4.32 | 2.917    9.36 | 4.500    1.44 |  6.08    0.72
               1.417    4.32 | 3.000    9.36 | 4.583    1.44 |  6.17    0.72
               1.500    4.32 | 3.083    9.36 | 4.667    1.44 |  6.25    0.72
               1.583    4.32 | 3.167    9.36 | 4.750    1.44 |

     Unit Hyd Qpeak  (cms)=   0.509

     PEAK FLOW       (cms)=   0.073 (i)
     TIME TO PEAK    (hrs)=   2.750
     RUNOFF VOLUME    (mm)=  11.045
     TOTAL RAINFALL   (mm)=  36.000
     RUNOFF COEFFICIENT   =   0.307

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

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0042)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0204):     6.73   0.181     2.83    10.02
      + ID2= 2 (  0205):     2.40   0.073     2.75    11.05
        ==================================================
        ID = 3 (  0042):     9.13   0.253     2.83    10.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0043)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0041):    69.95   0.680     3.83     9.92
      + ID2= 2 (  0042):     9.13   0.253     2.83    10.29
        ==================================================
        ID = 3 (  0043):    79.08   0.749     3.75     9.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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```

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\38a1d43c
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\38a1d43c

DATE: 03-01-2024 TIME: 01:29:09

USER:

COMMENTS: _____

****
** SIMULATION : Run 02 5yr 6hr AES **
****

| READ STORM | Filename: C:\Users\CAPP078249\AppData\Local\Temp\7de6ddff-3c07-4357-ba13-cd6f425c5b71\2df8acb1
| Ptotal= 47.81 mm | Comments: 5yr/6hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	1.75	16.25	3.50	6.69	5.25	0.96
0.25	0.96	2.00	16.25	3.75	3.82	5.50	0.96
0.50	0.96	2.25	43.98	4.00	3.82	5.75	0.96
0.75	0.96	2.50	43.98	4.25	1.91	6.00	0.96
1.00	0.96	2.75	12.43	4.50	1.91		
1.25	5.74	3.00	12.43	4.75	0.96		
1.50	5.74	3.25	6.69	5.00	0.96		

| CALIB | NASHYD (0201) | ID= 1 DT= 5.0 min |

Area (ha)= 4.59 Curve Number (CN)= 77.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.41

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.74	3.250	12.43	4.83	0.96
0.167	0.00	1.750	5.74	3.333	6.69	4.92	0.96
0.250	0.00	1.833	16.25	3.417	6.69	5.00	0.96
0.333	0.96	1.917	16.25	3.500	6.69	5.08	0.96
0.417	0.96	2.000	16.25	3.583	6.69	5.17	0.96
0.500	0.96	2.083	16.25	3.667	6.69	5.25	0.96
0.583	0.96	2.167	16.25	3.750	6.69	5.33	0.96
0.667	0.96	2.250	16.25	3.833	3.82	5.42	0.96
0.750	0.96	2.333	43.98	3.917	3.82	5.50	0.96
0.833	0.96	2.417	43.98	4.000	3.82	5.58	0.96
0.917	0.96	2.500	43.98	4.083	3.82	5.67	0.96
1.000	0.96	2.583	43.98	4.167	3.82	5.75	0.96
1.083	0.96	2.667	43.98	4.250	3.82	5.83	0.96
1.167	0.96	2.750	43.98	4.333	1.91	5.92	0.96
1.250	0.96	2.833	12.43	4.417	1.91	6.00	0.96
1.333	5.74	2.917	12.43	4.500	1.91	6.08	0.96
1.417	5.74	3.000	12.43	4.583	1.91	6.17	0.96
1.500	5.74	3.083	12.43	4.667	1.91	6.25	0.96
1.583	5.74	3.167	12.43	4.750	1.91		

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.113 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 13.698
TOTAL RAINFALL (mm)= 47.810
RUNOFF COEFFICIENT = 0.287

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

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| CALIB              |
| NASHYD   (  0202)|   Area    (ha)=  20.53   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.71

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


                          ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs    mm/hr |    hrs    mm/hr |'    hrs    mm/hr |    hrs    mm/hr
 0.083     0.00 | 1.667     5.74 | 3.250    12.43 |  4.83     0.96
 0.167     0.00 | 1.750     5.74 | 3.333     6.69 |  4.92     0.96
 0.250     0.00 | 1.833    16.25 | 3.417     6.69 |  5.00     0.96
 0.333     0.96 | 1.917    16.25 | 3.500     6.69 |  5.08     0.96
 0.417     0.96 | 2.000    16.25 | 3.583     6.69 |  5.17     0.96
 0.500     0.96 | 2.083    16.25 | 3.667     6.69 |  5.25     0.96
 0.583     0.96 | 2.167    16.25 | 3.750     6.69 |  5.33     0.96
 0.667     0.96 | 2.250    16.25 | 3.833     3.82 |  5.42     0.96
 0.750     0.96 | 2.333    43.98 | 3.917     3.82 |  5.50     0.96
 0.833     0.96 | 2.417    43.98 | 4.000     3.82 |  5.58     0.96
 0.917     0.96 | 2.500    43.98 | 4.083     3.82 |  5.67     0.96
 1.000     0.96 | 2.583    43.98 | 4.167     3.82 |  5.75     0.96
 1.083     0.96 | 2.667    43.98 | 4.250     3.82 |  5.83     0.96
 1.167     0.96 | 2.750    43.98 | 4.333     1.91 |  5.92     0.96
 1.250     0.96 | 2.833    12.43 | 4.417     1.91 |  6.00     0.96
 1.333     5.74 | 2.917    12.43 | 4.500     1.91 |  6.08     0.96
 1.417     5.74 | 3.000    12.43 | 4.583     1.91 |  6.17     0.96
 1.500     5.74 | 3.083    12.43 | 4.667     1.91 |  6.25     0.96
 1.583     5.74 | 3.167    12.43 | 4.750     1.91 |

     Unit Hyd Qpeak  (cms)=   1.104

     PEAK FLOW       (cms)=   0.512 (i)
     TIME TO PEAK    (hrs)=   3.417
     RUNOFF VOLUME    (mm)=  18.593
     TOTAL RAINFALL   (mm)=  47.810
     RUNOFF COEFFICIENT   =   0.389

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

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| CALIB              |
| NASHYD   (  0203)|   Area    (ha)=  44.83   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   1.26

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


                          ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs    mm/hr |    hrs    mm/hr |'    hrs    mm/hr |    hrs    mm/hr
 0.083     0.00 | 1.667     5.74 | 3.250    12.43 |  4.83     0.96
 0.167     0.00 | 1.750     5.74 | 3.333     6.69 |  4.92     0.96
 0.250     0.00 | 1.833    16.25 | 3.417     6.69 |  5.00     0.96
 0.333     0.96 | 1.917    16.25 | 3.500     6.69 |  5.08     0.96
 0.417     0.96 | 2.000    16.25 | 3.583     6.69 |  5.17     0.96
 0.500     0.96 | 2.083    16.25 | 3.667     6.69 |  5.25     0.96
 0.583     0.96 | 2.167    16.25 | 3.750     6.69 |  5.33     0.96
 0.667     0.96 | 2.250    16.25 | 3.833     3.82 |  5.42     0.96
 0.750     0.96 | 2.333    43.98 | 3.917     3.82 |  5.50     0.96
 0.833     0.96 | 2.417    43.98 | 4.000     3.82 |  5.58     0.96
 0.917     0.96 | 2.500    43.98 | 4.083     3.82 |  5.67     0.96
 1.000     0.96 | 2.583    43.98 | 4.167     3.82 |  5.75     0.96
 1.083     0.96 | 2.667    43.98 | 4.250     3.82 |  5.83     0.96
 1.167     0.96 | 2.750    43.98 | 4.333     1.91 |  5.92     0.96
 1.250     0.96 | 2.833    12.43 | 4.417     1.91 |  6.00     0.96
 1.333     5.74 | 2.917    12.43 | 4.500     1.91 |  6.08     0.96
 1.417     5.74 | 3.000    12.43 | 4.583     1.91 |  6.17     0.96
 1.500     5.74 | 3.083    12.43 | 4.667     1.91 |  6.25     0.96
 1.583     5.74 | 3.167    12.43 | 4.750     1.91 |

     Unit Hyd Qpeak  (cms)=   1.359

     PEAK FLOW       (cms)=   0.680 (i)
     TIME TO PEAK    (hrs)=   4.167
     RUNOFF VOLUME    (mm)=  16.599
     TOTAL RAINFALL   (mm)=  47.810
     RUNOFF COEFFICIENT   =   0.347
```

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

ADD HYD (0041)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0201):	4.59	0.113	3.08	13.70
	+ ID2= 2 (0202):	20.53	0.512	3.42	18.59
	ID = 3 (0041):	25.12	0.609	3.42	17.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0041)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3 + 2 = 1	ID1= 3 (0041):	25.12	0.609	3.42	17.70
	+ ID2= 2 (0203):	44.83	0.680	4.17	16.60
	ID = 1 (0041):	69.95	1.175	3.75	16.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0204)	ID= 1 DT= 5.0 min	Area (ha)= 6.73	Curve Number (CN)= 81.0	Ia (mm)= 6.00	# of Linear Res.(N)= 3.00	U.H. Tp(hrs)= 0.19

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.74	3.250	12.43	4.83	0.96
0.167	0.00	1.750	5.74	3.333	6.69	4.92	0.96
0.250	0.00	1.833	16.25	3.417	6.69	5.00	0.96
0.333	0.96	1.917	16.25	3.500	6.69	5.08	0.96
0.417	0.96	2.000	16.25	3.583	6.69	5.17	0.96
0.500	0.96	2.083	16.25	3.667	6.69	5.25	0.96
0.583	0.96	2.167	16.25	3.750	6.69	5.33	0.96
0.667	0.96	2.250	16.25	3.833	3.82	5.42	0.96
0.750	0.96	2.333	43.98	3.917	3.82	5.50	0.96
0.833	0.96	2.417	43.98	4.000	3.82	5.58	0.96
0.917	0.96	2.500	43.98	4.083	3.82	5.67	0.96
1.000	0.96	2.583	43.98	4.167	3.82	5.75	0.96
1.083	0.96	2.667	43.98	4.250	3.82	5.83	0.96
1.167	0.96	2.750	43.98	4.333	1.91	5.92	0.96
1.250	0.96	2.833	12.43	4.417	1.91	6.00	0.96
1.333	5.74	2.917	12.43	4.500	1.91	6.08	0.96
1.417	5.74	3.000	12.43	4.583	1.91	6.17	0.96
1.500	5.74	3.083	12.43	4.667	1.91	6.25	0.96
1.583	5.74	3.167	12.43	4.750	1.91		

Unit Hyd Qpeak (cms)= 1.353

PEAK FLOW (cms)= 0.314 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 17.201
TOTAL RAINFALL (mm)= 47.810
RUNOFF COEFFICIENT = 0.360

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

CALIB NASHYD (0205)	ID= 1 DT= 5.0 min	Area (ha)= 2.40	Curve Number (CN)= 82.0	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00	U.H. Tp(hrs)= 0.18

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.74	3.250	12.43	4.83	0.96

0.167	0.00	1.750	5.74	3.333	6.69	4.92	0.96
0.250	0.00	1.833	16.25	3.417	6.69	5.00	0.96
0.333	0.96	1.917	16.25	3.500	6.69	5.08	0.96
0.417	0.96	2.000	16.25	3.583	6.69	5.17	0.96
0.500	0.96	2.083	16.25	3.667	6.69	5.25	0.96
0.583	0.96	2.167	16.25	3.750	6.69	5.33	0.96
0.667	0.96	2.250	16.25	3.833	3.82	5.42	0.96
0.750	0.96	2.333	43.98	3.917	3.82	5.50	0.96
0.833	0.96	2.417	43.98	4.000	3.82	5.58	0.96
0.917	0.96	2.500	43.98	4.083	3.82	5.67	0.96
1.000	0.96	2.583	43.98	4.167	3.82	5.75	0.96
1.083	0.96	2.667	43.98	4.250	3.82	5.83	0.96
1.167	0.96	2.750	43.98	4.333	1.91	5.92	0.96
1.250	0.96	2.833	12.43	4.417	1.91	6.00	0.96
1.333	5.74	2.917	12.43	4.500	1.91	6.08	0.96
1.417	5.74	3.000	12.43	4.583	1.91	6.17	0.96
1.500	5.74	3.083	12.43	4.667	1.91	6.25	0.96
1.583	5.74	3.167	12.43	4.750	1.91		

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.124 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 18.540
TOTAL RAINFALL (mm)= 47.810
RUNOFF COEFFICIENT = 0.388

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

ADD HYD (0042)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0204):	6.73	0.314	2.75	17.20
	+ ID2= 2 (0205):	2.40	0.124	2.75	18.54
	ID = 3 (0042):	9.13	0.438	2.75	17.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0043)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0041):	69.95	1.175	3.75	16.99
	+ ID2= 2 (0042):	9.13	0.438	2.75	17.55
	ID = 3 (0043):	79.08	1.287	3.67	17.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```


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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\01261f62
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\01261f62

DATE: 03-01-2024 TIME: 01:29:08

USER:

COMMENTS: _____

****
** SIMULATION : Run 03 10yr 6hr AES **
****

| READ STORM | Filename: C:\Users\CAPP078249\AppData\Local\Temp\7de6ddff-3c07-4357-ba13-cd6f425c5b71\2cf98f01
| Ptotal= 55.69 mm | Comments: 10yr/6hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	1.75	18.94	3.50	7.80	5.25	1.11
0.25	1.11	2.00	18.94	3.75	4.46	5.50	1.11
0.50	1.11	2.25	51.24	4.00	4.46	5.75	1.11
0.75	1.11	2.50	51.24	4.25	2.23	6.00	1.11
1.00	1.11	2.75	14.48	4.50	2.23		
1.25	6.68	3.00	14.48	4.75	1.11		
1.50	6.68	3.25	7.80	5.00	1.11		

| CALIB |
| NASHYD (0201)| Area (ha)= 4.59 Curve Number (CN)= 77.0
|ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.41

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	6.68	3.250	14.48	4.83	1.11
0.167	0.00	1.750	6.68	3.333	7.80	4.92	1.11
0.250	0.00	1.833	18.94	3.417	7.80	5.00	1.11
0.333	1.11	1.917	18.94	3.500	7.80	5.08	1.11
0.417	1.11	2.000	18.94	3.583	7.80	5.17	1.11
0.500	1.11	2.083	18.94	3.667	7.80	5.25	1.11
0.583	1.11	2.167	18.94	3.750	7.80	5.33	1.11
0.667	1.11	2.250	18.94	3.833	4.46	5.42	1.11
0.750	1.11	2.333	51.24	3.917	4.46	5.50	1.11
0.833	1.11	2.417	51.24	4.000	4.46	5.58	1.11
0.917	1.11	2.500	51.24	4.083	4.46	5.67	1.11
1.000	1.11	2.583	51.24	4.167	4.46	5.75	1.11
1.083	1.11	2.667	51.24	4.250	4.46	5.83	1.11
1.167	1.11	2.750	51.24	4.333	2.23	5.92	1.11
1.250	1.11	2.833	14.48	4.417	2.23	6.00	1.11
1.333	6.68	2.917	14.48	4.500	2.23	6.08	1.11
1.417	6.68	3.000	14.48	4.583	2.23	6.17	1.11
1.500	6.68	3.083	14.48	4.667	2.23	6.25	1.11
1.583	6.68	3.167	14.48	4.750	2.23		

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.154 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 18.404
TOTAL RAINFALL (mm)= 55.690
RUNOFF COEFFICIENT = 0.330

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

| CALIB |
| NASHYD (0202)| Area (ha)= 20.53 Curve Number (CN)= 82.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.71

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	6.68	3.250	14.48	4.83	1.11

0.167	0.00	1.750	6.68	3.333	7.80	4.92	1.11
0.250	0.00	1.833	18.94	3.417	7.80	5.00	1.11
0.333	1.11	1.917	18.94	3.500	7.80	5.08	1.11
0.417	1.11	2.000	18.94	3.583	7.80	5.17	1.11
0.500	1.11	2.083	18.94	3.667	7.80	5.25	1.11
0.583	1.11	2.167	18.94	3.750	7.80	5.33	1.11
0.667	1.11	2.250	18.94	3.833	4.46	5.42	1.11
0.750	1.11	2.333	51.24	3.917	4.46	5.50	1.11
0.833	1.11	2.417	51.24	4.000	4.46	5.58	1.11
0.917	1.11	2.500	51.24	4.083	4.46	5.67	1.11
1.000	1.11	2.583	51.24	4.167	4.46	5.75	1.11
1.083	1.11	2.667	51.24	4.250	4.46	5.83	1.11
1.167	1.11	2.750	51.24	4.333	2.23	5.92	1.11
1.250	1.11	2.833	14.48	4.417	2.23	6.00	1.11
1.333	6.68	2.917	14.48	4.500	2.23	6.08	1.11
1.417	6.68	3.000	14.48	4.583	2.23	6.17	1.11
1.500	6.68	3.083	14.48	4.667	2.23	6.25	1.11
1.583	6.68	3.167	14.48	4.750	2.23		

Unit Hyd Qpeak (cms)= 1.104

PEAK FLOW (cms)= 0.671 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 24.138
TOTAL RAINFALL (mm)= 55.690
RUNOFF COEFFICIENT = 0.433

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

CALIB NASHYD (0203) | ID= 1 DT= 5.0 min	Area (ha)= 44.83 Curve Number (CN)= 80.0 Ia (mm)= 6.00 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= 1.26

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	6.68	3.250	14.48	4.83	1.11
0.167	0.00	1.750	6.68	3.333	7.80	4.92	1.11
0.250	0.00	1.833	18.94	3.417	7.80	5.00	1.11
0.333	1.11	1.917	18.94	3.500	7.80	5.08	1.11
0.417	1.11	2.000	18.94	3.583	7.80	5.17	1.11
0.500	1.11	2.083	18.94	3.667	7.80	5.25	1.11
0.583	1.11	2.167	18.94	3.750	7.80	5.33	1.11
0.667	1.11	2.250	18.94	3.833	4.46	5.42	1.11
0.750	1.11	2.333	51.24	3.917	4.46	5.50	1.11
0.833	1.11	2.417	51.24	4.000	4.46	5.58	1.11
0.917	1.11	2.500	51.24	4.083	4.46	5.67	1.11
1.000	1.11	2.583	51.24	4.167	4.46	5.75	1.11
1.083	1.11	2.667	51.24	4.250	4.46	5.83	1.11
1.167	1.11	2.750	51.24	4.333	2.23	5.92	1.11
1.250	1.11	2.833	14.48	4.417	2.23	6.00	1.11
1.333	6.68	2.917	14.48	4.500	2.23	6.08	1.11
1.417	6.68	3.000	14.48	4.583	2.23	6.17	1.11
1.500	6.68	3.083	14.48	4.667	2.23	6.25	1.11
1.583	6.68	3.167	14.48	4.750	2.23		

Unit Hyd Qpeak (cms)= 1.359

PEAK FLOW (cms)= 0.898 (i)
TIME TO PEAK (hrs)= 4.167
RUNOFF VOLUME (mm)= 21.814
TOTAL RAINFALL (mm)= 55.690
RUNOFF COEFFICIENT = 0.392

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

ADD HYD (0041) | 1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 1 (0201):	4.59	0.154	3.08	18.40
	+ ID2= 2 (0202):	20.53	0.671	3.42	24.14
	ID = 3 (0041):	25.12	0.801	3.33	23.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (  0041)|
|   3 +  2 =  1    |          AREA     QPEAK     TPEAK      R.V.
--------------------          (ha)     (cms)     (hrs)      (mm)
       ID1= 3 (  0041):     25.12    0.801      3.33     23.09
     + ID2= 2 (  0203):     44.83    0.898      4.17     21.81
       ================================================
       ID = 1 (  0041):     69.95    1.547      3.75     22.27

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0204)|   Area    (ha)=   6.73   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

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


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    0.00 | 1.667    6.68 | 3.250   14.48 |  4.83    1.11
 0.167    0.00 | 1.750    6.68 | 3.333    7.80 |  4.92    1.11
 0.250    0.00 | 1.833   18.94 | 3.417    7.80 |  5.00    1.11
 0.333    1.11 | 1.917   18.94 | 3.500    7.80 |  5.08    1.11
 0.417    1.11 | 2.000   18.94 | 3.583    7.80 |  5.17    1.11
 0.500    1.11 | 2.083   18.94 | 3.667    7.80 |  5.25    1.11
 0.583    1.11 | 2.167   18.94 | 3.750    7.80 |  5.33    1.11
 0.667    1.11 | 2.250   18.94 | 3.833    4.46 |  5.42    1.11
 0.750    1.11 | 2.333   51.24 | 3.917    4.46 |  5.50    1.11
 0.833    1.11 | 2.417   51.24 | 4.000    4.46 |  5.58    1.11
 0.917    1.11 | 2.500   51.24 | 4.083    4.46 |  5.67    1.11
 1.000    1.11 | 2.583   51.24 | 4.167    4.46 |  5.75    1.11
 1.083    1.11 | 2.667   51.24 | 4.250    4.46 |  5.83    1.11
 1.167    1.11 | 2.750   51.24 | 4.333    2.23 |  5.92    1.11
 1.250    1.11 | 2.833   14.48 | 4.417    2.23 |  6.00    1.11
 1.333    6.68 | 2.917   14.48 | 4.500    2.23 |  6.08    1.11
 1.417    6.68 | 3.000   14.48 | 4.583    2.23 |  6.17    1.11
 1.500    6.68 | 3.083   14.48 | 4.667    2.23 |  6.25    1.11
 1.583    6.68 | 3.167   14.48 | 4.750    2.23 |

     Unit Hyd Qpeak  (cms)=   1.353

     PEAK FLOW       (cms)=   0.415 (i)
     TIME TO PEAK    (hrs)=   2.750
     RUNOFF VOLUME    (mm)=  22.544
     TOTAL RAINFALL   (mm)=  55.690
     RUNOFF COEFFICIENT   =   0.405

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0205)|   Area    (ha)=   2.40   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

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


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    0.00 | 1.667    6.68 | 3.250   14.48 |  4.83    1.11
 0.167    0.00 | 1.750    6.68 | 3.333    7.80 |  4.92    1.11
 0.250    0.00 | 1.833   18.94 | 3.417    7.80 |  5.00    1.11
 0.333    1.11 | 1.917   18.94 | 3.500    7.80 |  5.08    1.11
 0.417    1.11 | 2.000   18.94 | 3.583    7.80 |  5.17    1.11
 0.500    1.11 | 2.083   18.94 | 3.667    7.80 |  5.25    1.11
 0.583    1.11 | 2.167   18.94 | 3.750    7.80 |  5.33    1.11
 0.667    1.11 | 2.250   18.94 | 3.833    4.46 |  5.42    1.11
 0.750    1.11 | 2.333   51.24 | 3.917    4.46 |  5.50    1.11
 0.833    1.11 | 2.417   51.24 | 4.000    4.46 |  5.58    1.11
 0.917    1.11 | 2.500   51.24 | 4.083    4.46 |  5.67    1.11
 1.000    1.11 | 2.583   51.24 | 4.167    4.46 |  5.75    1.11
 1.083    1.11 | 2.667   51.24 | 4.250    4.46 |  5.83    1.11
 1.167    1.11 | 2.750   51.24 | 4.333    2.23 |  5.92    1.11
 1.250    1.11 | 2.833   14.48 | 4.417    2.23 |  6.00    1.11
 1.333    6.68 | 2.917   14.48 | 4.500    2.23 |  6.08    1.11
```

```
               1.417    6.68 | 3.000   14.48 | 4.583    2.23 |  6.17    1.11
               1.500    6.68 | 3.083   14.48 | 4.667    2.23 |  6.25    1.11
               1.583    6.68 | 3.167   14.48 | 4.750    2.23 |

     Unit Hyd Qpeak  (cms)=   0.509

     PEAK FLOW       (cms)=   0.162 (i)
     TIME TO PEAK    (hrs)=   2.750
     RUNOFF VOLUME    (mm)=  24.069
     TOTAL RAINFALL   (mm)=  55.690
     RUNOFF COEFFICIENT   =   0.432

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

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0042)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     6.73   0.415     2.75    22.54
     + ID2= 2 (  0205):     2.40   0.162     2.75    24.07
       ================================================
       ID = 3 (  0042):     9.13   0.578     2.75    22.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0043)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0041):    69.95   1.547     3.75    22.27
     + ID2= 2 (  0042):     9.13   0.578     2.75    22.94
       ================================================
       ID = 3 (  0043):    79.08   1.691     3.67    22.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\09dd9aa4
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\09dd9aa4


DATE: 03-01-2024                          TIME: 01:29:08

USER:


COMMENTS: _____________________________________________________________

--------------------------------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 04 25yr 6hr AES           **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              7de6ddff-3c07-4357-ba13-cd6f425c5b71\64693e58
| Ptotal= 65.59 mm |    Comments: 25yr/6hr
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	1.75	22.30	3.50	9.18	5.25	1.31
0.25	1.31	2.00	22.30	3.75	5.25	5.50	1.31
0.50	1.31	2.25	60.35	4.00	5.25	5.75	1.31
0.75	1.31	2.50	60.35	4.25	2.62	6.00	1.31
1.00	1.31	2.75	17.06	4.50	2.62		
1.25	7.87	3.00	17.06	4.75	1.31		
1.50	7.87	3.25	9.18	5.00	1.31		

CALIB NASHYD (0201) | ID= 1 DT= 5.0 min	Area (ha)= 4.59	Curve Number (CN)= 77.0
	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.41	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	7.87	3.250	17.06	4.83	1.31
0.167	0.00	1.750	7.87	3.333	9.18	4.92	1.31
0.250	0.00	1.833	22.30	3.417	9.18	5.00	1.31
0.333	1.31	1.917	22.30	3.500	9.18	5.08	1.31
0.417	1.31	2.000	22.30	3.583	9.18	5.17	1.31
0.500	1.31	2.083	22.30	3.667	9.18	5.25	1.31
0.583	1.31	2.167	22.30	3.750	9.18	5.33	1.31
0.667	1.31	2.250	22.30	3.833	5.25	5.42	1.31
0.750	1.31	2.333	60.35	3.917	5.25	5.50	1.31
0.833	1.31	2.417	60.35	4.000	5.25	5.58	1.31
0.917	1.31	2.500	60.35	4.083	5.25	5.67	1.31
1.000	1.31	2.583	60.35	4.167	5.25	5.75	1.31
1.083	1.31	2.667	60.35	4.250	5.25	5.83	1.31
1.167	1.31	2.750	60.35	4.333	2.62	5.92	1.31
1.250	1.31	2.833	17.06	4.417	2.62	6.00	1.31
1.333	7.87	2.917	17.06	4.500	2.62	6.08	1.31
1.417	7.87	3.000	17.06	4.583	2.62	6.17	1.31
1.500	7.87	3.083	17.06	4.667	2.62	6.25	1.31
1.583	7.87	3.167	17.06	4.750	2.62		

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.211 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 24.848
TOTAL RAINFALL (mm)= 65.590
RUNOFF COEFFICIENT = 0.379

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

CALIB NASHYD (0202) | ID= 1 DT= 5.0 min	Area (ha)= 20.53	Curve Number (CN)= 82.0
	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.71	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	7.87	3.250	17.06	4.83	1.31
0.167	0.00	1.750	7.87	3.333	9.18	4.92	1.31
0.250	0.00	1.833	22.30	3.417	9.18	5.00	1.31
0.333	1.31	1.917	22.30	3.500	9.18	5.08	1.31
0.417	1.31	2.000	22.30	3.583	9.18	5.17	1.31
0.500	1.31	2.083	22.30	3.667	9.18	5.25	1.31
0.583	1.31	2.167	22.30	3.750	9.18	5.33	1.31
0.667	1.31	2.250	22.30	3.833	5.25	5.42	1.31
0.750	1.31	2.333	60.35	3.917	5.25	5.50	1.31
0.833	1.31	2.417	60.35	4.000	5.25	5.58	1.31
0.917	1.31	2.500	60.35	4.083	5.25	5.67	1.31
1.000	1.31	2.583	60.35	4.167	5.25	5.75	1.31
1.083	1.31	2.667	60.35	4.250	5.25	5.83	1.31
1.167	1.31	2.750	60.35	4.333	2.62	5.92	1.31
1.250	1.31	2.833	17.06	4.417	2.62	6.00	1.31
1.333	7.87	2.917	17.06	4.500	2.62	6.08	1.31

1.417	7.87	3.000	17.06	4.583	2.62	6.17	1.31
1.500	7.87	3.083	17.06	4.667	2.62	6.25	1.31
1.583	7.87	3.167	17.06	4.750	2.62		

Unit Hyd Qpeak (cms)= 1.104

PEAK FLOW (cms)= 0.883 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 31.553
TOTAL RAINFALL (mm)= 65.590
RUNOFF COEFFICIENT = 0.481

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

CALIB NASHYD (0203) ID= 1 DT= 5.0 min	Area (ha)= 44.83 Curve Number (CN)= 80.0 Ia (mm)= 6.00 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= 1.26

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	7.87	3.250	17.06	4.83	1.31
0.167	0.00	1.750	7.87	3.333	9.18	4.92	1.31
0.250	0.00	1.833	22.30	3.417	9.18	5.00	1.31
0.333	1.31	1.917	22.30	3.500	9.18	5.08	1.31
0.417	1.31	2.000	22.30	3.583	9.18	5.17	1.31
0.500	1.31	2.083	22.30	3.667	9.18	5.25	1.31
0.583	1.31	2.167	22.30	3.750	9.18	5.33	1.31
0.667	1.31	2.250	22.30	3.833	5.25	5.42	1.31
0.750	1.31	2.333	60.35	3.917	5.25	5.50	1.31
0.833	1.31	2.417	60.35	4.000	5.25	5.58	1.31
0.917	1.31	2.500	60.35	4.083	5.25	5.67	1.31
1.000	1.31	2.583	60.35	4.167	5.25	5.75	1.31
1.083	1.31	2.667	60.35	4.250	5.25	5.83	1.31
1.167	1.31	2.750	60.35	4.333	2.62	5.92	1.31
1.250	1.31	2.833	17.06	4.417	2.62	6.00	1.31
1.333	7.87	2.917	17.06	4.500	2.62	6.08	1.31
1.417	7.87	3.000	17.06	4.583	2.62	6.17	1.31
1.500	7.87	3.083	17.06	4.667	2.62	6.25	1.31
1.583	7.87	3.167	17.06	4.750	2.62		

Unit Hyd Qpeak (cms)= 1.359

PEAK FLOW (cms)= 1.192 (i)
TIME TO PEAK (hrs)= 4.167
RUNOFF VOLUME (mm)= 28.848
TOTAL RAINFALL (mm)= 65.590
RUNOFF COEFFICIENT = 0.440

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

ADD HYD (0041) 1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 1 (0201):	4.59	0.211	3.00	24.85
	+ ID2= 2 (0202):	20.53	0.883	3.42	31.55
	ID = 3 (0041):	25.12	1.061	3.33	30.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0041) 3 + 2 = 1		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 3 (0041):	25.12	1.061	3.33	30.33
	+ ID2= 2 (0203):	44.83	1.192	4.17	28.85
	ID = 1 (0041):	69.95	2.049	3.67	29.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

| NASHYD (0204)| Area (ha)= 6.73 Curve Number (CN)= 81.0
|ID= 1 DT= 5.0 min | Ia (mm)= 6.00 # of Linear Res.(N)= 3.00
---------- U.H. Tp(hrs)= 0.19

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	7.87	3.250	17.06	4.83	1.31
0.167	0.00	1.750	7.87	3.333	9.18	4.92	1.31
0.250	0.00	1.833	22.30	3.417	9.18	5.00	1.31
0.333	1.31	1.917	22.30	3.500	9.18	5.08	1.31
0.417	1.31	2.000	22.30	3.583	9.18	5.17	1.31
0.500	1.31	2.083	22.30	3.667	9.18	5.25	1.31
0.583	1.31	2.167	22.30	3.750	9.18	5.33	1.31
0.667	1.31	2.250	22.30	3.833	5.25	5.42	1.31
0.750	1.31	2.333	60.35	3.917	5.25	5.50	1.31
0.833	1.31	2.417	60.35	4.000	5.25	5.58	1.31
0.917	1.31	2.500	60.35	4.083	5.25	5.67	1.31
1.000	1.31	2.583	60.35	4.167	5.25	5.75	1.31
1.083	1.31	2.667	60.35	4.250	5.25	5.83	1.31
1.167	1.31	2.750	60.35	4.333	2.62	5.92	1.31
1.250	1.31	2.833	17.06	4.417	2.62	6.00	1.31
1.333	7.87	2.917	17.06	4.500	2.62	6.08	1.31
1.417	7.87	3.000	17.06	4.583	2.62	6.17	1.31
1.500	7.87	3.083	17.06	4.667	2.62	6.25	1.31
1.583	7.87	3.167	17.06	4.750	2.62		

Unit Hyd Qpeak (cms)= 1.353

PEAK FLOW (cms)= 0.551 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 29.728
TOTAL RAINFALL (mm)= 65.590
RUNOFF COEFFICIENT = 0.453

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

| CALIB |
| NASHYD (0205)| Area (ha)= 2.40 Curve Number (CN)= 82.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
---------- U.H. Tp(hrs)= 0.18

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	7.87	3.250	17.06	4.83	1.31
0.167	0.00	1.750	7.87	3.333	9.18	4.92	1.31
0.250	0.00	1.833	22.30	3.417	9.18	5.00	1.31
0.333	1.31	1.917	22.30	3.500	9.18	5.08	1.31
0.417	1.31	2.000	22.30	3.583	9.18	5.17	1.31
0.500	1.31	2.083	22.30	3.667	9.18	5.25	1.31
0.583	1.31	2.167	22.30	3.750	9.18	5.33	1.31
0.667	1.31	2.250	22.30	3.833	5.25	5.42	1.31
0.750	1.31	2.333	60.35	3.917	5.25	5.50	1.31
0.833	1.31	2.417	60.35	4.000	5.25	5.58	1.31
0.917	1.31	2.500	60.35	4.083	5.25	5.67	1.31
1.000	1.31	2.583	60.35	4.167	5.25	5.75	1.31
1.083	1.31	2.667	60.35	4.250	5.25	5.83	1.31
1.167	1.31	2.750	60.35	4.333	2.62	5.92	1.31
1.250	1.31	2.833	17.06	4.417	2.62	6.00	1.31
1.333	7.87	2.917	17.06	4.500	2.62	6.08	1.31
1.417	7.87	3.000	17.06	4.583	2.62	6.17	1.31
1.500	7.87	3.083	17.06	4.667	2.62	6.25	1.31
1.583	7.87	3.167	17.06	4.750	2.62		

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.213 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 31.463
TOTAL RAINFALL (mm)= 65.590
RUNOFF COEFFICIENT = 0.480

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

```
--------------------
| ADD HYD  (  0042)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     6.73   0.551     2.75    29.73
     + ID2= 2 (  0205):     2.40   0.213     2.75    31.46
       ================================================
       ID = 3 (  0042):     9.13   0.764     2.75    30.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0043)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0041):    69.95   2.049     3.67    29.38
     + ID2= 2 (  0042):     9.13   0.764     2.75    30.18
       ================================================
       ID = 3 (  0043):    79.08   2.238     3.58    29.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\12e80d3a
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\12e80d3a


DATE: 03-01-2024                          TIME: 01:29:08

USER:



COMMENTS: _____________________________________________________________


--------------------------------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 05 50yr 6hr AES           **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              7de6ddff-3c07-4357-ba13-cd6f425c5b71\6fadecc3
| Ptotal= 73.00 mm |    Comments: 50yr/6hr
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.75   24.82 |  3.50   10.22 |  5.25    1.46
                0.25    1.46 |  2.00   24.82 |  3.75    5.84 |  5.50    1.46
                0.50    1.46 |  2.25   67.16 |  4.00    5.84 |  5.75    1.46
                0.75    1.46 |  2.50   67.16 |  4.25    2.92 |  6.00    1.46
                1.00    1.46 |  2.75   18.98 |  4.50    2.92 |
                1.25    8.76 |  3.00   18.98 |  4.75    1.46 |
                1.50    8.76 |  3.25   10.22 |  5.00    1.46 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
```

```
| NASHYD   (  0201)|   Area    (ha)=   4.59   Curve Number   (CN)= 77.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.00   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.41

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    8.76 | 3.250   18.98 |  4.83    1.46
               0.167    0.00 | 1.750    8.76 | 3.333   10.22 |  4.92    1.46
               0.250    0.00 | 1.833   24.82 | 3.417   10.22 |  5.00    1.46
               0.333    1.46 | 1.917   24.82 | 3.500   10.22 |  5.08    1.46
               0.417    1.46 | 2.000   24.82 | 3.583   10.22 |  5.17    1.46
               0.500    1.46 | 2.083   24.82 | 3.667   10.22 |  5.25    1.46
               0.583    1.46 | 2.167   24.82 | 3.750   10.22 |  5.33    1.46
               0.667    1.46 | 2.250   24.82 | 3.833    5.84 |  5.42    1.46
               0.750    1.46 | 2.333   67.16 | 3.917    5.84 |  5.50    1.46
               0.833    1.46 | 2.417   67.16 | 4.000    5.84 |  5.58    1.46
               0.917    1.46 | 2.500   67.16 | 4.083    5.84 |  5.67    1.46
               1.000    1.46 | 2.583   67.16 | 4.167    5.84 |  5.75    1.46
               1.083    1.46 | 2.667   67.16 | 4.250    5.84 |  5.83    1.46
               1.167    1.46 | 2.750   67.16 | 4.333    2.92 |  5.92    1.46
               1.250    1.46 | 2.833   18.98 | 4.417    2.92 |  6.00    1.46
               1.333    8.76 | 2.917   18.98 | 4.500    2.92 |  6.08    1.46
               1.417    8.76 | 3.000   18.98 | 4.583    2.92 |  6.17    1.46
               1.500    8.76 | 3.083   18.98 | 4.667    2.92 |  6.25    1.46
               1.583    8.76 | 3.167   18.98 | 4.750    2.92 |

     Unit Hyd Qpeak  (cms)=   0.428

     PEAK FLOW       (cms)=   0.257 (i)
     TIME TO PEAK    (hrs)=   3.000
     RUNOFF VOLUME    (mm)=  29.989
     TOTAL RAINFALL   (mm)=  73.000
     RUNOFF COEFFICIENT   =   0.411

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0202)|   Area    (ha)=  20.53   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.71

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    8.76 | 3.250   18.98 |  4.83    1.46
               0.167    0.00 | 1.750    8.76 | 3.333   10.22 |  4.92    1.46
               0.250    0.00 | 1.833   24.82 | 3.417   10.22 |  5.00    1.46
               0.333    1.46 | 1.917   24.82 | 3.500   10.22 |  5.08    1.46
               0.417    1.46 | 2.000   24.82 | 3.583   10.22 |  5.17    1.46
               0.500    1.46 | 2.083   24.82 | 3.667   10.22 |  5.25    1.46
               0.583    1.46 | 2.167   24.82 | 3.750   10.22 |  5.33    1.46
               0.667    1.46 | 2.250   24.82 | 3.833    5.84 |  5.42    1.46
               0.750    1.46 | 2.333   67.16 | 3.917    5.84 |  5.50    1.46
               0.833    1.46 | 2.417   67.16 | 4.000    5.84 |  5.58    1.46
               0.917    1.46 | 2.500   67.16 | 4.083    5.84 |  5.67    1.46
               1.000    1.46 | 2.583   67.16 | 4.167    5.84 |  5.75    1.46
               1.083    1.46 | 2.667   67.16 | 4.250    5.84 |  5.83    1.46
               1.167    1.46 | 2.750   67.16 | 4.333    2.92 |  5.92    1.46
               1.250    1.46 | 2.833   18.98 | 4.417    2.92 |  6.00    1.46
               1.333    8.76 | 2.917   18.98 | 4.500    2.92 |  6.08    1.46
               1.417    8.76 | 3.000   18.98 | 4.583    2.92 |  6.17    1.46
               1.500    8.76 | 3.083   18.98 | 4.667    2.92 |  6.25    1.46
               1.583    8.76 | 3.167   18.98 | 4.750    2.92 |

     Unit Hyd Qpeak  (cms)=   1.104

     PEAK FLOW       (cms)=   1.049 (i)
     TIME TO PEAK    (hrs)=   3.417
     RUNOFF VOLUME    (mm)=  37.363
     TOTAL RAINFALL   (mm)=  73.000
     RUNOFF COEFFICIENT   =   0.512

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

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--------------------
| CALIB            |
| NASHYD   (  0203)|   Area    (ha)=  44.83   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   1.26

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    8.76 | 3.250   18.98 |  4.83    1.46
               0.167    0.00 | 1.750    8.76 | 3.333   10.22 |  4.92    1.46
               0.250    0.00 | 1.833   24.82 | 3.417   10.22 |  5.00    1.46
               0.333    1.46 | 1.917   24.82 | 3.500   10.22 |  5.08    1.46
               0.417    1.46 | 2.000   24.82 | 3.583   10.22 |  5.17    1.46
               0.500    1.46 | 2.083   24.82 | 3.667   10.22 |  5.25    1.46
               0.583    1.46 | 2.167   24.82 | 3.750   10.22 |  5.33    1.46
               0.667    1.46 | 2.250   24.82 | 3.833    5.84 |  5.42    1.46
               0.750    1.46 | 2.333   67.16 | 3.917    5.84 |  5.50    1.46
               0.833    1.46 | 2.417   67.16 | 4.000    5.84 |  5.58    1.46
               0.917    1.46 | 2.500   67.16 | 4.083    5.84 |  5.67    1.46
               1.000    1.46 | 2.583   67.16 | 4.167    5.84 |  5.75    1.46
               1.083    1.46 | 2.667   67.16 | 4.250    5.84 |  5.83    1.46
               1.167    1.46 | 2.750   67.16 | 4.333    2.92 |  5.92    1.46
               1.250    1.46 | 2.833   18.98 | 4.417    2.92 |  6.00    1.46
               1.333    8.76 | 2.917   18.98 | 4.500    2.92 |  6.08    1.46
               1.417    8.76 | 3.000   18.98 | 4.583    2.92 |  6.17    1.46
               1.500    8.76 | 3.083   18.98 | 4.667    2.92 |  6.25    1.46
               1.583    8.76 | 3.167   18.98 | 4.750    2.92 |

     Unit Hyd Qpeak  (cms)=   1.359

     PEAK FLOW       (cms)=   1.425 (i)
     TIME TO PEAK    (hrs)=   4.083
     RUNOFF VOLUME    (mm)=  34.398
     TOTAL RAINFALL   (mm)=  73.000
     RUNOFF COEFFICIENT   =   0.471

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

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0041)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0201):     4.59   0.257     3.00    29.99
     + ID2= 2 (  0202):    20.53   1.049     3.42    37.36
       ================================================
       ID = 3 (  0041):    25.12   1.266     3.33    36.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0041)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0041):    25.12   1.266     3.33    36.02
     + ID2= 2 (  0203):    44.83   1.425     4.08    34.40
       ================================================
       ID = 1 (  0041):    69.95   2.447     3.67    34.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0204)|   Area    (ha)=   6.73   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    8.76 | 3.250   18.98 |  4.83    1.46
               0.167    0.00 | 1.750    8.76 | 3.333   10.22 |  4.92    1.46
               0.250    0.00 | 1.833   24.82 | 3.417   10.22 |  5.00    1.46
               0.333    1.46 | 1.917   24.82 | 3.500   10.22 |  5.08    1.46
               0.417    1.46 | 2.000   24.82 | 3.583   10.22 |  5.17    1.46
```

0.500	1.46	2.083	24.82	3.667	10.22	5.25	1.46
0.583	1.46	2.167	24.82	3.750	10.22	5.33	1.46
0.667	1.46	2.250	24.82	3.833	5.84	5.42	1.46
0.750	1.46	2.333	67.16	3.917	5.84	5.50	1.46
0.833	1.46	2.417	67.16	4.000	5.84	5.58	1.46
0.917	1.46	2.500	67.16	4.083	5.84	5.67	1.46
1.000	1.46	2.583	67.16	4.167	5.84	5.75	1.46
1.083	1.46	2.667	67.16	4.250	5.84	5.83	1.46
1.167	1.46	2.750	67.16	4.333	2.92	5.92	1.46
1.250	1.46	2.833	18.98	4.417	2.92	6.00	1.46
1.333	8.76	2.917	18.98	4.500	2.92	6.08	1.46
1.417	8.76	3.000	18.98	4.583	2.92	6.17	1.46
1.500	8.76	3.083	18.98	4.667	2.92	6.25	1.46
1.583	8.76	3.167	18.98	4.750	2.92		

Unit Hyd Qpeak (cms)= 1.353

PEAK FLOW (cms)= 0.658 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 35.381
TOTAL RAINFALL (mm)= 73.000
RUNOFF COEFFICIENT = 0.485

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

CALIB			
NASHYD (0205)	Area (ha)=	2.40	Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.18	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	8.76	3.250	18.98	4.83	1.46
0.167	0.00	1.750	8.76	3.333	10.22	4.92	1.46
0.250	0.00	1.833	24.82	3.417	10.22	5.00	1.46
0.333	1.46	1.917	24.82	3.500	10.22	5.08	1.46
0.417	1.46	2.000	24.82	3.583	10.22	5.17	1.46
0.500	1.46	2.083	24.82	3.667	10.22	5.25	1.46
0.583	1.46	2.167	24.82	3.750	10.22	5.33	1.46
0.667	1.46	2.250	24.82	3.833	5.84	5.42	1.46
0.750	1.46	2.333	67.16	3.917	5.84	5.50	1.46
0.833	1.46	2.417	67.16	4.000	5.84	5.58	1.46
0.917	1.46	2.500	67.16	4.083	5.84	5.67	1.46
1.000	1.46	2.583	67.16	4.167	5.84	5.75	1.46
1.083	1.46	2.667	67.16	4.250	5.84	5.83	1.46
1.167	1.46	2.750	67.16	4.333	2.92	5.92	1.46
1.250	1.46	2.833	18.98	4.417	2.92	6.00	1.46
1.333	8.76	2.917	18.98	4.500	2.92	6.08	1.46
1.417	8.76	3.000	18.98	4.583	2.92	6.17	1.46
1.500	8.76	3.083	18.98	4.667	2.92	6.25	1.46
1.583	8.76	3.167	18.98	4.750	2.92		

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.253 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 37.257
TOTAL RAINFALL (mm)= 73.000
RUNOFF COEFFICIENT = 0.510

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

ADD HYD (0042)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):	6.73	0.658	2.75	35.38
+ ID2= 2 (0205):	2.40	0.253	2.75	37.26
ID = 3 (0042):	9.13	0.911	2.75	35.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0043)

```
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0041):    69.95   2.447     3.67    34.98
      + ID2= 2 (  0042):     9.13   0.911     2.75    35.87
        ================================================
        ID = 3 (  0043):    79.08   2.669     3.58    35.08

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\0d170592
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\0d170592


DATE: 03-01-2024                          TIME: 01:29:08

USER:



COMMENTS: ____________________________________________________________


--------------------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 06 100yr 6hr AES          **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              7de6ddff-3c07-4357-ba13-cd6f425c5b71\ca56a851
| Ptotal= 80.31 mm |    Comments: 100yr/6hr
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.75   27.30 |  3.50   11.24 |  5.25    1.61
                0.25    1.61 |  2.00   27.30 |  3.75    6.42 |  5.50    1.61
                0.50    1.61 |  2.25   73.88 |  4.00    6.42 |  5.75    1.61
                0.75    1.61 |  2.50   73.88 |  4.25    3.21 |  6.00    1.61
                1.00    1.61 |  2.75   20.88 |  4.50    3.21 |
                1.25    9.64 |  3.00   20.88 |  4.75    1.61 |
                1.50    9.64 |  3.25   11.24 |  5.00    1.61 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (  0201)|   Area    (ha)=   4.59   Curve Number   (CN)= 77.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.41

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


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    9.64 | 3.250   20.88 |  4.83    1.61
               0.167    0.00 | 1.750    9.64 | 3.333   11.24 |  4.92    1.61
               0.250    0.00 | 1.833   27.30 | 3.417   11.24 |  5.00    1.61
               0.333    1.61 | 1.917   27.30 | 3.500   11.24 |  5.08    1.61
               0.417    1.61 | 2.000   27.30 | 3.583   11.24 |  5.17    1.61
```

0.500	1.61	2.083	27.30	3.667	11.24	5.25	1.61
0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61
1.500	9.64	3.083	20.88	4.667	3.21	6.25	1.61
1.583	9.64	3.167	20.88	4.750	3.21		

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.304 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 35.282
TOTAL RAINFALL (mm)= 80.310
RUNOFF COEFFICIENT = 0.439

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

CALIB					
NASHYD (0202)	Area (ha)=	20.53	Curve Number (CN)=	82.0	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.71			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	9.64	3.250	20.88	4.83	1.61
0.167	0.00	1.750	9.64	3.333	11.24	4.92	1.61
0.250	0.00	1.833	27.30	3.417	11.24	5.00	1.61
0.333	1.61	1.917	27.30	3.500	11.24	5.08	1.61
0.417	1.61	2.000	27.30	3.583	11.24	5.17	1.61
0.500	1.61	2.083	27.30	3.667	11.24	5.25	1.61
0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61
1.500	9.64	3.083	20.88	4.667	3.21	6.25	1.61
1.583	9.64	3.167	20.88	4.750	3.21		

Unit Hyd Qpeak (cms)= 1.104

PEAK FLOW (cms)= 1.219 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 43.272
TOTAL RAINFALL (mm)= 80.310
RUNOFF COEFFICIENT = 0.539

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

CALIB					
NASHYD (0203)	Area (ha)=	44.83	Curve Number (CN)=	80.0	
ID= 1 DT= 5.0 min	Ia (mm)=	6.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	1.26			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	9.64	3.250	20.88	4.83	1.61
0.167	0.00	1.750	9.64	3.333	11.24	4.92	1.61
0.250	0.00	1.833	27.30	3.417	11.24	5.00	1.61

0.333	1.61	1.917	27.30	3.500	11.24	5.08	1.61
0.417	1.61	2.000	27.30	3.583	11.24	5.17	1.61
0.500	1.61	2.083	27.30	3.667	11.24	5.25	1.61
0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61
1.500	9.64	3.083	20.88	4.667	3.21	6.25	1.61
1.583	9.64	3.167	20.88	4.750	3.21		

Unit Hyd Qpeak (cms)= 1.359

PEAK FLOW (cms)= 1.664 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 40.069
TOTAL RAINFALL (mm)= 80.310
RUNOFF COEFFICIENT = 0.499

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

ADD HYD (0041)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0201):	4.59	0.304	3.00	35.28
	+ ID2= 2 (0202):	20.53	1.219	3.42	43.27
	ID = 3 (0041):	25.12	1.474	3.33	41.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0041)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
	ID1= 3 (0041):	25.12	1.474	3.33	41.81
	+ ID2= 2 (0203):	44.83	1.664	4.08	40.07
	ID = 1 (0041):	69.95	2.854	3.67	40.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0204)			
ID= 1 DT= 5.0 min	Area (ha)= 6.73	Curve Number (CN)= 81.0	
	Ia (mm)= 6.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.19		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	9.64	3.250	20.88	4.83	1.61
0.167	0.00	1.750	9.64	3.333	11.24	4.92	1.61
0.250	0.00	1.833	27.30	3.417	11.24	5.00	1.61
0.333	1.61	1.917	27.30	3.500	11.24	5.08	1.61
0.417	1.61	2.000	27.30	3.583	11.24	5.17	1.61
0.500	1.61	2.083	27.30	3.667	11.24	5.25	1.61
0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61
1.500	9.64	3.083	20.88	4.667	3.21	6.25	1.61
1.583	9.64	3.167	20.88	4.750	3.21		

Unit Hyd Qpeak (cms)= 1.353

PEAK FLOW (cms)= 0.767 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 41.147
TOTAL RAINFALL (mm)= 80.310
RUNOFF COEFFICIENT = 0.512

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

CALIB			
NASHYD (0205)	Area (ha)=	2.40	Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.18	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	9.64	3.250	20.88	4.83	1.61
0.167	0.00	1.750	9.64	3.333	11.24	4.92	1.61
0.250	0.00	1.833	27.30	3.417	11.24	5.00	1.61
0.333	1.61	1.917	27.30	3.500	11.24	5.08	1.61
0.417	1.61	2.000	27.30	3.583	11.24	5.17	1.61
0.500	1.61	2.083	27.30	3.667	11.24	5.25	1.61
0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61
1.500	9.64	3.083	20.88	4.667	3.21	6.25	1.61
1.583	9.64	3.167	20.88	4.750	3.21		

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.293 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 43.149
TOTAL RAINFALL (mm)= 80.310
RUNOFF COEFFICIENT = 0.537

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

ADD HYD (0042)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0204):	6.73	0.767	2.75	41.15
	+ ID2= 2 (0205):	2.40	0.293	2.75	43.15
	ID = 3 (0042):	9.13	1.060	2.75	41.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0043)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0041):	69.95	2.854	3.67	40.70
	+ ID2= 2 (0042):	9.13	1.060	2.75	41.67
	ID = 3 (0043):	79.08	3.112	3.50	40.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
V    V   I    SS     U   U   A A   L
 V  V    I     SS    U   U  AAAAA  L
 V  V    I      SS   U   U  A   A  L
```

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         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```


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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\82f214c4
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\82f214c4

DATE: 03-01-2024 TIME: 01:29:09

USER:

COMMENTS: _____

****
** SIMULATION : Run 07 hurrhaz.stm **
****

READ STORM	Ptotal=212.00 mm
Filename: C:\Users\CAPP078249\AppData\Local\Temp\7de6ddff-3c07-4357-ba13-cd6f425c5b71\629303c6	
Comments: HURRICANE HAZEL DESIGN STORM:	

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	6.00	3.00	13.00	6.00	23.00	9.00	53.00
0.25	6.00	3.25	13.00	6.25	23.00	9.25	53.00
0.50	6.00	3.50	13.00	6.50	23.00	9.50	53.00
0.75	6.00	3.75	13.00	6.75	23.00	9.75	53.00
1.00	4.00	4.00	17.00	7.00	13.00	10.00	38.00
1.25	4.00	4.25	17.00	7.25	13.00	10.25	38.00
1.50	4.00	4.50	17.00	7.50	13.00	10.50	38.00
1.75	4.00	4.75	17.00	7.75	13.00	10.75	38.00
2.00	6.00	5.00	13.00	8.00	13.00	11.00	13.00
2.25	6.00	5.25	13.00	8.25	13.00	11.25	13.00
2.50	6.00	5.50	13.00	8.50	13.00	11.50	13.00
2.75	6.00	5.75	13.00	8.75	13.00	11.75	13.00

CALIB NASHYD (0201) ID= 1 DT= 5.0 min	Area (ha)= 4.59	Curve Number (CN)= 77.0
	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.41	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00

1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.542 (i)
TIME TO PEAK (hrs)= 10.167
RUNOFF VOLUME (mm)= 148.681
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.701

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

CALIB			
NASHYD (0202)	Area (ha)= 20.53	Curve Number (CN)= 82.0	
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.71		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 1.104

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     PEAK FLOW       (cms)=   2.224 (i)
     TIME TO PEAK    (hrs)=  10.667
     RUNOFF VOLUME    (mm)= 163.073
     TOTAL RAINFALL   (mm)= 212.000
     RUNOFF COEFFICIENT   =   0.769

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

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| CALIB            |
| NASHYD   (  0203)|   Area    (ha)=  44.83   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   1.26

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


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.00 | 3.083   13.00 | 6.083   23.00 |  9.08   53.00
              0.167    6.00 | 3.167   13.00 | 6.167   23.00 |  9.17   53.00
              0.250    6.00 | 3.250   13.00 | 6.250   23.00 |  9.25   53.00
              0.333    6.00 | 3.333   13.00 | 6.333   23.00 |  9.33   53.00
              0.417    6.00 | 3.417   13.00 | 6.417   23.00 |  9.42   53.00
              0.500    6.00 | 3.500   13.00 | 6.500   23.00 |  9.50   53.00
              0.583    6.00 | 3.583   13.00 | 6.583   23.00 |  9.58   53.00
              0.667    6.00 | 3.667   13.00 | 6.667   23.00 |  9.67   53.00
              0.750    6.00 | 3.750   13.00 | 6.750   23.00 |  9.75   53.00
              0.833    6.00 | 3.833   13.00 | 6.833   23.00 |  9.83   53.00
              0.917    6.00 | 3.917   13.00 | 6.917   23.00 |  9.92   53.00
              1.000    6.00 | 4.000   13.00 | 7.000   23.00 | 10.00   53.00
              1.083    4.00 | 4.083   17.00 | 7.083   13.00 | 10.08   38.00
              1.167    4.00 | 4.167   17.00 | 7.167   13.00 | 10.17   38.00
              1.250    4.00 | 4.250   17.00 | 7.250   13.00 | 10.25   38.00
              1.333    4.00 | 4.333   17.00 | 7.333   13.00 | 10.33   38.00
              1.417    4.00 | 4.417   17.00 | 7.417   13.00 | 10.42   38.00
              1.500    4.00 | 4.500   17.00 | 7.500   13.00 | 10.50   38.00
              1.583    4.00 | 4.583   17.00 | 7.583   13.00 | 10.58   38.00
              1.667    4.00 | 4.667   17.00 | 7.667   13.00 | 10.67   38.00
              1.750    4.00 | 4.750   17.00 | 7.750   13.00 | 10.75   38.00
              1.833    4.00 | 4.833   17.00 | 7.833   13.00 | 10.83   38.00
              1.917    4.00 | 4.917   17.00 | 7.917   13.00 | 10.92   38.00
              2.000    4.00 | 5.000   17.00 | 8.000   13.00 | 11.00   38.00
              2.083    6.00 | 5.083   13.00 | 8.083   13.00 | 11.08   13.00
              2.167    6.00 | 5.167   13.00 | 8.167   13.00 | 11.17   13.00
              2.250    6.00 | 5.250   13.00 | 8.250   13.00 | 11.25   13.00
              2.333    6.00 | 5.333   13.00 | 8.333   13.00 | 11.33   13.00
              2.417    6.00 | 5.417   13.00 | 8.417   13.00 | 11.42   13.00
              2.500    6.00 | 5.500   13.00 | 8.500   13.00 | 11.50   13.00
              2.583    6.00 | 5.583   13.00 | 8.583   13.00 | 11.58   13.00
              2.667    6.00 | 5.667   13.00 | 8.667   13.00 | 11.67   13.00
              2.750    6.00 | 5.750   13.00 | 8.750   13.00 | 11.75   13.00
              2.833    6.00 | 5.833   13.00 | 8.833   13.00 | 11.83   13.00
              2.917    6.00 | 5.917   13.00 | 8.917   13.00 | 11.92   13.00
              3.000    6.00 | 6.000   13.00 | 9.000   13.00 | 12.00   13.00

     Unit Hyd Qpeak  (cms)=   1.359

     PEAK FLOW       (cms)=   4.034 (i)
     TIME TO PEAK    (hrs)=  11.333
     RUNOFF VOLUME    (mm)= 157.462
     TOTAL RAINFALL   (mm)= 212.000
     RUNOFF COEFFICIENT   =   0.743

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

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--------------------
| ADD HYD  (  0041)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (  0201):     4.59   0.542    10.17   148.68
      + ID2= 2 (  0202):    20.53   2.224    10.67   163.07
        ==========================================================
        ID = 3 (  0041):    25.12   2.711    10.58   160.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0041)|
```

```
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
-------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0041):    25.12   2.711    10.58   160.44
      + ID2= 2 (  0203):    44.83   4.034    11.33   157.46
        ================================================
        ID = 1 (  0041):    69.95   6.558    11.08   158.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0204)|   Area     (ha)=   6.73   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.00 | 3.083   13.00 | 6.083   23.00 |  9.08   53.00
               0.167    6.00 | 3.167   13.00 | 6.167   23.00 |  9.17   53.00
               0.250    6.00 | 3.250   13.00 | 6.250   23.00 |  9.25   53.00
               0.333    6.00 | 3.333   13.00 | 6.333   23.00 |  9.33   53.00
               0.417    6.00 | 3.417   13.00 | 6.417   23.00 |  9.42   53.00
               0.500    6.00 | 3.500   13.00 | 6.500   23.00 |  9.50   53.00
               0.583    6.00 | 3.583   13.00 | 6.583   23.00 |  9.58   53.00
               0.667    6.00 | 3.667   13.00 | 6.667   23.00 |  9.67   53.00
               0.750    6.00 | 3.750   13.00 | 6.750   23.00 |  9.75   53.00
               0.833    6.00 | 3.833   13.00 | 6.833   23.00 |  9.83   53.00
               0.917    6.00 | 3.917   13.00 | 6.917   23.00 |  9.92   53.00
               1.000    6.00 | 4.000   13.00 | 7.000   23.00 | 10.00   53.00
               1.083    4.00 | 4.083   17.00 | 7.083   13.00 | 10.08   38.00
               1.167    4.00 | 4.167   17.00 | 7.167   13.00 | 10.17   38.00
               1.250    4.00 | 4.250   17.00 | 7.250   13.00 | 10.25   38.00
               1.333    4.00 | 4.333   17.00 | 7.333   13.00 | 10.33   38.00
               1.417    4.00 | 4.417   17.00 | 7.417   13.00 | 10.42   38.00
               1.500    4.00 | 4.500   17.00 | 7.500   13.00 | 10.50   38.00
               1.583    4.00 | 4.583   17.00 | 7.583   13.00 | 10.58   38.00
               1.667    4.00 | 4.667   17.00 | 7.667   13.00 | 10.67   38.00
               1.750    4.00 | 4.750   17.00 | 7.750   13.00 | 10.75   38.00
               1.833    4.00 | 4.833   17.00 | 7.833   13.00 | 10.83   38.00
               1.917    4.00 | 4.917   17.00 | 7.917   13.00 | 10.92   38.00
               2.000    4.00 | 5.000   17.00 | 8.000   13.00 | 11.00   38.00
               2.083    6.00 | 5.083   13.00 | 8.083   13.00 | 11.08   13.00
               2.167    6.00 | 5.167   13.00 | 8.167   13.00 | 11.17   13.00
               2.250    6.00 | 5.250   13.00 | 8.250   13.00 | 11.25   13.00
               2.333    6.00 | 5.333   13.00 | 8.333   13.00 | 11.33   13.00
               2.417    6.00 | 5.417   13.00 | 8.417   13.00 | 11.42   13.00
               2.500    6.00 | 5.500   13.00 | 8.500   13.00 | 11.50   13.00
               2.583    6.00 | 5.583   13.00 | 8.583   13.00 | 11.58   13.00
               2.667    6.00 | 5.667   13.00 | 8.667   13.00 | 11.67   13.00
               2.750    6.00 | 5.750   13.00 | 8.750   13.00 | 11.75   13.00
               2.833    6.00 | 5.833   13.00 | 8.833   13.00 | 11.83   13.00
               2.917    6.00 | 5.917   13.00 | 8.917   13.00 | 11.92   13.00
               3.000    6.00 | 6.000   13.00 | 9.000   13.00 | 12.00   13.00

     Unit Hyd Qpeak  (cms)=   1.353

     PEAK FLOW       (cms)=   0.901 (i)
     TIME TO PEAK    (hrs)=  10.000
     RUNOFF VOLUME    (mm)= 159.415
     TOTAL RAINFALL   (mm)= 212.000
     RUNOFF COEFFICIENT   =   0.752

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

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--------------------
| CALIB             |
| NASHYD   (  0205)|   Area     (ha)=   2.40   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.00 | 3.083   13.00 | 6.083   23.00 |  9.08   53.00
               0.167    6.00 | 3.167   13.00 | 6.167   23.00 |  9.17   53.00
               0.250    6.00 | 3.250   13.00 | 6.250   23.00 |  9.25   53.00
```

0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.325 (i)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 162.608
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.767

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

ADD HYD (0042)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):	6.73	0.901	10.00	159.42
+ ID2= 2 (0205):	2.40	0.325	10.00	162.61
ID = 3 (0042):	9.13	1.225	10.00	160.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0043)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0041):	69.95	6.558	11.08	158.53
+ ID2= 2 (0042):	9.13	1.225	10.00	160.25
ID = 3 (0043):	79.08	7.428	11.00	158.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\1c8fb52d
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\1c8fb52d

DATE: 03-01-2024 TIME: 01:29:09

USER:

COMMENTS: _____

** SIMULATION : Run 08 25mm 4 hr Chicago Desi **

| CHICAGO STORM |
| Ptotal= 24.99 mm |

IDF curve parameters: A= 722.949
B= 7.503
C= 0.862
used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	1.20	1.00	14.13	2.00	3.38	3.00	1.48
0.17	1.41	1.17	61.31	2.17	2.77	3.17	1.35
0.33	1.72	1.33	19.06	2.33	2.36	3.33	1.25
0.50	2.20	1.50	9.21	2.50	2.05	3.50	1.16
0.67	3.07	1.67	5.90	2.67	1.81	3.67	1.08
0.83	5.10	1.83	4.30	2.83	1.63	3.83	1.02

| CALIB |
| NASHYD (0201)|
|ID= 1 DT= 5.0 min |

Area (ha)= 4.59 Curve Number (CN)= 77.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.41

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.20	1.083	14.13	2.083	3.38	3.08	1.48
0.167	1.20	1.167	14.13	2.167	3.38	3.17	1.48
0.250	1.41	1.250	61.31	2.250	2.77	3.25	1.35
0.333	1.41	1.333	61.31	2.333	2.77	3.33	1.35
0.417	1.72	1.417	19.06	2.417	2.36	3.42	1.25
0.500	1.72	1.500	19.06	2.500	2.36	3.50	1.25
0.583	2.20	1.583	9.21	2.583	2.05	3.58	1.16
0.667	2.20	1.667	9.21	2.667	2.05	3.67	1.16
0.750	3.07	1.750	5.90	2.750	1.81	3.75	1.08
0.833	3.07	1.833	5.90	2.833	1.81	3.83	1.08
0.917	5.10	1.917	4.30	2.917	1.63	3.92	1.02
1.000	5.10	2.000	4.30	3.000	1.63	4.00	1.02

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.026 (i)
TIME TO PEAK (hrs)= 1.917
RUNOFF VOLUME (mm)= 3.108
TOTAL RAINFALL (mm)= 24.991
RUNOFF COEFFICIENT = 0.124

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

| CALIB |
| NASHYD (0202)|

Area (ha)= 20.53 Curve Number (CN)= 82.0

```
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.71

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.20	1.083	14.13	2.083	3.38	3.08	1.48
0.167	1.20	1.167	14.13	2.167	3.38	3.17	1.48
0.250	1.41	1.250	61.31	2.250	2.77	3.25	1.35
0.333	1.41	1.333	61.31	2.333	2.77	3.33	1.35
0.417	1.72	1.417	19.06	2.417	2.36	3.42	1.25
0.500	1.72	1.500	19.06	2.500	2.36	3.50	1.25
0.583	2.20	1.583	9.21	2.583	2.05	3.58	1.16
0.667	2.20	1.667	9.21	2.667	2.05	3.67	1.16
0.750	3.07	1.750	5.90	2.750	1.81	3.75	1.08
0.833	3.07	1.833	5.90	2.833	1.81	3.83	1.08
0.917	5.10	1.917	4.30	2.917	1.63	3.92	1.02
1.000	5.10	2.000	4.30	3.000	1.63	4.00	1.02

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     Unit Hyd Qpeak  (cms)=   1.104

     PEAK FLOW       (cms)=   0.150 (i)
     TIME TO PEAK    (hrs)=   2.250
     RUNOFF VOLUME    (mm)=   5.276
     TOTAL RAINFALL   (mm)=  24.991
     RUNOFF COEFFICIENT   =   0.211

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

------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0203)|   Area    (ha)=  44.83   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   1.26

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.20	1.083	14.13	2.083	3.38	3.08	1.48
0.167	1.20	1.167	14.13	2.167	3.38	3.17	1.48
0.250	1.41	1.250	61.31	2.250	2.77	3.25	1.35
0.333	1.41	1.333	61.31	2.333	2.77	3.33	1.35
0.417	1.72	1.417	19.06	2.417	2.36	3.42	1.25
0.500	1.72	1.500	19.06	2.500	2.36	3.50	1.25
0.583	2.20	1.583	9.21	2.583	2.05	3.58	1.16
0.667	2.20	1.667	9.21	2.667	2.05	3.67	1.16
0.750	3.07	1.750	5.90	2.750	1.81	3.75	1.08
0.833	3.07	1.833	5.90	2.833	1.81	3.83	1.08
0.917	5.10	1.917	4.30	2.917	1.63	3.92	1.02
1.000	5.10	2.000	4.30	3.000	1.63	4.00	1.02

```
     Unit Hyd Qpeak  (cms)=   1.359

     PEAK FLOW       (cms)=   0.178 (i)
     TIME TO PEAK    (hrs)=   3.000
     RUNOFF VOLUME    (mm)=   4.372
     TOTAL RAINFALL   (mm)=  24.991
     RUNOFF COEFFICIENT   =   0.175

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

------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0041)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0201):     4.59   0.026     1.92     3.11
     + ID2= 2 (  0202):    20.53   0.150     2.25     5.28
       ==========================================================
       ID = 3 (  0041):    25.12   0.173     2.17     4.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0041)|
```

```
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0041):    25.12   0.173     2.17     4.88
      + ID2= 2 (  0203):    44.83   0.178     3.00     4.37
        ================================================
        ID = 1 (  0041):    69.95   0.318     2.50     4.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0204)|   Area     (ha)=   6.73   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.20 | 1.083   14.13 | 2.083    3.38 |  3.08    1.48
               0.167    1.20 | 1.167   14.13 | 2.167    3.38 |  3.17    1.48
               0.250    1.41 | 1.250   61.31 | 2.250    2.77 |  3.25    1.35
               0.333    1.41 | 1.333   61.31 | 2.333    2.77 |  3.33    1.35
               0.417    1.72 | 1.417   19.06 | 2.417    2.36 |  3.42    1.25
               0.500    1.72 | 1.500   19.06 | 2.500    2.36 |  3.50    1.25
               0.583    2.20 | 1.583    9.21 | 2.583    2.05 |  3.58    1.16
               0.667    2.20 | 1.667    9.21 | 2.667    2.05 |  3.67    1.16
               0.750    3.07 | 1.750    5.90 | 2.750    1.81 |  3.75    1.08
               0.833    3.07 | 1.833    5.90 | 2.833    1.81 |  3.83    1.08
               0.917    5.10 | 1.917    4.30 | 2.917    1.63 |  3.92    1.02
               1.000    5.10 | 2.000    4.30 | 3.000    1.63 |  4.00    1.02

     Unit Hyd Qpeak  (cms)=   1.353

     PEAK FLOW       (cms)=   0.093 (i)
     TIME TO PEAK    (hrs)=   1.583
     RUNOFF VOLUME    (mm)=   4.579
     TOTAL RAINFALL   (mm)=  24.991
     RUNOFF COEFFICIENT   =   0.183

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

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0205)|   Area     (ha)=   2.40   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.20 | 1.083   14.13 | 2.083    3.38 |  3.08    1.48
               0.167    1.20 | 1.167   14.13 | 2.167    3.38 |  3.17    1.48
               0.250    1.41 | 1.250   61.31 | 2.250    2.77 |  3.25    1.35
               0.333    1.41 | 1.333   61.31 | 2.333    2.77 |  3.33    1.35
               0.417    1.72 | 1.417   19.06 | 2.417    2.36 |  3.42    1.25
               0.500    1.72 | 1.500   19.06 | 2.500    2.36 |  3.50    1.25
               0.583    2.20 | 1.583    9.21 | 2.583    2.05 |  3.58    1.16
               0.667    2.20 | 1.667    9.21 | 2.667    2.05 |  3.67    1.16
               0.750    3.07 | 1.750    5.90 | 2.750    1.81 |  3.75    1.08
               0.833    3.07 | 1.833    5.90 | 2.833    1.81 |  3.83    1.08
               0.917    5.10 | 1.917    4.30 | 2.917    1.63 |  3.92    1.02
               1.000    5.10 | 2.000    4.30 | 3.000    1.63 |  4.00    1.02

     Unit Hyd Qpeak  (cms)=   0.509

     PEAK FLOW       (cms)=   0.041 (i)
     TIME TO PEAK    (hrs)=   1.500
     RUNOFF VOLUME    (mm)=   5.261
     TOTAL RAINFALL   (mm)=  24.991
     RUNOFF COEFFICIENT   =   0.211

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

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0042)|
```

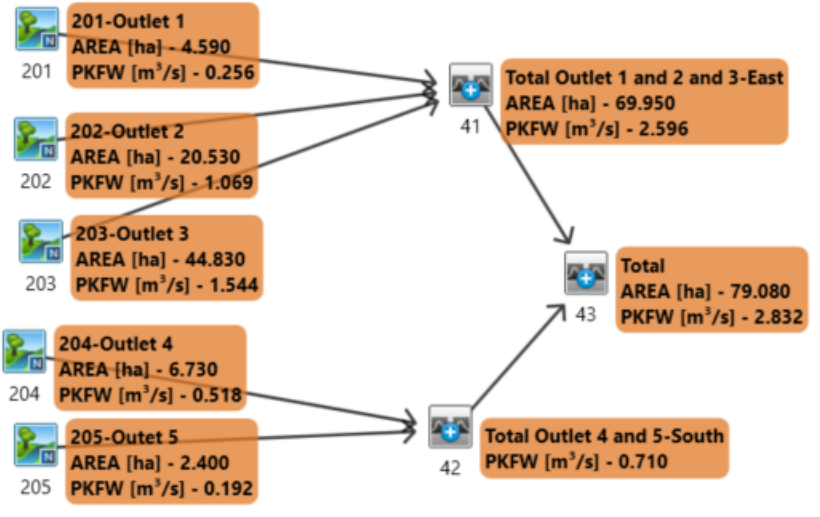
```
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0204):     6.73   0.093     1.58     4.58
      + ID2= 2 (  0205):     2.40   0.041     1.50     5.26
        ==================================================
        ID = 3 (  0042):     9.13   0.133     1.50     4.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------


--------------------
| ADD HYD  (  0043)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0041):    69.95   0.318     2.50     4.55
      + ID2= 2 (  0042):     9.13   0.133     1.50     4.76
        ==================================================
        ID = 3 (  0043):    79.08   0.348     2.42     4.58

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

 FINISH
================================================================================================================================
```


201-Outlet 1
AREA [ha] - 4.590
PKFW [m³/s] - 0.256
201
202-Outlet 2
AREA [ha] - 20.530
PKFW [m³/s] - 1.069
202
203-Outlet 3
AREA [ha] - 44.830
PKFW [m³/s] - 1.544
203
204-Outlet 4
AREA [ha] - 6.730
PKFW [m³/s] - 0.518
204
205-Outet 5
AREA [ha] - 2.400
PKFW [m³/s] - 0.192
205
41
Total Outlet 1 and 2 and 3-East
AREA [ha] - 69.950
PKFW [m³/s] - 2.596
42
Total Outlet 4 and 5-South
PKFW [m³/s] - 0.710
43
Total
AREA [ha] - 79.080
PKFW [m³/s] - 2.832

```
==========================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\c4ac2978
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\c4ac2978


DATE: 03-01-2024                          TIME: 01:15:05

USER:



COMMENTS: _____________________________________________________________

----------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 01 2YR12HR                **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              92f5c119-003d-49df-bd41-9da5eeb5310d\384f4442
| Ptotal= 42.00 mm |    Comments: 2yr/12hr
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	7.14	6.50	2.94	9.75	0.42
0.25	0.42	3.50	7.14	6.75	2.94	10.00	0.42
0.50	0.42	3.75	7.14	7.00	2.94	10.25	0.42
0.75	0.42	4.00	7.14	7.25	1.68	10.50	0.42
1.00	0.42	4.25	19.32	7.50	1.68	10.75	0.42
1.25	0.42	4.50	19.32	7.75	1.68	11.00	0.42
1.50	0.42	4.75	19.32	8.00	1.68	11.25	0.42
1.75	0.42	5.00	19.32	8.25	0.84	11.50	0.42
2.00	0.42	5.25	5.46	8.50	0.84	11.75	0.42
2.25	2.52	5.50	5.46	8.75	0.84	12.00	0.42
2.50	2.52	5.75	5.46	9.00	0.84		
2.75	2.52	6.00	5.46	9.25	0.42		
3.00	2.52	6.25	2.94	9.50	0.42		

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--------------------
| CALIB            |
| NASHYD   (  0201)|   Area    (ha)=   4.59   Curve Number   (CN)= 77.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.41

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


                          ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42

0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.063 (i)
TIME TO PEAK (hrs)= 5.417
RUNOFF VOLUME (mm)= 10.520
TOTAL RAINFALL (mm)= 42.000
RUNOFF COEFFICIENT = 0.250

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

CALIB	
NASHYD (0202)	Area (ha)= 20.53 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.71

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42
0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42

2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

Unit Hyd Qpeak (cms)= 1.104

PEAK FLOW (cms)= 0.303 (i)
TIME TO PEAK (hrs)= 5.750
RUNOFF VOLUME (mm)= 14.759
TOTAL RAINFALL (mm)= 42.000
RUNOFF COEFFICIENT = 0.351

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

CALIB NASHYD (0203) | ID= 1 DT= 5.0 min

Area (ha)= 44.83 Curve Number (CN)= 80.0
Ia (mm)= 6.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.26

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42
0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

Unit Hyd Qpeak (cms)= 1.359

PEAK FLOW (cms)= 0.416 (i)
TIME TO PEAK (hrs)= 6.583
RUNOFF VOLUME (mm)= 13.025
TOTAL RAINFALL (mm)= 42.000
RUNOFF COEFFICIENT = 0.310

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

ADD HYD (0041) | 1 + 2 = 3

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

```
       ID1= 1 (  0201):     4.59   0.063     5.42    10.52
     + ID2= 2 (  0202):    20.53   0.303     5.75    14.76
       ================================================
       ID = 3 (  0041):    25.12   0.358     5.67    13.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (  0041)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0041):    25.12   0.358     5.67    13.98
     + ID2= 2 (  0203):    44.83   0.416     6.58    13.03
       ================================================
       ID = 1 (  0041):    69.95   0.703     6.08    13.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0204)|   Area    (ha)=   6.73   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

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


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    0.00 | 3.167    2.52 | 6.250    5.46 |  9.33    0.42
 0.167    0.00 | 3.250    2.52 | 6.333    2.94 |  9.42    0.42
 0.250    0.00 | 3.333    7.14 | 6.417    2.94 |  9.50    0.42
 0.333    0.42 | 3.417    7.14 | 6.500    2.94 |  9.58    0.42
 0.417    0.42 | 3.500    7.14 | 6.583    2.94 |  9.67    0.42
 0.500    0.42 | 3.583    7.14 | 6.667    2.94 |  9.75    0.42
 0.583    0.42 | 3.667    7.14 | 6.750    2.94 |  9.83    0.42
 0.667    0.42 | 3.750    7.14 | 6.833    2.94 |  9.92    0.42
 0.750    0.42 | 3.833    7.14 | 6.917    2.94 | 10.00    0.42
 0.833    0.42 | 3.917    7.14 | 7.000    2.94 | 10.08    0.42
 0.917    0.42 | 4.000    7.14 | 7.083    2.94 | 10.17    0.42
 1.000    0.42 | 4.083    7.14 | 7.167    2.94 | 10.25    0.42
 1.083    0.42 | 4.167    7.14 | 7.250    2.94 | 10.33    0.42
 1.167    0.42 | 4.250    7.14 | 7.333    1.68 | 10.42    0.42
 1.250    0.42 | 4.333   19.32 | 7.417    1.68 | 10.50    0.42
 1.333    0.42 | 4.417   19.32 | 7.500    1.68 | 10.58    0.42
 1.417    0.42 | 4.500   19.32 | 7.583    1.68 | 10.67    0.42
 1.500    0.42 | 4.583   19.32 | 7.667    1.68 | 10.75    0.42
 1.583    0.42 | 4.667   19.32 | 7.750    1.68 | 10.83    0.42
 1.667    0.42 | 4.750   19.32 | 7.833    1.68 | 10.92    0.42
 1.750    0.42 | 4.833   19.32 | 7.917    1.68 | 11.00    0.42
 1.833    0.42 | 4.917   19.32 | 8.000    1.68 | 11.08    0.42
 1.917    0.42 | 5.000   19.32 | 8.083    1.68 | 11.17    0.42
 2.000    0.42 | 5.083   19.32 | 8.167    1.68 | 11.25    0.42
 2.083    0.42 | 5.167   19.32 | 8.250    1.68 | 11.33    0.42
 2.167    0.42 | 5.250   19.32 | 8.333    0.84 | 11.42    0.42
 2.250    0.42 | 5.333    5.46 | 8.417    0.84 | 11.50    0.42
 2.333    2.52 | 5.417    5.46 | 8.500    0.84 | 11.58    0.42
 2.417    2.52 | 5.500    5.46 | 8.583    0.84 | 11.67    0.42
 2.500    2.52 | 5.583    5.46 | 8.667    0.84 | 11.75    0.42
 2.583    2.52 | 5.667    5.46 | 8.750    0.84 | 11.83    0.42
 2.667    2.52 | 5.750    5.46 | 8.833    0.84 | 11.92    0.42
 2.750    2.52 | 5.833    5.46 | 8.917    0.84 | 12.00    0.42
 2.833    2.52 | 5.917    5.46 | 9.000    0.84 | 12.08    0.42
 2.917    2.52 | 6.000    5.46 | 9.083    0.84 | 12.17    0.42
 3.000    2.52 | 6.083    5.46 | 9.167    0.84 | 12.25    0.42
 3.083    2.52 | 6.167    5.46 | 9.250    0.84 |

     Unit Hyd Qpeak  (cms)=   1.353

     PEAK FLOW       (cms)=   0.153 (i)
     TIME TO PEAK    (hrs)=   5.250
     RUNOFF VOLUME    (mm)=  13.528
     TOTAL RAINFALL   (mm)=  42.000
     RUNOFF COEFFICIENT   =   0.322

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

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| CALIB            |
| NASHYD   (  0205)|   Area    (ha)=   2.40   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
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---------- U.H. Tp(hrs)= 0.18

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42
0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.059 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 14.717
TOTAL RAINFALL (mm)= 42.000
RUNOFF COEFFICIENT = 0.350

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

ADD HYD (0042)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):	6.73	0.153	5.25	13.53
+ ID2= 2 (0205):	2.40	0.059	5.25	14.72
ID = 3 (0042):	9.13	0.212	5.25	13.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0043)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0041):	69.95	0.703	6.08	13.37
+ ID2= 2 (0042):	9.13	0.212	5.25	13.84
ID = 3 (0043):	79.08	0.777	6.08	13.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.2.2015)

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       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```


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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\2bd1cdde
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\2bd1cdde

DATE: 03-01-2024 TIME: 01:15:05

USER:

COMMENTS: _____

****
** SIMULATION : Run 02 5YR12HR **
****

| READ STORM | Ptotal= 54.38 mm | Filename: C:\Users\CAPP078249\AppData\Local\Temp\92f5c119-003d-49df-bd41-9da5eeb5310d\545c1c68 Comments: 5yr/12hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	9.25	6.50	3.81	9.75	0.54
0.25	0.54	3.50	9.25	6.75	3.81	10.00	0.54
0.50	0.54	3.75	9.25	7.00	3.81	10.25	0.54
0.75	0.54	4.00	9.25	7.25	2.18	10.50	0.54
1.00	0.54	4.25	25.02	7.50	2.18	10.75	0.54
1.25	0.54	4.50	25.02	7.75	2.18	11.00	0.54
1.50	0.54	4.75	25.02	8.00	2.18	11.25	0.54
1.75	0.54	5.00	25.02	8.25	1.09	11.50	0.54
2.00	0.54	5.25	7.07	8.50	1.09	11.75	0.54
2.25	3.26	5.50	7.07	8.75	1.09	12.00	0.54
2.50	3.26	5.75	7.07	9.00	1.09		
2.75	3.26	6.00	7.07	9.25	0.54		
3.00	3.26	6.25	3.81	9.50	0.54		

CALIB NASHYD (0201) ID= 1 DT= 5.0 min	Area (ha)= 4.59 Curve Number (CN)= 77.0 Ia (mm)= 8.00 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= 0.41

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54

1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54
2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.107 (i)
TIME TO PEAK (hrs)= 5.417
RUNOFF VOLUME (mm)= 17.594
TOTAL RAINFALL (mm)= 54.380
RUNOFF COEFFICIENT = 0.324

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

CALIB NASHYD (0202)	Area (ha)= 20.53	Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.71	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54

2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

Unit Hyd Qpeak (cms)= 1.104

PEAK FLOW (cms)= 0.484 (i)
TIME TO PEAK (hrs)= 5.667
RUNOFF VOLUME (mm)= 23.192
TOTAL RAINFALL (mm)= 54.380
RUNOFF COEFFICIENT = 0.426

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

CALIB NASHYD (0203) | ID= 1 DT= 5.0 min	Area (ha)= 44.83 Curve Number (CN)= 80.0 Ia (mm)= 6.00 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= 1.26

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54
2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

Unit Hyd Qpeak (cms)= 1.359

PEAK FLOW (cms)= 0.678 (i)
TIME TO PEAK (hrs)= 6.500
RUNOFF VOLUME (mm)= 20.921
TOTAL RAINFALL (mm)= 54.380
RUNOFF COEFFICIENT = 0.385

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

ADD HYD (0041) | 1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 1 (0201):	4.59	0.107	5.42	17.59
	+ ID2= 2 (0202):	20.53	0.484	5.67	23.19
		==========	==========	==========	==========

```
        ID = 3 (  0041):    25.12   0.578     5.58    22.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0041)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0041):    25.12   0.578     5.58    22.17
      + ID2= 2 (  0203):    44.83   0.678     6.50    20.92
        ================================================
        ID = 1 (  0041):    69.95   1.143     6.00    21.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0204)|   Area    (ha)=   6.73   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

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


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
 0.083     0.00 | 3.167     3.26 | 6.250     7.07 |  9.33     0.54
 0.167     0.00 | 3.250     3.26 | 6.333     3.81 |  9.42     0.54
 0.250     0.00 | 3.333     9.25 | 6.417     3.81 |  9.50     0.54
 0.333     0.54 | 3.417     9.25 | 6.500     3.81 |  9.58     0.54
 0.417     0.54 | 3.500     9.25 | 6.583     3.81 |  9.67     0.54
 0.500     0.54 | 3.583     9.25 | 6.667     3.81 |  9.75     0.54
 0.583     0.54 | 3.667     9.25 | 6.750     3.81 |  9.83     0.54
 0.667     0.54 | 3.750     9.25 | 6.833     3.81 |  9.92     0.54
 0.750     0.54 | 3.833     9.25 | 6.917     3.81 | 10.00     0.54
 0.833     0.54 | 3.917     9.25 | 7.000     3.81 | 10.08     0.54
 0.917     0.54 | 4.000     9.25 | 7.083     3.81 | 10.17     0.54
 1.000     0.54 | 4.083     9.25 | 7.167     3.81 | 10.25     0.54
 1.083     0.54 | 4.167     9.25 | 7.250     3.81 | 10.33     0.54
 1.167     0.54 | 4.250     9.25 | 7.333     2.18 | 10.42     0.54
 1.250     0.54 | 4.333    25.02 | 7.417     2.18 | 10.50     0.54
 1.333     0.54 | 4.417    25.02 | 7.500     2.18 | 10.58     0.54
 1.417     0.54 | 4.500    25.02 | 7.583     2.18 | 10.67     0.54
 1.500     0.54 | 4.583    25.02 | 7.667     2.18 | 10.75     0.54
 1.583     0.54 | 4.667    25.02 | 7.750     2.18 | 10.83     0.54
 1.667     0.54 | 4.750    25.02 | 7.833     2.18 | 10.92     0.54
 1.750     0.54 | 4.833    25.02 | 7.917     2.18 | 11.00     0.54
 1.833     0.54 | 4.917    25.02 | 8.000     2.18 | 11.08     0.54
 1.917     0.54 | 5.000    25.02 | 8.083     2.18 | 11.17     0.54
 2.000     0.54 | 5.083    25.02 | 8.167     2.18 | 11.25     0.54
 2.083     0.54 | 5.167    25.02 | 8.250     2.18 | 11.33     0.54
 2.167     0.54 | 5.250    25.02 | 8.333     1.09 | 11.42     0.54
 2.250     0.54 | 5.333     7.07 | 8.417     1.09 | 11.50     0.54
 2.333     3.26 | 5.417     7.07 | 8.500     1.09 | 11.58     0.54
 2.417     3.26 | 5.500     7.07 | 8.583     1.09 | 11.67     0.54
 2.500     3.26 | 5.583     7.07 | 8.667     1.09 | 11.75     0.54
 2.583     3.26 | 5.667     7.07 | 8.750     1.09 | 11.83     0.54
 2.667     3.26 | 5.750     7.07 | 8.833     1.09 | 11.92     0.54
 2.750     3.26 | 5.833     7.07 | 8.917     1.09 | 12.00     0.54
 2.833     3.26 | 5.917     7.07 | 9.000     1.09 | 12.08     0.54
 2.917     3.26 | 6.000     7.07 | 9.083     1.09 | 12.17     0.54
 3.000     3.26 | 6.083     7.07 | 9.167     1.09 | 12.25     0.54
 3.083     3.26 | 6.167     7.07 | 9.250     1.09 |

     Unit Hyd Qpeak  (cms)=   1.353

     PEAK FLOW       (cms)=   0.241 (i)
     TIME TO PEAK    (hrs)=   5.250
     RUNOFF VOLUME    (mm)=  21.630
     TOTAL RAINFALL   (mm)=  54.380
     RUNOFF COEFFICIENT   =   0.398

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

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--------------------
| CALIB            |
| NASHYD   (  0205)|   Area    (ha)=   2.40   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54
2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.092 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 23.126
TOTAL RAINFALL (mm)= 54.380
RUNOFF COEFFICIENT = 0.425

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

ADD HYD (0042) | 1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 1 (0204):	6.73	0.241	5.25	21.63
+	ID2= 2 (0205):	2.40	0.092	5.25	23.13
	ID = 3 (0042):	9.13	0.333	5.25	22.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0043) | 1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 1 (0041):	69.95	1.143	6.00	21.37
+	ID2= 2 (0042):	9.13	0.333	5.25	22.02
	ID = 3 (0043):	79.08	1.256	6.00	21.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
         V  V   I      SS   U   U  A   A  L
```

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         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```


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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\c4dd516a
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\c4dd516a

DATE: 03-01-2024 TIME: 01:15:05

USER:

COMMENTS: _____

****
** SIMULATION : Run 03 10YR12HR **
****

READ STORM	Filename: C:\Users\CAPP078249\AppData\Local\Temp\92f5c119-003d-49df-bd41-9da5eeb5310d\ca56f05e
Ptotal= 62.71 mm	Comments: 10yr/12hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	10.66	6.50	4.39	9.75	0.63
0.25	0.63	3.50	10.66	6.75	4.39	10.00	0.63
0.50	0.63	3.75	10.66	7.00	4.39	10.25	0.63
0.75	0.63	4.00	10.66	7.25	2.51	10.50	0.63
1.00	0.63	4.25	28.84	7.50	2.51	10.75	0.63
1.25	0.63	4.50	28.84	7.75	2.51	11.00	0.63
1.50	0.63	4.75	28.84	8.00	2.51	11.25	0.63
1.75	0.63	5.00	28.84	8.25	1.25	11.50	0.63
2.00	0.63	5.25	8.15	8.50	1.25	11.75	0.63
2.25	3.76	5.50	8.15	8.75	1.25	12.00	0.63
2.50	3.76	5.75	8.15	9.00	1.25		
2.75	3.76	6.00	8.15	9.25	0.63		
3.00	3.76	6.25	4.39	9.50	0.63		

CALIB NASHYD (0201) ID= 1 DT= 5.0 min	Area (ha)= 4.59 Curve Number (CN)= 77.0 Ia (mm)= 8.00 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= 0.41

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63

1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.140 (i)
TIME TO PEAK (hrs)= 5.417
RUNOFF VOLUME (mm)= 22.919
TOTAL RAINFALL (mm)= 62.710
RUNOFF COEFFICIENT = 0.365

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

CALIB NASHYD (0202) ID= 1 DT= 5.0 min	Area (ha)= 20.53	Curve Number (CN)= 82.0
	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.71	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

Unit Hyd Qpeak (cms)= 1.104

PEAK FLOW (cms)= 0.618 (i)
TIME TO PEAK (hrs)= 5.667
RUNOFF VOLUME (mm)= 29.351
TOTAL RAINFALL (mm)= 62.710
RUNOFF COEFFICIENT = 0.468

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

CALIB	
NASHYD (0203)	Area (ha)= 44.83 Curve Number (CN)= 80.0
ID= 1 DT= 5.0 min	Ia (mm)= 6.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 1.26

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

Unit Hyd Qpeak (cms)= 1.359

PEAK FLOW (cms)= 0.873 (i)
TIME TO PEAK (hrs)= 6.500
RUNOFF VOLUME (mm)= 26.753
TOTAL RAINFALL (mm)= 62.710
RUNOFF COEFFICIENT = 0.427

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

ADD HYD (0041)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0201):	4.59	0.140	5.42	22.92
+ ID2= 2 (0202):	20.53	0.618	5.67	29.35
ID = 3 (0041):	25.12	0.742	5.58	28.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (  0041)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0041):    25.12   0.742     5.58    28.18
     + ID2= 2 (  0203):    44.83   0.873     6.50    26.75
       ================================================
       ID = 1 (  0041):    69.95   1.470     6.00    27.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| NASHYD   (  0204)|   Area    (ha)=   6.73   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

```
     Unit Hyd Qpeak  (cms)=   1.353

     PEAK FLOW       (cms)=   0.305 (i)
     TIME TO PEAK    (hrs)=   5.250
     RUNOFF VOLUME    (mm)=  27.591
     TOTAL RAINFALL   (mm)=  62.710
     RUNOFF COEFFICIENT   =   0.440

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB            |
| NASHYD   (  0205)|   Area    (ha)=   2.40   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.115 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 29.268
TOTAL RAINFALL (mm)= 62.710
RUNOFF COEFFICIENT = 0.467

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

ADD HYD (0042) | 1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):		6.73	0.305	5.25	27.59
+ ID2= 2 (0205):		2.40	0.115	5.25	29.27
ID = 3 (0042):		9.13	0.421	5.25	28.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0043) | 1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0041):		69.95	1.470	6.00	27.26
+ ID2= 2 (0042):		9.13	0.421	5.25	28.03
ID = 3 (0043):		79.08	1.611	5.92	27.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
 V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
 V    V   I    SS     U   U   A A   L
  V  V    I     SS    U   U  AAAAA  L
  V  V    I      SS   U   U  A   A  L
   VV     I    SSSSS  UUUUU  A   A  LLLLL

   OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
```

```
       O   O    T     T    H   H   Y Y   MM MM  O   O
       O   O    T     T    H   H    Y    M   M  O   O
        OOO     T     T    H   H    Y    M   M   OOO
```


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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\9ba97c86
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\9ba97c86

DATE: 03-01-2024 TIME: 01:15:05

USER:

COMMENTS: _____

****
** SIMULATION : Run 04 25YR12HR **
****

READ STORM	Filename: C:\Users\CAPP078249\AppD ata\Local\Temp\ 92f5c119-003d-49df-bd41-9da5eeb5310d\ec76e1ab
Ptotal= 73.10 mm	Comments: 25yr/12hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	12.43	6.50	5.12	9.75	0.73
0.25	0.73	3.50	12.43	6.75	5.12	10.00	0.73
0.50	0.73	3.75	12.43	7.00	5.12	10.25	0.73
0.75	0.73	4.00	12.43	7.25	2.92	10.50	0.73
1.00	0.73	4.25	33.63	7.50	2.92	10.75	0.73
1.25	0.73	4.50	33.63	7.75	2.92	11.00	0.73
1.50	0.73	4.75	33.63	8.00	2.92	11.25	0.73
1.75	0.73	5.00	33.63	8.25	1.46	11.50	0.73
2.00	0.73	5.25	9.50	8.50	1.46	11.75	0.73
2.25	4.39	5.50	9.50	8.75	1.46	12.00	0.73
2.50	4.39	5.75	9.50	9.00	1.46		
2.75	4.39	6.00	9.50	9.25	0.73		
3.00	4.39	6.25	5.12	9.50	0.73		

CALIB NASHYD (0201) ID= 1 DT= 5.0 min	Area (ha)= 4.59 Curve Number (CN)= 77.0 Ia (mm)= 8.00 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= 0.41

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.39	6.250	9.50	9.33	0.73
0.167	0.00	3.250	4.39	6.333	5.12	9.42	0.73
0.250	0.00	3.333	12.43	6.417	5.12	9.50	0.73
0.333	0.73	3.417	12.43	6.500	5.12	9.58	0.73
0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73
0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73
1.000	0.73	4.083	12.43	7.167	5.12	10.25	0.73
1.083	0.73	4.167	12.43	7.250	5.12	10.33	0.73
1.167	0.73	4.250	12.43	7.333	2.92	10.42	0.73
1.250	0.73	4.333	33.63	7.417	2.92	10.50	0.73
1.333	0.73	4.417	33.63	7.500	2.92	10.58	0.73
1.417	0.73	4.500	33.63	7.583	2.92	10.67	0.73

1.500	0.73	4.583	33.63	7.667	2.92	10.75	0.73
1.583	0.73	4.667	33.63	7.750	2.92	10.83	0.73
1.667	0.73	4.750	33.63	7.833	2.92	10.92	0.73
1.750	0.73	4.833	33.63	7.917	2.92	11.00	0.73
1.833	0.73	4.917	33.63	8.000	2.92	11.08	0.73
1.917	0.73	5.000	33.63	8.083	2.92	11.17	0.73
2.000	0.73	5.083	33.63	8.167	2.92	11.25	0.73
2.083	0.73	5.167	33.63	8.250	2.92	11.33	0.73
2.167	0.73	5.250	33.63	8.333	1.46	11.42	0.73
2.250	0.73	5.333	9.50	8.417	1.46	11.50	0.73
2.333	4.39	5.417	9.50	8.500	1.46	11.58	0.73
2.417	4.39	5.500	9.50	8.583	1.46	11.67	0.73
2.500	4.39	5.583	9.50	8.667	1.46	11.75	0.73
2.583	4.39	5.667	9.50	8.750	1.46	11.83	0.73
2.667	4.39	5.750	9.50	8.833	1.46	11.92	0.73
2.750	4.39	5.833	9.50	8.917	1.46	12.00	0.73
2.833	4.39	5.917	9.50	9.000	1.46	12.08	0.73
2.917	4.39	6.000	9.50	9.083	1.46	12.17	0.73
3.000	4.39	6.083	9.50	9.167	1.46	12.25	0.73
3.083	4.39	6.167	9.50	9.250	1.46		

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.185 (i)
TIME TO PEAK (hrs)= 5.417
RUNOFF VOLUME (mm)= 30.060
TOTAL RAINFALL (mm)= 73.100
RUNOFF COEFFICIENT = 0.411

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

CALIB NASHYD (0202) ID= 1 DT= 5.0 min	Area (ha)= 20.53 Curve Number (CN)= 82.0 Ia (mm)= 5.00 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= 0.71

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.39	6.250	9.50	9.33	0.73
0.167	0.00	3.250	4.39	6.333	5.12	9.42	0.73
0.250	0.00	3.333	12.43	6.417	5.12	9.50	0.73
0.333	0.73	3.417	12.43	6.500	5.12	9.58	0.73
0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73
0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73
1.000	0.73	4.083	12.43	7.167	5.12	10.25	0.73
1.083	0.73	4.167	12.43	7.250	5.12	10.33	0.73
1.167	0.73	4.250	12.43	7.333	2.92	10.42	0.73
1.250	0.73	4.333	33.63	7.417	2.92	10.50	0.73
1.333	0.73	4.417	33.63	7.500	2.92	10.58	0.73
1.417	0.73	4.500	33.63	7.583	2.92	10.67	0.73
1.500	0.73	4.583	33.63	7.667	2.92	10.75	0.73
1.583	0.73	4.667	33.63	7.750	2.92	10.83	0.73
1.667	0.73	4.750	33.63	7.833	2.92	10.92	0.73
1.750	0.73	4.833	33.63	7.917	2.92	11.00	0.73
1.833	0.73	4.917	33.63	8.000	2.92	11.08	0.73
1.917	0.73	5.000	33.63	8.083	2.92	11.17	0.73
2.000	0.73	5.083	33.63	8.167	2.92	11.25	0.73
2.083	0.73	5.167	33.63	8.250	2.92	11.33	0.73
2.167	0.73	5.250	33.63	8.333	1.46	11.42	0.73
2.250	0.73	5.333	9.50	8.417	1.46	11.50	0.73
2.333	4.39	5.417	9.50	8.500	1.46	11.58	0.73
2.417	4.39	5.500	9.50	8.583	1.46	11.67	0.73
2.500	4.39	5.583	9.50	8.667	1.46	11.75	0.73
2.583	4.39	5.667	9.50	8.750	1.46	11.83	0.73
2.667	4.39	5.750	9.50	8.833	1.46	11.92	0.73
2.750	4.39	5.833	9.50	8.917	1.46	12.00	0.73
2.833	4.39	5.917	9.50	9.000	1.46	12.08	0.73
2.917	4.39	6.000	9.50	9.083	1.46	12.17	0.73
3.000	4.39	6.083	9.50	9.167	1.46	12.25	0.73
3.083	4.39	6.167	9.50	9.250	1.46		

Unit Hyd Qpeak (cms)= 1.104

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     PEAK FLOW       (cms)=   0.794 (i)
     TIME TO PEAK    (hrs)=   5.667
     RUNOFF VOLUME    (mm)=  37.443
     TOTAL RAINFALL   (mm)=  73.100
     RUNOFF COEFFICIENT   =   0.512

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

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| CALIB             |
| NASHYD   (  0203)|   Area    (ha)=  44.83   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   1.26

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


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
              0.083     0.00 | 3.167     4.39 | 6.250     9.50 |  9.33     0.73
              0.167     0.00 | 3.250     4.39 | 6.333     5.12 |  9.42     0.73
              0.250     0.00 | 3.333    12.43 | 6.417     5.12 |  9.50     0.73
              0.333     0.73 | 3.417    12.43 | 6.500     5.12 |  9.58     0.73
              0.417     0.73 | 3.500    12.43 | 6.583     5.12 |  9.67     0.73
              0.500     0.73 | 3.583    12.43 | 6.667     5.12 |  9.75     0.73
              0.583     0.73 | 3.667    12.43 | 6.750     5.12 |  9.83     0.73
              0.667     0.73 | 3.750    12.43 | 6.833     5.12 |  9.92     0.73
              0.750     0.73 | 3.833    12.43 | 6.917     5.12 | 10.00     0.73
              0.833     0.73 | 3.917    12.43 | 7.000     5.12 | 10.08     0.73
              0.917     0.73 | 4.000    12.43 | 7.083     5.12 | 10.17     0.73
              1.000     0.73 | 4.083    12.43 | 7.167     5.12 | 10.25     0.73
              1.083     0.73 | 4.167    12.43 | 7.250     5.12 | 10.33     0.73
              1.167     0.73 | 4.250    12.43 | 7.333     2.92 | 10.42     0.73
              1.250     0.73 | 4.333    33.63 | 7.417     2.92 | 10.50     0.73
              1.333     0.73 | 4.417    33.63 | 7.500     2.92 | 10.58     0.73
              1.417     0.73 | 4.500    33.63 | 7.583     2.92 | 10.67     0.73
              1.500     0.73 | 4.583    33.63 | 7.667     2.92 | 10.75     0.73
              1.583     0.73 | 4.667    33.63 | 7.750     2.92 | 10.83     0.73
              1.667     0.73 | 4.750    33.63 | 7.833     2.92 | 10.92     0.73
              1.750     0.73 | 4.833    33.63 | 7.917     2.92 | 11.00     0.73
              1.833     0.73 | 4.917    33.63 | 8.000     2.92 | 11.08     0.73
              1.917     0.73 | 5.000    33.63 | 8.083     2.92 | 11.17     0.73
              2.000     0.73 | 5.083    33.63 | 8.167     2.92 | 11.25     0.73
              2.083     0.73 | 5.167    33.63 | 8.250     2.92 | 11.33     0.73
              2.167     0.73 | 5.250    33.63 | 8.333     1.46 | 11.42     0.73
              2.250     0.73 | 5.333     9.50 | 8.417     1.46 | 11.50     0.73
              2.333     4.39 | 5.417     9.50 | 8.500     1.46 | 11.58     0.73
              2.417     4.39 | 5.500     9.50 | 8.583     1.46 | 11.67     0.73
              2.500     4.39 | 5.583     9.50 | 8.667     1.46 | 11.75     0.73
              2.583     4.39 | 5.667     9.50 | 8.750     1.46 | 11.83     0.73
              2.667     4.39 | 5.750     9.50 | 8.833     1.46 | 11.92     0.73
              2.750     4.39 | 5.833     9.50 | 8.917     1.46 | 12.00     0.73
              2.833     4.39 | 5.917     9.50 | 9.000     1.46 | 12.08     0.73
              2.917     4.39 | 6.000     9.50 | 9.083     1.46 | 12.17     0.73
              3.000     4.39 | 6.083     9.50 | 9.167     1.46 | 12.25     0.73
              3.083     4.39 | 6.167     9.50 | 9.250     1.46 |

     Unit Hyd Qpeak  (cms)=   1.359

     PEAK FLOW       (cms)=   1.133 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  34.475
     TOTAL RAINFALL   (mm)=  73.100
     RUNOFF COEFFICIENT   =   0.472

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

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| ADD HYD  (  0041)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (  0201):     4.59   0.185     5.42     30.06
      + ID2= 2 (  0202):    20.53   0.794     5.67     37.44
        ================================================
        ID = 3 (  0041):    25.12   0.959     5.58     36.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| ADD HYD (0041)|
| 3 + 2 = 1 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0041):	25.12	0.959	5.58	36.09
+ ID2= 2 (0203):	44.83	1.133	6.42	34.47
ID = 1 (0041):	69.95	1.906	5.92	35.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0204) | ID= 1 DT= 5.0 min				
	Area (ha)=	6.73	Curve Number (CN)=	81.0
	Ia (mm)=	6.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.19		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.39	6.250	9.50	9.33	0.73
0.167	0.00	3.250	4.39	6.333	5.12	9.42	0.73
0.250	0.00	3.333	12.43	6.417	5.12	9.50	0.73
0.333	0.73	3.417	12.43	6.500	5.12	9.58	0.73
0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73
0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73
1.000	0.73	4.083	12.43	7.167	5.12	10.25	0.73
1.083	0.73	4.167	12.43	7.250	5.12	10.33	0.73
1.167	0.73	4.250	12.43	7.333	2.92	10.42	0.73
1.250	0.73	4.333	33.63	7.417	2.92	10.50	0.73
1.333	0.73	4.417	33.63	7.500	2.92	10.58	0.73
1.417	0.73	4.500	33.63	7.583	2.92	10.67	0.73
1.500	0.73	4.583	33.63	7.667	2.92	10.75	0.73
1.583	0.73	4.667	33.63	7.750	2.92	10.83	0.73
1.667	0.73	4.750	33.63	7.833	2.92	10.92	0.73
1.750	0.73	4.833	33.63	7.917	2.92	11.00	0.73
1.833	0.73	4.917	33.63	8.000	2.92	11.08	0.73
1.917	0.73	5.000	33.63	8.083	2.92	11.17	0.73
2.000	0.73	5.083	33.63	8.167	2.92	11.25	0.73
2.083	0.73	5.167	33.63	8.250	2.92	11.33	0.73
2.167	0.73	5.250	33.63	8.333	1.46	11.42	0.73
2.250	0.73	5.333	9.50	8.417	1.46	11.50	0.73
2.333	4.39	5.417	9.50	8.500	1.46	11.58	0.73
2.417	4.39	5.500	9.50	8.583	1.46	11.67	0.73
2.500	4.39	5.583	9.50	8.667	1.46	11.75	0.73
2.583	4.39	5.667	9.50	8.750	1.46	11.83	0.73
2.667	4.39	5.750	9.50	8.833	1.46	11.92	0.73
2.750	4.39	5.833	9.50	8.917	1.46	12.00	0.73
2.833	4.39	5.917	9.50	9.000	1.46	12.08	0.73
2.917	4.39	6.000	9.50	9.083	1.46	12.17	0.73
3.000	4.39	6.083	9.50	9.167	1.46	12.25	0.73
3.083	4.39	6.167	9.50	9.250	1.46		

Unit Hyd Qpeak (cms)= 1.353

PEAK FLOW (cms)= 0.389 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 35.459
TOTAL RAINFALL (mm)= 73.100
RUNOFF COEFFICIENT = 0.485

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

CALIB NASHYD (0205) | ID= 1 DT= 5.0 min				
	Area (ha)=	2.40	Curve Number (CN)=	82.0
	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.18		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.39	6.250	9.50	9.33	0.73

0.167	0.00	3.250	4.39	6.333	5.12	9.42	0.73
0.250	0.00	3.333	12.43	6.417	5.12	9.50	0.73
0.333	0.73	3.417	12.43	6.500	5.12	9.58	0.73
0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73
0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73
1.000	0.73	4.083	12.43	7.167	5.12	10.25	0.73
1.083	0.73	4.167	12.43	7.250	5.12	10.33	0.73
1.167	0.73	4.250	12.43	7.333	2.92	10.42	0.73
1.250	0.73	4.333	33.63	7.417	2.92	10.50	0.73
1.333	0.73	4.417	33.63	7.500	2.92	10.58	0.73
1.417	0.73	4.500	33.63	7.583	2.92	10.67	0.73
1.500	0.73	4.583	33.63	7.667	2.92	10.75	0.73
1.583	0.73	4.667	33.63	7.750	2.92	10.83	0.73
1.667	0.73	4.750	33.63	7.833	2.92	10.92	0.73
1.750	0.73	4.833	33.63	7.917	2.92	11.00	0.73
1.833	0.73	4.917	33.63	8.000	2.92	11.08	0.73
1.917	0.73	5.000	33.63	8.083	2.92	11.17	0.73
2.000	0.73	5.083	33.63	8.167	2.92	11.25	0.73
2.083	0.73	5.167	33.63	8.250	2.92	11.33	0.73
2.167	0.73	5.250	33.63	8.333	1.46	11.42	0.73
2.250	0.73	5.333	9.50	8.417	1.46	11.50	0.73
2.333	4.39	5.417	9.50	8.500	1.46	11.58	0.73
2.417	4.39	5.500	9.50	8.583	1.46	11.67	0.73
2.500	4.39	5.583	9.50	8.667	1.46	11.75	0.73
2.583	4.39	5.667	9.50	8.750	1.46	11.83	0.73
2.667	4.39	5.750	9.50	8.833	1.46	11.92	0.73
2.750	4.39	5.833	9.50	8.917	1.46	12.00	0.73
2.833	4.39	5.917	9.50	9.000	1.46	12.08	0.73
2.917	4.39	6.000	9.50	9.083	1.46	12.17	0.73
3.000	4.39	6.083	9.50	9.167	1.46	12.25	0.73
3.083	4.39	6.167	9.50	9.250	1.46		

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.146 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 37.336
TOTAL RAINFALL (mm)= 73.100
RUNOFF COEFFICIENT = 0.511

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

ADD HYD (0042)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0204):		6.73	0.389	5.25	35.46
+ ID2= 2 (0205):		2.40	0.146	5.25	37.34
ID = 3 (0042):		9.13	0.535	5.25	35.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0043)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0041):		69.95	1.906	5.92	35.06
+ ID2= 2 (0042):		9.13	0.535	5.25	35.95
ID = 3 (0043):		79.08	2.084	5.92	35.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
        O   O    T      T    H   H   Y Y   MM MM  O   O
        O   O    T      T    H   H    Y    M   M  O   O
         OOO     T      T    H   H    Y    M   M   OOO
```

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\caec4afe
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\caec4afe

DATE: 03-01-2024 TIME: 01:15:05

USER:

COMMENTS: _____

** SIMULATION : Run 05 50YR12HR **

READ STORM | Ptotal= 80.82 mm | Filename: C:\Users\CAPP078249\AppData\Local\Temp\92f5c119-003d-49df-bd41-9da5eeb5310d\114dc132
Comments: 50yr/12hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	13.74	6.50	5.66	9.75	0.81
0.25	0.81	3.50	13.74	6.75	5.66	10.00	0.81
0.50	0.81	3.75	13.74	7.00	5.66	10.25	0.81
0.75	0.81	4.00	13.74	7.25	3.23	10.50	0.81
1.00	0.81	4.25	37.17	7.50	3.23	10.75	0.81
1.25	0.81	4.50	37.17	7.75	3.23	11.00	0.81
1.50	0.81	4.75	37.17	8.00	3.23	11.25	0.81
1.75	0.81	5.00	37.17	8.25	1.62	11.50	0.81
2.00	0.81	5.25	10.50	8.50	1.62	11.75	0.81
2.25	4.85	5.50	10.50	8.75	1.62	12.00	0.81
2.50	4.85	5.75	10.50	9.00	1.62		
2.75	4.85	6.00	10.50	9.25	0.81		
3.00	4.85	6.25	5.66	9.50	0.81		

CALIB | NASHYD (0201) | ID= 1 DT= 5.0 min | Area (ha)= 4.59 | Ia (mm)= 8.00 | U.H. Tp(hrs)= 0.41 | Curve Number (CN)= 77.0 | # of Linear Res.(N)= 3.00

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.85	6.250	10.50	9.33	0.81
0.167	0.00	3.250	4.85	6.333	5.66	9.42	0.81
0.250	0.00	3.333	13.74	6.417	5.66	9.50	0.81
0.333	0.81	3.417	13.74	6.500	5.66	9.58	0.81
0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81
1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81

1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81
1.833	0.81	4.917	37.17	8.000	3.23	11.08	0.81
1.917	0.81	5.000	37.17	8.083	3.23	11.17	0.81
2.000	0.81	5.083	37.17	8.167	3.23	11.25	0.81
2.083	0.81	5.167	37.17	8.250	3.23	11.33	0.81
2.167	0.81	5.250	37.17	8.333	1.62	11.42	0.81
2.250	0.81	5.333	10.50	8.417	1.62	11.50	0.81
2.333	4.85	5.417	10.50	8.500	1.62	11.58	0.81
2.417	4.85	5.500	10.50	8.583	1.62	11.67	0.81
2.500	4.85	5.583	10.50	8.667	1.62	11.75	0.81
2.583	4.85	5.667	10.50	8.750	1.62	11.83	0.81
2.667	4.85	5.750	10.50	8.833	1.62	11.92	0.81
2.750	4.85	5.833	10.50	8.917	1.62	12.00	0.81
2.833	4.85	5.917	10.50	9.000	1.62	12.08	0.81
2.917	4.85	6.000	10.50	9.083	1.62	12.17	0.81
3.000	4.85	6.083	10.50	9.167	1.62	12.25	0.81
3.083	4.85	6.167	10.50	9.250	1.62		

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.220 (i)
TIME TO PEAK (hrs)= 5.417
RUNOFF VOLUME (mm)= 35.659
TOTAL RAINFALL (mm)= 80.820
RUNOFF COEFFICIENT = 0.441

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

CALIB			
NASHYD (0202)	Area (ha)= 20.53	Curve Number (CN)= 82.0	
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.71		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.85	6.250	10.50	9.33	0.81
0.167	0.00	3.250	4.85	6.333	5.66	9.42	0.81
0.250	0.00	3.333	13.74	6.417	5.66	9.50	0.81
0.333	0.81	3.417	13.74	6.500	5.66	9.58	0.81
0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81
1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81
1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81
1.833	0.81	4.917	37.17	8.000	3.23	11.08	0.81
1.917	0.81	5.000	37.17	8.083	3.23	11.17	0.81
2.000	0.81	5.083	37.17	8.167	3.23	11.25	0.81
2.083	0.81	5.167	37.17	8.250	3.23	11.33	0.81
2.167	0.81	5.250	37.17	8.333	1.62	11.42	0.81
2.250	0.81	5.333	10.50	8.417	1.62	11.50	0.81
2.333	4.85	5.417	10.50	8.500	1.62	11.58	0.81
2.417	4.85	5.500	10.50	8.583	1.62	11.67	0.81
2.500	4.85	5.583	10.50	8.667	1.62	11.75	0.81
2.583	4.85	5.667	10.50	8.750	1.62	11.83	0.81
2.667	4.85	5.750	10.50	8.833	1.62	11.92	0.81
2.750	4.85	5.833	10.50	8.917	1.62	12.00	0.81
2.833	4.85	5.917	10.50	9.000	1.62	12.08	0.81
2.917	4.85	6.000	10.50	9.083	1.62	12.17	0.81
3.000	4.85	6.083	10.50	9.167	1.62	12.25	0.81
3.083	4.85	6.167	10.50	9.250	1.62		

Unit Hyd Qpeak (cms)= 1.104

PEAK FLOW (cms)= 0.930 (i)
TIME TO PEAK (hrs)= 5.667
RUNOFF VOLUME (mm)= 43.690

TOTAL RAINFALL (mm)= 80.820
RUNOFF COEFFICIENT = 0.541

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

CALIB			
NASHYD (0203)	Area (ha)= 44.83	Curve Number (CN)= 80.0	
ID= 1 DT= 5.0 min	Ia (mm)= 6.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 1.26		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.85	6.250	10.50	9.33	0.81
0.167	0.00	3.250	4.85	6.333	5.66	9.42	0.81
0.250	0.00	3.333	13.74	6.417	5.66	9.50	0.81
0.333	0.81	3.417	13.74	6.500	5.66	9.58	0.81
0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81
1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81
1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81
1.833	0.81	4.917	37.17	8.000	3.23	11.08	0.81
1.917	0.81	5.000	37.17	8.083	3.23	11.17	0.81
2.000	0.81	5.083	37.17	8.167	3.23	11.25	0.81
2.083	0.81	5.167	37.17	8.250	3.23	11.33	0.81
2.167	0.81	5.250	37.17	8.333	1.62	11.42	0.81
2.250	0.81	5.333	10.50	8.417	1.62	11.50	0.81
2.333	4.85	5.417	10.50	8.500	1.62	11.58	0.81
2.417	4.85	5.500	10.50	8.583	1.62	11.67	0.81
2.500	4.85	5.583	10.50	8.667	1.62	11.75	0.81
2.583	4.85	5.667	10.50	8.750	1.62	11.83	0.81
2.667	4.85	5.750	10.50	8.833	1.62	11.92	0.81
2.750	4.85	5.833	10.50	8.917	1.62	12.00	0.81
2.833	4.85	5.917	10.50	9.000	1.62	12.08	0.81
2.917	4.85	6.000	10.50	9.083	1.62	12.17	0.81
3.000	4.85	6.083	10.50	9.167	1.62	12.25	0.81
3.083	4.85	6.167	10.50	9.250	1.62		

Unit Hyd Qpeak (cms)= 1.359

PEAK FLOW (cms)= 1.335 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 40.471
TOTAL RAINFALL (mm)= 80.820
RUNOFF COEFFICIENT = 0.501

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

ADD HYD (0041)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0201):	4.59	0.220	5.42	35.66
+ ID2= 2 (0202):	20.53	0.930	5.67	43.69
ID = 3 (0041):	25.12	1.126	5.58	42.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0041)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)

```
       ID1= 3 (  0041):    25.12   1.126     5.58    42.22
     + ID2= 2 (  0203):    44.83   1.335     6.42    40.47
       ================================================
       ID = 1 (  0041):    69.95   2.246     5.92    41.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0204)|   Area    (ha)=   6.73   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    4.85 | 6.250   10.50 |  9.33    0.81
               0.167    0.00 | 3.250    4.85 | 6.333    5.66 |  9.42    0.81
               0.250    0.00 | 3.333   13.74 | 6.417    5.66 |  9.50    0.81
               0.333    0.81 | 3.417   13.74 | 6.500    5.66 |  9.58    0.81
               0.417    0.81 | 3.500   13.74 | 6.583    5.66 |  9.67    0.81
               0.500    0.81 | 3.583   13.74 | 6.667    5.66 |  9.75    0.81
               0.583    0.81 | 3.667   13.74 | 6.750    5.66 |  9.83    0.81
               0.667    0.81 | 3.750   13.74 | 6.833    5.66 |  9.92    0.81
               0.750    0.81 | 3.833   13.74 | 6.917    5.66 | 10.00    0.81
               0.833    0.81 | 3.917   13.74 | 7.000    5.66 | 10.08    0.81
               0.917    0.81 | 4.000   13.74 | 7.083    5.66 | 10.17    0.81
               1.000    0.81 | 4.083   13.74 | 7.167    5.66 | 10.25    0.81
               1.083    0.81 | 4.167   13.74 | 7.250    5.66 | 10.33    0.81
               1.167    0.81 | 4.250   13.74 | 7.333    3.23 | 10.42    0.81
               1.250    0.81 | 4.333   37.17 | 7.417    3.23 | 10.50    0.81
               1.333    0.81 | 4.417   37.17 | 7.500    3.23 | 10.58    0.81
               1.417    0.81 | 4.500   37.17 | 7.583    3.23 | 10.67    0.81
               1.500    0.81 | 4.583   37.17 | 7.667    3.23 | 10.75    0.81
               1.583    0.81 | 4.667   37.17 | 7.750    3.23 | 10.83    0.81
               1.667    0.81 | 4.750   37.17 | 7.833    3.23 | 10.92    0.81
               1.750    0.81 | 4.833   37.17 | 7.917    3.23 | 11.00    0.81
               1.833    0.81 | 4.917   37.17 | 8.000    3.23 | 11.08    0.81
               1.917    0.81 | 5.000   37.17 | 8.083    3.23 | 11.17    0.81
               2.000    0.81 | 5.083   37.17 | 8.167    3.23 | 11.25    0.81
               2.083    0.81 | 5.167   37.17 | 8.250    3.23 | 11.33    0.81
               2.167    0.81 | 5.250   37.17 | 8.333    1.62 | 11.42    0.81
               2.250    0.81 | 5.333   10.50 | 8.417    1.62 | 11.50    0.81
               2.333    4.85 | 5.417   10.50 | 8.500    1.62 | 11.58    0.81
               2.417    4.85 | 5.500   10.50 | 8.583    1.62 | 11.67    0.81
               2.500    4.85 | 5.583   10.50 | 8.667    1.62 | 11.75    0.81
               2.583    4.85 | 5.667   10.50 | 8.750    1.62 | 11.83    0.81
               2.667    4.85 | 5.750   10.50 | 8.833    1.62 | 11.92    0.81
               2.750    4.85 | 5.833   10.50 | 8.917    1.62 | 12.00    0.81
               2.833    4.85 | 5.917   10.50 | 9.000    1.62 | 12.08    0.81
               2.917    4.85 | 6.000   10.50 | 9.083    1.62 | 12.17    0.81
               3.000    4.85 | 6.083   10.50 | 9.167    1.62 | 12.25    0.81
               3.083    4.85 | 6.167   10.50 | 9.250    1.62 |

     Unit Hyd Qpeak  (cms)=   1.353

     PEAK FLOW       (cms)=   0.453 (i)
     TIME TO PEAK    (hrs)=   5.250
     RUNOFF VOLUME    (mm)=  41.555
     TOTAL RAINFALL   (mm)=  80.820
     RUNOFF COEFFICIENT   =   0.514

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

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0205)|   Area    (ha)=   2.40   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    4.85 | 6.250   10.50 |  9.33    0.81
               0.167    0.00 | 3.250    4.85 | 6.333    5.66 |  9.42    0.81
               0.250    0.00 | 3.333   13.74 | 6.417    5.66 |  9.50    0.81
               0.333    0.81 | 3.417   13.74 | 6.500    5.66 |  9.58    0.81
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0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81
1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81
1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81
1.833	0.81	4.917	37.17	8.000	3.23	11.08	0.81
1.917	0.81	5.000	37.17	8.083	3.23	11.17	0.81
2.000	0.81	5.083	37.17	8.167	3.23	11.25	0.81
2.083	0.81	5.167	37.17	8.250	3.23	11.33	0.81
2.167	0.81	5.250	37.17	8.333	1.62	11.42	0.81
2.250	0.81	5.333	10.50	8.417	1.62	11.50	0.81
2.333	4.85	5.417	10.50	8.500	1.62	11.58	0.81
2.417	4.85	5.500	10.50	8.583	1.62	11.67	0.81
2.500	4.85	5.583	10.50	8.667	1.62	11.75	0.81
2.583	4.85	5.667	10.50	8.750	1.62	11.83	0.81
2.667	4.85	5.750	10.50	8.833	1.62	11.92	0.81
2.750	4.85	5.833	10.50	8.917	1.62	12.00	0.81
2.833	4.85	5.917	10.50	9.000	1.62	12.08	0.81
2.917	4.85	6.000	10.50	9.083	1.62	12.17	0.81
3.000	4.85	6.083	10.50	9.167	1.62	12.25	0.81
3.083	4.85	6.167	10.50	9.250	1.62		

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.169 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 43.566
TOTAL RAINFALL (mm)= 80.820
RUNOFF COEFFICIENT = 0.539

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

ADD HYD (0042)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0204):		6.73	0.453	5.25	41.56
+ ID2= 2 (0205):		2.40	0.169	5.25	43.57
ID = 3 (0042):		9.13	0.622	5.25	42.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0043)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0041):		69.95	2.246	5.92	41.10
+ ID2= 2 (0042):		9.13	0.622	5.25	42.08
ID = 3 (0043):		79.08	2.452	5.83	41.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
V    V   I    SS     U   U   A A   L
 V  V    I     SS    U   U  AAAAA  L
 V  V    I      SS   U   U  A   A  L
  VV     I    SSSSS  UUUUU  A   A  LLLLL

 OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
O   O    T      T    H   H   Y Y   MM MM  O   O
O   O    T      T    H   H    Y    M   M  O   O
 OOO     T      T    H   H    Y    M   M   OOO
```

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\a5339c22
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\a5339c22

DATE: 03-01-2024 TIME: 01:15:06

USER:

COMMENTS: _____

****
** SIMULATION : Run 06 100YR12HR **
****

READ STORM	Filename: C:\Users\CAPP078249\AppData\Local\Temp\92f5c119-003d-49df-bd41-9da5eeb5310d\ffd0dba4
Ptotal= 88.54 mm	Comments: 100yr/12hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	15.05	6.50	6.20	9.75	0.89
0.25	0.89	3.50	15.05	6.75	6.20	10.00	0.89
0.50	0.89	3.75	15.05	7.00	6.20	10.25	0.89
0.75	0.89	4.00	15.05	7.25	3.54	10.50	0.89
1.00	0.89	4.25	40.71	7.50	3.54	10.75	0.89
1.25	0.89	4.50	40.71	7.75	3.54	11.00	0.89
1.50	0.89	4.75	40.71	8.00	3.54	11.25	0.89
1.75	0.89	5.00	40.71	8.25	1.77	11.50	0.89
2.00	0.89	5.25	11.51	8.50	1.77	11.75	0.89
2.25	5.31	5.50	11.51	8.75	1.77	12.00	0.89
2.50	5.31	5.75	11.51	9.00	1.77		
2.75	5.31	6.00	11.51	9.25	0.89		
3.00	5.31	6.25	6.20	9.50	0.89		

CALIB	
NASHYD (0201)	Area (ha)= 4.59 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.41

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89

2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.256 (i)
TIME TO PEAK (hrs)= 5.417
RUNOFF VOLUME (mm)= 41.467
TOTAL RAINFALL (mm)= 88.540
RUNOFF COEFFICIENT = 0.468

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

CALIB			
NASHYD (0202)	Area (ha)= 20.53	Curve Number (CN)= 82.0	
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.71		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

Unit Hyd Qpeak (cms)= 1.104

PEAK FLOW (cms)= 1.069 (i)
TIME TO PEAK (hrs)= 5.667
RUNOFF VOLUME (mm)= 50.101
TOTAL RAINFALL (mm)= 88.540
RUNOFF COEFFICIENT = 0.566

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

CALIB			
NASHYD (0203)	Area (ha)= 44.83	Curve Number (CN)= 80.0	
ID= 1 DT= 5.0 min	Ia (mm)= 6.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 1.26		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

Unit Hyd Qpeak (cms)= 1.359

PEAK FLOW (cms)= 1.544 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 46.650
TOTAL RAINFALL (mm)= 88.540
RUNOFF COEFFICIENT = 0.527

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

ADD HYD (0041)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0201):	4.59	0.256	5.42	41.47
	+ ID2= 2 (0202):	20.53	1.069	5.67	50.10
	ID = 3 (0041):	25.12	1.298	5.58	48.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0041)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
	ID1= 3 (0041):	25.12	1.298	5.58	48.52
	+ ID2= 2 (0203):	44.83	1.544	6.42	46.65

ID = 1 (0041): 69.95 2.596 5.92 47.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0204) ID= 1 DT= 5.0 min	Area (ha)= 6.73 Curve Number (CN)= 81.0 Ia (mm)= 6.00 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= 0.19

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

Unit Hyd Qpeak (cms)= 1.353

PEAK FLOW (cms)= 0.518 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 47.826
TOTAL RAINFALL (mm)= 88.540
RUNOFF COEFFICIENT = 0.540

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

CALIB NASHYD (0205) ID= 1 DT= 5.0 min	Area (ha)= 2.40 Curve Number (CN)= 82.0 Ia (mm)= 5.00 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= 0.18

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89

0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.192 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 49.958
TOTAL RAINFALL (mm)= 88.540
RUNOFF COEFFICIENT = 0.564

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

ADD HYD (0042)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0204):		6.73	0.518	5.25	47.83
+ ID2= 2 (0205):		2.40	0.192	5.25	49.96
ID = 3 (0042):		9.13	0.710	5.25	48.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0043)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0041):		69.95	2.596	5.92	47.32
+ ID2= 2 (0042):		9.13	0.710	5.25	48.39
ID = 3 (0043):		79.08	2.832	5.83	47.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

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       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\d8a24ea5
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\d8a24ea5

DATE: 03-01-2024 TIME: 01:15:04

USER:

COMMENTS: _____

****
** SIMULATION : Run 07 hurrhaz.stm **
****

READ STORM | Ptotal=212.00 mm

Filename: C:\Users\CAPP078249\AppData\Local\Temp\92f5c119-003d-49df-bd41-9da5eeb5310d\629303c6
Comments: HURRICANE HAZEL DESIGN STORM:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	6.00	3.00	13.00	6.00	23.00	9.00	53.00
0.25	6.00	3.25	13.00	6.25	23.00	9.25	53.00
0.50	6.00	3.50	13.00	6.50	23.00	9.50	53.00
0.75	6.00	3.75	13.00	6.75	23.00	9.75	53.00
1.00	4.00	4.00	17.00	7.00	13.00	10.00	38.00
1.25	4.00	4.25	17.00	7.25	13.00	10.25	38.00
1.50	4.00	4.50	17.00	7.50	13.00	10.50	38.00
1.75	4.00	4.75	17.00	7.75	13.00	10.75	38.00
2.00	6.00	5.00	13.00	8.00	13.00	11.00	13.00
2.25	6.00	5.25	13.00	8.25	13.00	11.25	13.00
2.50	6.00	5.50	13.00	8.50	13.00	11.50	13.00
2.75	6.00	5.75	13.00	8.75	13.00	11.75	13.00

CALIB | NASHYD (0201) | ID= 1 DT= 5.0 min

Area (ha)= 4.59 Curve Number (CN)= 77.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.41

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00

2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 0.428

PEAK FLOW (cms)= 0.542 (i)
TIME TO PEAK (hrs)= 10.167
RUNOFF VOLUME (mm)= 148.681
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.701

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

CALIB			
NASHYD (0202)	Area (ha)= 20.53	Curve Number (CN)= 82.0	
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.71		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 1.104

PEAK FLOW (cms)= 2.224 (i)
TIME TO PEAK (hrs)= 10.667
RUNOFF VOLUME (mm)= 163.073
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.769

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

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| CALIB            |
| NASHYD   (  0203)|   Area    (ha)=  44.83   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   1.26

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


                          ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
 0.083     6.00 | 3.083    13.00 | 6.083    23.00 |  9.08    53.00
 0.167     6.00 | 3.167    13.00 | 6.167    23.00 |  9.17    53.00
 0.250     6.00 | 3.250    13.00 | 6.250    23.00 |  9.25    53.00
 0.333     6.00 | 3.333    13.00 | 6.333    23.00 |  9.33    53.00
 0.417     6.00 | 3.417    13.00 | 6.417    23.00 |  9.42    53.00
 0.500     6.00 | 3.500    13.00 | 6.500    23.00 |  9.50    53.00
 0.583     6.00 | 3.583    13.00 | 6.583    23.00 |  9.58    53.00
 0.667     6.00 | 3.667    13.00 | 6.667    23.00 |  9.67    53.00
 0.750     6.00 | 3.750    13.00 | 6.750    23.00 |  9.75    53.00
 0.833     6.00 | 3.833    13.00 | 6.833    23.00 |  9.83    53.00
 0.917     6.00 | 3.917    13.00 | 6.917    23.00 |  9.92    53.00
 1.000     6.00 | 4.000    13.00 | 7.000    23.00 | 10.00    53.00
 1.083     4.00 | 4.083    17.00 | 7.083    13.00 | 10.08    38.00
 1.167     4.00 | 4.167    17.00 | 7.167    13.00 | 10.17    38.00
 1.250     4.00 | 4.250    17.00 | 7.250    13.00 | 10.25    38.00
 1.333     4.00 | 4.333    17.00 | 7.333    13.00 | 10.33    38.00
 1.417     4.00 | 4.417    17.00 | 7.417    13.00 | 10.42    38.00
 1.500     4.00 | 4.500    17.00 | 7.500    13.00 | 10.50    38.00
 1.583     4.00 | 4.583    17.00 | 7.583    13.00 | 10.58    38.00
 1.667     4.00 | 4.667    17.00 | 7.667    13.00 | 10.67    38.00
 1.750     4.00 | 4.750    17.00 | 7.750    13.00 | 10.75    38.00
 1.833     4.00 | 4.833    17.00 | 7.833    13.00 | 10.83    38.00
 1.917     4.00 | 4.917    17.00 | 7.917    13.00 | 10.92    38.00
 2.000     4.00 | 5.000    17.00 | 8.000    13.00 | 11.00    38.00
 2.083     6.00 | 5.083    13.00 | 8.083    13.00 | 11.08    13.00
 2.167     6.00 | 5.167    13.00 | 8.167    13.00 | 11.17    13.00
 2.250     6.00 | 5.250    13.00 | 8.250    13.00 | 11.25    13.00
 2.333     6.00 | 5.333    13.00 | 8.333    13.00 | 11.33    13.00
 2.417     6.00 | 5.417    13.00 | 8.417    13.00 | 11.42    13.00
 2.500     6.00 | 5.500    13.00 | 8.500    13.00 | 11.50    13.00
 2.583     6.00 | 5.583    13.00 | 8.583    13.00 | 11.58    13.00
 2.667     6.00 | 5.667    13.00 | 8.667    13.00 | 11.67    13.00
 2.750     6.00 | 5.750    13.00 | 8.750    13.00 | 11.75    13.00
 2.833     6.00 | 5.833    13.00 | 8.833    13.00 | 11.83    13.00
 2.917     6.00 | 5.917    13.00 | 8.917    13.00 | 11.92    13.00
 3.000     6.00 | 6.000    13.00 | 9.000    13.00 | 12.00    13.00

     Unit Hyd Qpeak  (cms)=   1.359

     PEAK FLOW       (cms)=   4.034 (i)
     TIME TO PEAK    (hrs)=  11.333
     RUNOFF VOLUME    (mm)= 157.462
     TOTAL RAINFALL   (mm)= 212.000
     RUNOFF COEFFICIENT   =   0.743

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

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--------------------
| ADD HYD  (  0041)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0201):     4.59   0.542    10.17   148.68
      + ID2= 2 (  0202):    20.53   2.224    10.67   163.07
        ================================================
        ID = 3 (  0041):    25.12   2.711    10.58   160.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (  0041)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0041):    25.12   2.711    10.58   160.44
      + ID2= 2 (  0203):    44.83   4.034    11.33   157.46
        ================================================
        ID = 1 (  0041):    69.95   6.558    11.08   158.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| NASHYD   (  0204)|   Area    (ha)=   6.73   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

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     Unit Hyd Qpeak  (cms)=   1.353

     PEAK FLOW       (cms)=   0.901 (i)
     TIME TO PEAK    (hrs)=  10.000
     RUNOFF VOLUME    (mm)= 159.415
     TOTAL RAINFALL   (mm)= 212.000
     RUNOFF COEFFICIENT   =   0.752

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

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--------------------
| CALIB            |
| NASHYD   (  0205)|   Area    (ha)=   2.40   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00

1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 0.509

PEAK FLOW (cms)= 0.325 (i)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 162.608
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.767

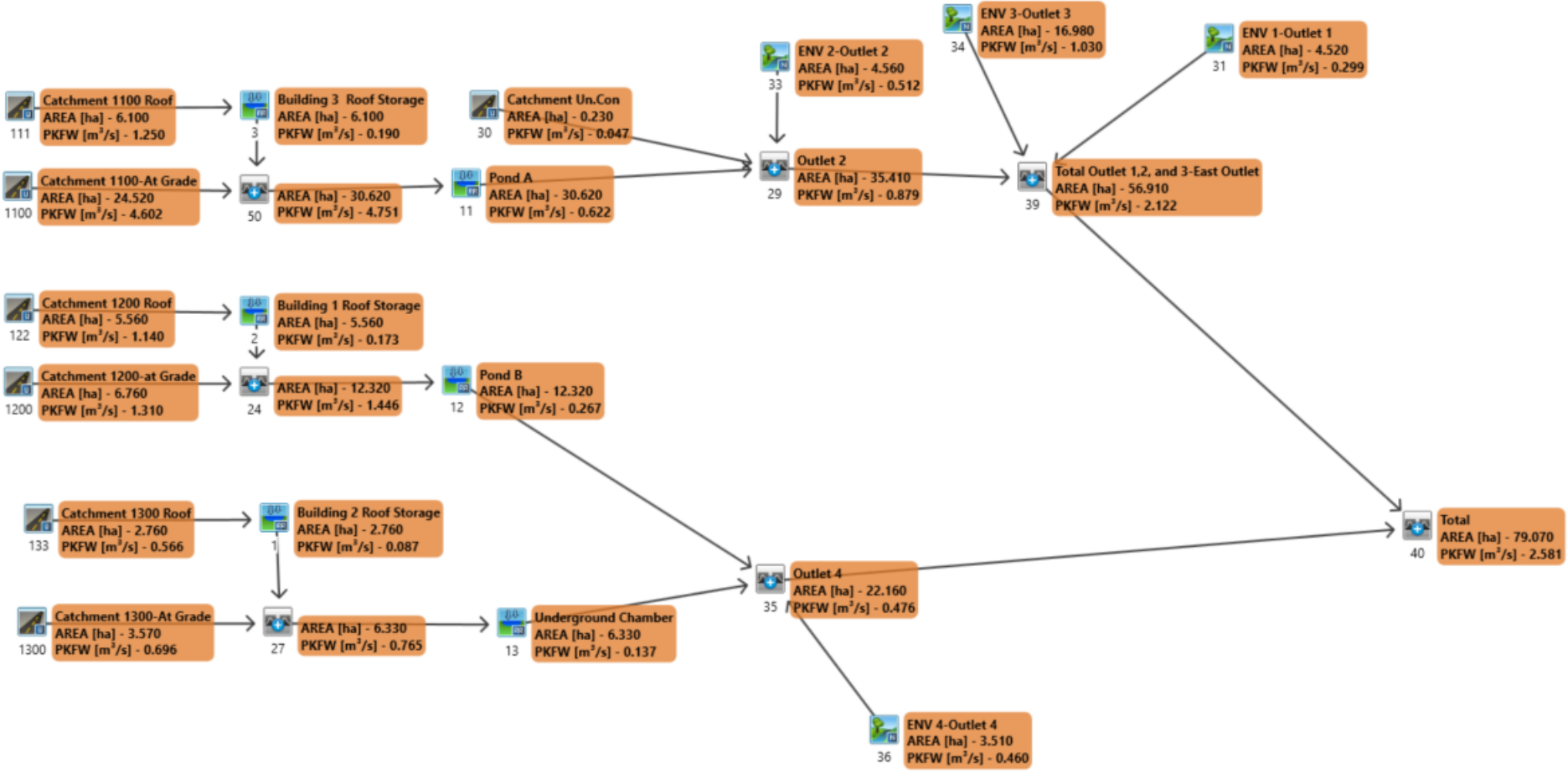
(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0042)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0204):	6.73	0.901	10.00	159.42
	+ ID2= 2 (0205):	2.40	0.325	10.00	162.61
	ID = 3 (0042):	9.13	1.225	10.00	160.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0043)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0041):	69.95	6.558	11.08	158.53
	+ ID2= 2 (0042):	9.13	1.225	10.00	160.25
	ID = 3 (0043):	79.08	7.428	11.00	158.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.


Catchment 1100 Roof
AREA [ha] - 6.100
PKFW [m³/s] - 1.250
111
Building 3 Roof Storage
AREA [ha] - 6.100
PKFW [m³/s] - 0.190
3
Catchment Un.Con
AREA [ha] - 0.230
PKFW [m³/s] - 0.047
30
ENV 2-Outlet 2
AREA [ha] - 4.560
PKFW [m³/s] - 0.512
33
ENV 3-Outlet 3
AREA [ha] - 16.980
PKFW [m³/s] - 1.030
34
ENV 1-Outlet 1
AREA [ha] - 4.520
PKFW [m³/s] - 0.299
31
Catchment 1100-At Grade
AREA [ha] - 24.520
PKFW [m³/s] - 4.602
1100
AREA [ha] - 30.620
PKFW [m³/s] - 4.751
50
Pond A
AREA [ha] - 30.620
PKFW [m³/s] - 0.622
11
Outlet 2
AREA [ha] - 35.410
PKFW [m³/s] - 0.879
29
Total Outlet 1,2, and 3-East Outlet
AREA [ha] - 56.910
PKFW [m³/s] - 2.122
39
Catchment 1200 Roof
AREA [ha] - 5.560
PKFW [m³/s] - 1.140
122
Building 1 Roof Storage
AREA [ha] - 5.560
PKFW [m³/s] - 0.173
2
Catchment 1200-at Grade
AREA [ha] - 6.760
PKFW [m³/s] - 1.310
1200
AREA [ha] - 12.320
PKFW [m³/s] - 1.446
24
Pond B
AREA [ha] - 12.320
PKFW [m³/s] - 0.267
12
Catchment 1300 Roof
AREA [ha] - 2.760
PKFW [m³/s] - 0.566
133
Building 2 Roof Storage
AREA [ha] - 2.760
PKFW [m³/s] - 0.087
1
Catchment 1300-At Grade
AREA [ha] - 3.570
PKFW [m³/s] - 0.696
1300
AREA [ha] - 6.330
PKFW [m³/s] - 0.765
27
Underground Chamber
AREA [ha] - 6.330
PKFW [m³/s] - 0.137
13
Outlet 4
AREA [ha] - 22.160
PKFW [m³/s] - 0.476
35
Total
AREA [ha] - 79.070
PKFW [m³/s] - 2.581
40
ENV 4-Outlet 4
AREA [ha] - 3.510
PKFW [m³/s] - 0.460
36

```
==========================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\e8689382
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\e8689382


DATE: 03-01-2024                          TIME: 01:27:03

USER:



COMMENTS: _____________________________________________________________

----------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 01 2yr 6hr AES           **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              68f9ca60-68a4-457b-842b-1f5eebf71d66\f4a7b4fa
| Ptotal= 36.00 mm |    Comments: 2yr/6hr
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.75   12.24 |  3.50    5.04 |  5.25    0.72
                0.25    0.72 |  2.00   12.24 |  3.75    2.88 |  5.50    0.72
                0.50    0.72 |  2.25   33.12 |  4.00    2.88 |  5.75    0.72
                0.75    0.72 |  2.50   33.12 |  4.25    1.44 |  6.00    0.72
                1.00    0.72 |  2.75    9.36 |  4.50    1.44 |
                1.25    4.32 |  3.00    9.36 |  4.75    0.72 |
                1.50    4.32 |  3.25    5.04 |  5.00    0.72 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (  0033)|   Area    (ha)=   4.56   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    4.32 | 3.250    9.36 |  4.83    0.72
               0.167    0.00 | 1.750    4.32 | 3.333    5.04 |  4.92    0.72
               0.250    0.00 | 1.833   12.24 | 3.417    5.04 |  5.00    0.72
               0.333    0.72 | 1.917   12.24 | 3.500    5.04 |  5.08    0.72
               0.417    0.72 | 2.000   12.24 | 3.583    5.04 |  5.17    0.72
               0.500    0.72 | 2.083   12.24 | 3.667    5.04 |  5.25    0.72
               0.583    0.72 | 2.167   12.24 | 3.750    5.04 |  5.33    0.72
               0.667    0.72 | 2.250   12.24 | 3.833    2.88 |  5.42    0.72
               0.750    0.72 | 2.333   33.12 | 3.917    2.88 |  5.50    0.72
               0.833    0.72 | 2.417   33.12 | 4.000    2.88 |  5.58    0.72
               0.917    0.72 | 2.500   33.12 | 4.083    2.88 |  5.67    0.72
               1.000    0.72 | 2.583   33.12 | 4.167    2.88 |  5.75    0.72
               1.083    0.72 | 2.667   33.12 | 4.250    2.88 |  5.83    0.72
               1.167    0.72 | 2.750   33.12 | 4.333    1.44 |  5.92    0.72
```

1.250	0.72	2.833	9.36	4.417	1.44	6.00	0.72
1.333	4.32	2.917	9.36	4.500	1.44	6.08	0.72
1.417	4.32	3.000	9.36	4.583	1.44	6.17	0.72
1.500	4.32	3.083	9.36	4.667	1.44	6.25	0.72
1.583	4.32	3.167	9.36	4.750	1.44		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.129 (i)
TIME TO PEAK (hrs)= 2.833
RUNOFF VOLUME (mm)= 11.062
TOTAL RAINFALL (mm)= 36.000
RUNOFF COEFFICIENT = 0.307

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

CALIB
STANDHYD (1100)| Area (ha)= 24.52
ID= 1 DT= 2.0 min | Total Imp(%)= 84.00 Dir. Conn.(%)= 84.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	1.08
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.133	0.00	1.700	4.32	3.267	7.20	4.83	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.200	0.00	1.767	8.28	3.333	5.04	4.90	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.267	0.36	1.833	12.24	3.400	5.04	4.97	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.633	0.72	2.200	12.24	3.767	3.96	5.33	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.700	0.72	2.267	22.68	3.833	2.88	5.40	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.133	0.72	2.700	33.12	4.267	2.16	5.83	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.200	0.72	2.767	21.24	4.333	1.44	5.90	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.267	2.52	2.833	9.36	4.400	1.44	5.97	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.567	4.32	3.133	9.36	4.700	1.44	6.27	0.36

Max.Eff.Inten.(mm/hr)= 33.12 13.18

over (min)	10.00	16.00		
Storage Coeff. (min)=	9.19 (ii)	14.85 (ii)		
Unit Hyd. Tpeak (min)=	10.00	16.00		
Unit Hyd. peak (cms)=	0.12	0.07		
			TOTALS	
PEAK FLOW (cms)=	1.81	0.10	1.890 (iii)	
TIME TO PEAK (hrs)=	2.73	2.90	2.77	
RUNOFF VOLUME (mm)=	35.00	10.61	31.10	
TOTAL RAINFALL (mm)=	36.00	36.00	36.00	
RUNOFF COEFFICIENT =	0.97	0.29	0.86	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0111)
ID= 1 DT= 2.0 min

Area (ha)= 6.10
Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	1.08
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.133	0.00	1.700	4.32	3.267	7.20	4.83	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.200	0.00	1.767	8.28	3.333	5.04	4.90	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.267	0.36	1.833	12.24	3.400	5.04	4.97	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.633	0.72	2.200	12.24	3.767	3.96	5.33	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.700	0.72	2.267	22.68	3.833	2.88	5.40	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.133	0.72	2.700	33.12	4.267	2.16	5.83	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.200	0.72	2.767	21.24	4.333	1.44	5.90	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.267	2.52	2.833	9.36	4.400	1.44	5.97	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.567	4.32	3.133	9.36	4.700	1.44	6.27	0.36

```
     Max.Eff.Inten.(mm/hr)=      33.12        32.73
                 over (min)       6.00         8.00
     Storage Coeff.  (min)=       6.05 (ii)    6.75 (ii)
     Unit Hyd. Tpeak (min)=       6.00         8.00
     Unit Hyd. peak  (cms)=       0.19         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.56         0.00          0.557 (iii)
     TIME TO PEAK    (hrs)=       2.73         2.73           2.73
     RUNOFF VOLUME    (mm)=      35.00        32.61          35.00
     TOTAL RAINFALL   (mm)=      36.00        36.00          36.00
     RUNOFF COEFFICIENT   =       0.97         0.91           0.97


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  99.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0920      0.1659

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0111)      6.100      0.557      2.73      35.00
   OUTFLOW: ID= 1 (  0003)      6.100      0.084      3.77      34.92

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 15.10
                  TIME SHIFT OF PEAK FLOW         (min)= 62.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1516

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--------------------
| ADD HYD  (  0050)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  1100):    24.52   1.890     2.77    31.10
      + ID2= 2 (  0003):     6.10   0.084     3.77    34.92
        ==========================================================
        ID = 3 (  0050):    30.62   1.954     2.77    31.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0011)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.4686      1.2877
                          0.0158     0.8925   |   0.5484      1.3960
                          0.0439     1.1554   |   0.6220      1.5142
                          0.3705     1.1796   |   2.8520      2.3383

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0050)     30.620      1.954      2.77      31.86
   OUTFLOW: ID= 1 (  0011)     30.620      0.016     13.00      10.48

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.81
                  TIME SHIFT OF PEAK FLOW         (min)=614.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.8925

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--------------------
| CALIB            |
| STANDHYD (  0030)|   Area    (ha)=   0.23
|ID= 1 DT= 2.0 min |   Total Imp(%)=  99.99   Dir. Conn.(%)=  99.99
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23         0.00
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      39.16        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	1.08
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.133	0.00	1.700	4.32	3.267	7.20	4.83	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.200	0.00	1.767	8.28	3.333	5.04	4.90	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.267	0.36	1.833	12.24	3.400	5.04	4.97	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.633	0.72	2.200	12.24	3.767	3.96	5.33	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.700	0.72	2.267	22.68	3.833	2.88	5.40	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.133	0.72	2.700	33.12	4.267	2.16	5.83	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.200	0.72	2.767	21.24	4.333	1.44	5.90	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.267	2.52	2.833	9.36	4.400	1.44	5.97	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.567	4.32	3.133	9.36	4.700	1.44	6.27	0.36

Max.Eff.Inten.(mm/hr)=	33.12	13.18		
over (min)	5.00	4.00		
Storage Coeff. (min)=	2.26 (ii)	2.54 (ii)		
Unit Hyd. Tpeak (min)=	4.00	4.00		
Unit Hyd. peak (cms)=	0.39	0.39		
			TOTALS	
PEAK FLOW (cms)=	0.02	0.00	0.021 (iii)	
TIME TO PEAK (hrs)=	2.73	2.73	2.73	
RUNOFF VOLUME (mm)=	35.00	10.61	34.99	
TOTAL RAINFALL (mm)=	36.00	36.00	36.00	
RUNOFF COEFFICIENT =	0.97	0.29	0.97	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0011):		30.62	0.016	13.00	10.48
+ ID2= 2 (0030):		0.23	0.021	2.73	34.99
ID = 3 (0029):		30.85	0.027	2.73	10.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (  0029)|
|   3 +  2 =  1    |          AREA     QPEAK     TPEAK      R.V.
--------------------          (ha)     (cms)     (hrs)      (mm)
        ID1= 3 (  0029):     30.85    0.027     2.73     10.67
      + ID2= 2 (  0033):      4.56    0.129     2.83     11.06
        ================================================
        ID = 1 (  0029):     35.41    0.150     2.77     10.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0034)|   Area    (ha)=  16.98   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.60

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


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    0.00 | 1.667    4.32 | 3.250    9.36 |  4.83    0.72
 0.167    0.00 | 1.750    4.32 | 3.333    5.04 |  4.92    0.72
 0.250    0.00 | 1.833   12.24 | 3.417    5.04 |  5.00    0.72
 0.333    0.72 | 1.917   12.24 | 3.500    5.04 |  5.08    0.72
 0.417    0.72 | 2.000   12.24 | 3.583    5.04 |  5.17    0.72
 0.500    0.72 | 2.083   12.24 | 3.667    5.04 |  5.25    0.72
 0.583    0.72 | 2.167   12.24 | 3.750    5.04 |  5.33    0.72
 0.667    0.72 | 2.250   12.24 | 3.833    2.88 |  5.42    0.72
 0.750    0.72 | 2.333   33.12 | 3.917    2.88 |  5.50    0.72
 0.833    0.72 | 2.417   33.12 | 4.000    2.88 |  5.58    0.72
 0.917    0.72 | 2.500   33.12 | 4.083    2.88 |  5.67    0.72
 1.000    0.72 | 2.583   33.12 | 4.167    2.88 |  5.75    0.72
 1.083    0.72 | 2.667   33.12 | 4.250    2.88 |  5.83    0.72
 1.167    0.72 | 2.750   33.12 | 4.333    1.44 |  5.92    0.72
 1.250    0.72 | 2.833    9.36 | 4.417    1.44 |  6.00    0.72
 1.333    4.32 | 2.917    9.36 | 4.500    1.44 |  6.08    0.72
 1.417    4.32 | 3.000    9.36 | 4.583    1.44 |  6.17    0.72
 1.500    4.32 | 3.083    9.36 | 4.667    1.44 |  6.25    0.72
 1.583    4.32 | 3.167    9.36 | 4.750    1.44 |

     Unit Hyd Qpeak  (cms)=   1.081

     PEAK FLOW       (cms)=   0.237 (i)
     TIME TO PEAK    (hrs)=   3.417
     RUNOFF VOLUME    (mm)=   9.625
     TOTAL RAINFALL   (mm)=  36.000
     RUNOFF COEFFICIENT   =   0.267

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0031)|   Area    (ha)=   4.52   Curve Number   (CN)= 77.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.41

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


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    0.00 | 1.667    4.32 | 3.250    9.36 |  4.83    0.72
 0.167    0.00 | 1.750    4.32 | 3.333    5.04 |  4.92    0.72
 0.250    0.00 | 1.833   12.24 | 3.417    5.04 |  5.00    0.72
 0.333    0.72 | 1.917   12.24 | 3.500    5.04 |  5.08    0.72
 0.417    0.72 | 2.000   12.24 | 3.583    5.04 |  5.17    0.72
 0.500    0.72 | 2.083   12.24 | 3.667    5.04 |  5.25    0.72
 0.583    0.72 | 2.167   12.24 | 3.750    5.04 |  5.33    0.72
 0.667    0.72 | 2.250   12.24 | 3.833    2.88 |  5.42    0.72
 0.750    0.72 | 2.333   33.12 | 3.917    2.88 |  5.50    0.72
 0.833    0.72 | 2.417   33.12 | 4.000    2.88 |  5.58    0.72
 0.917    0.72 | 2.500   33.12 | 4.083    2.88 |  5.67    0.72
 1.000    0.72 | 2.583   33.12 | 4.167    2.88 |  5.75    0.72
 1.083    0.72 | 2.667   33.12 | 4.250    2.88 |  5.83    0.72
 1.167    0.72 | 2.750   33.12 | 4.333    1.44 |  5.92    0.72
 1.250    0.72 | 2.833    9.36 | 4.417    1.44 |  6.00    0.72
 1.333    4.32 | 2.917    9.36 | 4.500    1.44 |  6.08    0.72
 1.417    4.32 | 3.000    9.36 | 4.583    1.44 |  6.17    0.72
```

1.500	4.32	3.083	9.36	4.667	1.44	6.25	0.72
1.583	4.32	3.167	9.36	4.750	1.44		

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.059 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 7.547
TOTAL RAINFALL (mm)= 36.000
RUNOFF COEFFICIENT = 0.210

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

ADD HYD (0039)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0029):	35.41	0.150	2.77	10.72
	+ ID2= 2 (0031):	4.52	0.059	3.08	7.55
	ID = 3 (0039):	39.93	0.191	2.83	10.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0039)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
	ID1= 3 (0039):	39.93	0.191	2.83	10.36
	+ ID2= 2 (0034):	16.98	0.237	3.42	9.63
	ID = 1 (0039):	56.91	0.378	3.23	10.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0036)				
ID= 1 DT= 5.0 min	Area (ha)=	3.51	Curve Number (CN)=	81.0
	Ia (mm)=	6.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.09		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	4.32	3.250	9.36	4.83	0.72
0.167	0.00	1.750	4.32	3.333	5.04	4.92	0.72
0.250	0.00	1.833	12.24	3.417	5.04	5.00	0.72
0.333	0.72	1.917	12.24	3.500	5.04	5.08	0.72
0.417	0.72	2.000	12.24	3.583	5.04	5.17	0.72
0.500	0.72	2.083	12.24	3.667	5.04	5.25	0.72
0.583	0.72	2.167	12.24	3.750	5.04	5.33	0.72
0.667	0.72	2.250	12.24	3.833	2.88	5.42	0.72
0.750	0.72	2.333	33.12	3.917	2.88	5.50	0.72
0.833	0.72	2.417	33.12	4.000	2.88	5.58	0.72
0.917	0.72	2.500	33.12	4.083	2.88	5.67	0.72
1.000	0.72	2.583	33.12	4.167	2.88	5.75	0.72
1.083	0.72	2.667	33.12	4.250	2.88	5.83	0.72
1.167	0.72	2.750	33.12	4.333	1.44	5.92	0.72
1.250	0.72	2.833	9.36	4.417	1.44	6.00	0.72
1.333	4.32	2.917	9.36	4.500	1.44	6.08	0.72
1.417	4.32	3.000	9.36	4.583	1.44	6.17	0.72
1.500	4.32	3.083	9.36	4.667	1.44	6.25	0.72
1.583	4.32	3.167	9.36	4.750	1.44		

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.118 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 9.667
TOTAL RAINFALL (mm)= 36.000
RUNOFF COEFFICIENT = 0.269

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

CALIB STANDHYD (1200)			
	Area (ha)=	6.76	

|ID= 1 DT= 2.0 min | Total Imp(%)= 87.00 Dir. Conn.(%)= 87.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.88	0.88
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	212.29	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	1.08
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.133	0.00	1.700	4.32	3.267	7.20	4.83	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.200	0.00	1.767	8.28	3.333	5.04	4.90	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.267	0.36	1.833	12.24	3.400	5.04	4.97	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.633	0.72	2.200	12.24	3.767	3.96	5.33	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.700	0.72	2.267	22.68	3.833	2.88	5.40	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.133	0.72	2.700	33.12	4.267	2.16	5.83	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.200	0.72	2.767	21.24	4.333	1.44	5.90	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.267	2.52	2.833	9.36	4.400	1.44	5.97	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.567	4.32	3.133	9.36	4.700	1.44	6.27	0.36

				TOTALS
Max.Eff.Inten.(mm/hr)=		33.12	13.18	
	over (min)	6.00	12.00	
Storage Coeff. (min)=		6.24 (ii)	11.38 (ii)	
Unit Hyd. Tpeak (min)=		6.00	12.00	
Unit Hyd. peak (cms)=		0.18	0.10	
PEAK FLOW	(cms)=	0.54	0.02	0.558 (iii)
TIME TO PEAK	(hrs)=	2.73	2.83	2.73
RUNOFF VOLUME	(mm)=	35.00	10.61	31.83
TOTAL RAINFALL	(mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT	=	0.97	0.29	0.88

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0122)	Area (ha)= 5.56
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	1.08
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.133	0.00	1.700	4.32	3.267	7.20	4.83	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.200	0.00	1.767	8.28	3.333	5.04	4.90	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.267	0.36	1.833	12.24	3.400	5.04	4.97	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.633	0.72	2.200	12.24	3.767	3.96	5.33	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.700	0.72	2.267	22.68	3.833	2.88	5.40	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.133	0.72	2.700	33.12	4.267	2.16	5.83	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.200	0.72	2.767	21.24	4.333	1.44	5.90	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.267	2.52	2.833	9.36	4.400	1.44	5.97	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.567	4.32	3.133	9.36	4.700	1.44	6.27	0.36

				TOTALS
Max.Eff.Inten.(mm/hr)=		33.12	32.73	
over (min)		6.00	8.00	
Storage Coeff. (min)=		5.89 (ii)	6.58 (ii)	
Unit Hyd. Tpeak (min)=		6.00	8.00	
Unit Hyd. peak (cms)=		0.19	0.16	
PEAK FLOW	(cms)=	0.51	0.00	0.508 (iii)
TIME TO PEAK	(hrs)=	2.73	2.73	2.73
RUNOFF VOLUME	(mm)=	35.00	32.61	35.00
TOTAL RAINFALL	(mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT	=	0.97	0.91	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0002)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0840      0.1513

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0122)      5.560      0.508      2.73      35.00
   OUTFLOW: ID= 1 (  0002)      5.560      0.077      3.77      34.92

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 15.10
                  TIME SHIFT OF PEAK FLOW         (min)= 62.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1381

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--------------------
| ADD HYD  (  0024)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  1200):     6.76   0.558     2.73    31.83
      + ID2= 2 (  0002):     5.56   0.077     3.77    34.92
        ================================================
        ID = 3 (  0024):    12.32   0.614     2.73    33.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| RESERVOIR(  0012)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2030      0.4395
                          0.0150     0.3342   |   0.2360      0.4580
                          0.0290     0.4309   |   0.2670      0.4832
                          0.1610     0.4312   |   1.1520      0.6099

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0024)     12.320      0.614      2.73      33.22
   OUTFLOW: ID= 1 (  0012)     12.320      0.015     12.77      20.89

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.44
                  TIME SHIFT OF PEAK FLOW         (min)=602.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.3342

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--------------------
| CALIB            |
| STANDHYD (  1300)|   Area    (ha)=   3.57
|ID= 1 DT= 2.0 min |   Total Imp(%)=  87.30   Dir. Conn.(%)=  87.30
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.12         0.45
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     154.27        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.033     0.00 | 1.600     4.32 | 3.167     9.36 |  4.73     1.44
               0.067     0.00 | 1.633     4.32 | 3.200     9.36 |  4.77     1.08
               0.100     0.00 | 1.667     4.32 | 3.233     9.36 |  4.80     0.72
               0.133     0.00 | 1.700     4.32 | 3.267     7.20 |  4.83     0.72
               0.167     0.00 | 1.733     4.32 | 3.300     5.04 |  4.87     0.72
               0.200     0.00 | 1.767     8.28 | 3.333     5.04 |  4.90     0.72
               0.233     0.00 | 1.800    12.24 | 3.367     5.04 |  4.93     0.72
               0.267     0.36 | 1.833    12.24 | 3.400     5.04 |  4.97     0.72
               0.300     0.72 | 1.867    12.24 | 3.433     5.04 |  5.00     0.72
               0.333     0.72 | 1.900    12.24 | 3.467     5.04 |  5.03     0.72
               0.367     0.72 | 1.933    12.24 | 3.500     5.04 |  5.07     0.72
               0.400     0.72 | 1.967    12.24 | 3.533     5.04 |  5.10     0.72
               0.433     0.72 | 2.000    12.24 | 3.567     5.04 |  5.13     0.72
               0.467     0.72 | 2.033    12.24 | 3.600     5.04 |  5.17     0.72
               0.500     0.72 | 2.067    12.24 | 3.633     5.04 |  5.20     0.72
               0.533     0.72 | 2.100    12.24 | 3.667     5.04 |  5.23     0.72
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0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.633	0.72	2.200	12.24	3.767	3.96	5.33	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.700	0.72	2.267	22.68	3.833	2.88	5.40	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.133	0.72	2.700	33.12	4.267	2.16	5.83	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.200	0.72	2.767	21.24	4.333	1.44	5.90	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.267	2.52	2.833	9.36	4.400	1.44	5.97	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.567	4.32	3.133	9.36	4.700	1.44	6.27	0.36

Max.Eff.Inten.(mm/hr)=	33.12	13.18		
over (min)	6.00	12.00		
Storage Coeff. (min)=	5.16 (ii)	10.23 (ii)		
Unit Hyd. Tpeak (min)=	6.00	12.00		
Unit Hyd. peak (cms)=	0.21	0.10		
			TOTALS	
PEAK FLOW (cms)=	0.29	0.01	0.298 (iii)	
TIME TO PEAK (hrs)=	2.73	2.83	2.73	
RUNOFF VOLUME (mm)=	35.00	10.61	31.90	
TOTAL RAINFALL (mm)=	36.00	36.00	36.00	
RUNOFF COEFFICIENT =	0.97	0.29	0.89	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0133)	Area (ha)=	2.76	
ID= 1 DT= 2.0 min	Total Imp(%)=	99.90	Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	1.08
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.133	0.00	1.700	4.32	3.267	7.20	4.83	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.200	0.00	1.767	8.28	3.333	5.04	4.90	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.267	0.36	1.833	12.24	3.400	5.04	4.97	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72

0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.633	0.72	2.200	12.24	3.767	3.96	5.33	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.700	0.72	2.267	22.68	3.833	2.88	5.40	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.133	0.72	2.700	33.12	4.267	2.16	5.83	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.200	0.72	2.767	21.24	4.333	1.44	5.90	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.267	2.52	2.833	9.36	4.400	1.44	5.97	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.567	4.32	3.133	9.36	4.700	1.44	6.27	0.36

Max.Eff.Inten.(mm/hr)=	33.12	0.00	
over (min)	5.00	6.00	
Storage Coeff. (min)=	4.77 (ii)	5.47 (ii)	
Unit Hyd. Tpeak (min)=	4.00	6.00	
Unit Hyd. peak (cms)=	0.25	0.20	
			TOTALS
PEAK FLOW (cms)=	0.25	0.00	0.253 (iii)
TIME TO PEAK (hrs)=	2.73	0.00	2.73
RUNOFF VOLUME (mm)=	35.00	0.00	34.96
TOTAL RAINFALL (mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT =	0.97	0.00	0.97

***** WARNING: THE PERVIOUS AREA HAS NO FLOW .

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0001)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0420	0.0751

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0133)	2.760	0.253	2.73	34.96
OUTFLOW: ID= 1 (0001)	2.760	0.038	3.73	34.80

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.11
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.0684

ADD HYD (0027)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0001):	2.76	0.038	3.73	34.80
+ ID2= 2 (1300):	3.57	0.298	2.73	31.90
ID = 3 (0027):	6.33	0.327	2.73	33.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| RESERVOIR(  0013)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1040      0.2272
                          0.0080     0.1711   |   0.1210      0.2380
                          0.0150     0.2214   |   0.1370      0.2516
                          0.0830     0.2217   |   0.5920      0.3236

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0027)      6.330      0.327      2.73       33.17
   OUTFLOW: ID= 1 (  0013)      6.330      0.008     12.33       21.38

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.45
                  TIME SHIFT OF PEAK FLOW         (min)=576.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1711

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0012):    12.32   0.015    12.77    20.89
     + ID2= 2 (  0013):     6.33   0.008    12.33    21.38
       ================================================
       ID = 3 (  0035):    18.65   0.023    12.50    21.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0035):    18.65   0.023    12.50    21.05
     + ID2= 2 (  0036):     3.51   0.118     2.75     9.67
       ================================================
       ID = 1 (  0035):    22.16   0.124     2.73    19.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0035):    22.16   0.124     2.73    19.25
     + ID2= 2 (  0039):    56.91   0.378     3.23    10.14
       ================================================
       ID = 3 (  0040):    79.07   0.434     3.23    12.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\d3773189
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\d3773189


DATE: 03-01-2024                          TIME: 01:27:02

USER:
```

COMMENTS: _____

****
** SIMULATION : Run 02 5yr 6hr AES **
****

| READ STORM | Filename: C:\Users\CAPP078249\AppData\Local\Temp\68f9ca60-68a4-457b-842b-1f5eebf71d66\2df8acb1
| Ptotal= 47.81 mm | Comments: 5yr/6hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	1.75	16.25	3.50	6.69	5.25	0.96
0.25	0.96	2.00	16.25	3.75	3.82	5.50	0.96
0.50	0.96	2.25	43.98	4.00	3.82	5.75	0.96
0.75	0.96	2.50	43.98	4.25	1.91	6.00	0.96
1.00	0.96	2.75	12.43	4.50	1.91		
1.25	5.74	3.00	12.43	4.75	0.96		
1.50	5.74	3.25	6.69	5.00	0.96		

| CALIB | NASHYD (0033) | ID= 1 DT= 5.0 min |

Area (ha)= 4.56 Curve Number (CN)= 82.0
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.22

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.74	3.250	12.43	4.83	0.96
0.167	0.00	1.750	5.74	3.333	6.69	4.92	0.96
0.250	0.00	1.833	16.25	3.417	6.69	5.00	0.96
0.333	0.96	1.917	16.25	3.500	6.69	5.08	0.96
0.417	0.96	2.000	16.25	3.583	6.69	5.17	0.96
0.500	0.96	2.083	16.25	3.667	6.69	5.25	0.96
0.583	0.96	2.167	16.25	3.750	6.69	5.33	0.96
0.667	0.96	2.250	16.25	3.833	3.82	5.42	0.96
0.750	0.96	2.333	43.98	3.917	3.82	5.50	0.96
0.833	0.96	2.417	43.98	4.000	3.82	5.58	0.96
0.917	0.96	2.500	43.98	4.083	3.82	5.67	0.96
1.000	0.96	2.583	43.98	4.167	3.82	5.75	0.96
1.083	0.96	2.667	43.98	4.250	3.82	5.83	0.96
1.167	0.96	2.750	43.98	4.333	1.91	5.92	0.96
1.250	0.96	2.833	12.43	4.417	1.91	6.00	0.96
1.333	5.74	2.917	12.43	4.500	1.91	6.08	0.96
1.417	5.74	3.000	12.43	4.583	1.91	6.17	0.96
1.500	5.74	3.083	12.43	4.667	1.91	6.25	0.96
1.583	5.74	3.167	12.43	4.750	1.91		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.219 (i)
TIME TO PEAK (hrs)= 2.833
RUNOFF VOLUME (mm)= 18.569
TOTAL RAINFALL (mm)= 47.810
RUNOFF COEFFICIENT = 0.388

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

| CALIB | STANDHYD (1100) | ID= 1 DT= 2.0 min |

Area (ha)= 24.52
Total Imp(%)= 84.00 Dir. Conn.(%)= 84.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	1.44
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.133	0.00	1.700	5.74	3.267	9.56	4.83	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.200	0.00	1.767	10.99	3.333	6.69	4.90	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.267	0.48	1.833	16.25	3.400	6.69	4.97	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96
0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.633	0.96	2.200	16.25	3.767	5.26	5.33	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.700	0.96	2.267	30.11	3.833	3.82	5.40	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.133	0.96	2.700	43.98	4.267	2.87	5.83	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.200	0.96	2.767	28.21	4.333	1.91	5.90	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.267	3.35	2.833	12.43	4.400	1.91	5.97	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.567	5.74	3.133	12.43	4.700	1.91	6.27	0.48

Max.Eff.Inten.(mm/hr)=	43.98	21.88		
over (min)	8.00	14.00		
Storage Coeff. (min)=	8.20 (ii)	13.25 (ii)		
Unit Hyd. Tpeak (min)=	8.00	14.00		
Unit Hyd. peak (cms)=	0.14	0.08		
			TOTALS	
PEAK FLOW (cms)=	2.44	0.18	2.598 (iii)	
TIME TO PEAK (hrs)=	2.73	2.87	2.73	
RUNOFF VOLUME (mm)=	46.81	17.90	42.18	
TOTAL RAINFALL (mm)=	47.81	47.81	47.81	
RUNOFF COEFFICIENT =	0.98	0.37	0.88	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0111)	Area (ha)= 6.10
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00

Length (m)=	201.66	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	1.44
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.133	0.00	1.700	5.74	3.267	9.56	4.83	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.200	0.00	1.767	10.99	3.333	6.69	4.90	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.267	0.48	1.833	16.25	3.400	6.69	4.97	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96
0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.633	0.96	2.200	16.25	3.767	5.26	5.33	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.700	0.96	2.267	30.11	3.833	3.82	5.40	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.133	0.96	2.700	43.98	4.267	2.87	5.83	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.200	0.96	2.767	28.21	4.333	1.91	5.90	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.267	3.35	2.833	12.43	4.400	1.91	5.97	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.567	5.74	3.133	12.43	4.700	1.91	6.27	0.48

Max.Eff.Inten.(mm/hr)=	43.98	43.68		
over (min)	6.00	8.00		
Storage Coeff. (min)=	5.41 (ii)	6.02 (ii)		
Unit Hyd. Tpeak (min)=	6.00	8.00		
Unit Hyd. peak (cms)=	0.20	0.17		
			TOTALS	
PEAK FLOW (cms)=	0.74	0.00	0.742 (iii)	
TIME TO PEAK (hrs)=	2.73	2.73	2.73	
RUNOFF VOLUME (mm)=	46.81	44.38	46.81	
TOTAL RAINFALL (mm)=	47.81	47.81	47.81	
RUNOFF COEFFICIENT =	0.98	0.93	0.98	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0003)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0920	0.1659

**** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

```
                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0111)      6.100      0.742      2.73      46.81
   OUTFLOW: ID= 1 (  0003)      6.100      0.112      3.77      46.73

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 15.15
                  TIME SHIFT OF PEAK FLOW         (min)= 62.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2025

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0050)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  1100):    24.52   2.598     2.73    42.18
      + ID2= 2 (  0003):     6.10   0.112     3.77    46.73
        ================================================
        ID = 3 (  0050):    30.62   2.681     2.73    43.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0011)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE    |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)    |   (cms)     (ha.m.)
                          0.0000     0.0000    |   0.4686      1.2877
                          0.0158     0.8925    |   0.5484      1.3960
                          0.0439     1.1554    |   0.6220      1.5142
                          0.3705     1.1796    |   2.8520      2.3383

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0050)     30.620      2.681      2.73      43.09
   OUTFLOW: ID= 1 (  0011)     30.620      0.044      9.30      18.28

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.64
                  TIME SHIFT OF PEAK FLOW         (min)=394.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.1554

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0030)|   Area    (ha)=   0.23
|ID= 1 DT= 2.0 min |   Total Imp(%)=  99.99   Dir. Conn.(%)=  99.99
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23         0.00
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      39.16        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
 0.033     0.00 | 1.600     5.74 | 3.167    12.43 |  4.73     1.91
 0.067     0.00 | 1.633     5.74 | 3.200    12.43 |  4.77     1.44
 0.100     0.00 | 1.667     5.74 | 3.233    12.43 |  4.80     0.96
 0.133     0.00 | 1.700     5.74 | 3.267     9.56 |  4.83     0.96
 0.167     0.00 | 1.733     5.74 | 3.300     6.69 |  4.87     0.96
 0.200     0.00 | 1.767    10.99 | 3.333     6.69 |  4.90     0.96
 0.233     0.00 | 1.800    16.25 | 3.367     6.69 |  4.93     0.96
 0.267     0.48 | 1.833    16.25 | 3.400     6.69 |  4.97     0.96
 0.300     0.96 | 1.867    16.25 | 3.433     6.69 |  5.00     0.96
 0.333     0.96 | 1.900    16.25 | 3.467     6.69 |  5.03     0.96
 0.367     0.96 | 1.933    16.25 | 3.500     6.69 |  5.07     0.96
 0.400     0.96 | 1.967    16.25 | 3.533     6.69 |  5.10     0.96
 0.433     0.96 | 2.000    16.25 | 3.567     6.69 |  5.13     0.96
 0.467     0.96 | 2.033    16.25 | 3.600     6.69 |  5.17     0.96
 0.500     0.96 | 2.067    16.25 | 3.633     6.69 |  5.20     0.96
 0.533     0.96 | 2.100    16.25 | 3.667     6.69 |  5.23     0.96
 0.567     0.96 | 2.133    16.25 | 3.700     6.69 |  5.27     0.96
 0.600     0.96 | 2.167    16.25 | 3.733     6.69 |  5.30     0.96
 0.633     0.96 | 2.200    16.25 | 3.767     5.26 |  5.33     0.96
 0.667     0.96 | 2.233    16.25 | 3.800     3.82 |  5.37     0.96
 0.700     0.96 | 2.267    30.11 | 3.833     3.82 |  5.40     0.96
 0.733     0.96 | 2.300    43.98 | 3.867     3.82 |  5.43     0.96
 0.767     0.96 | 2.333    43.98 | 3.900     3.82 |  5.47     0.96
```

0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.133	0.96	2.700	43.98	4.267	2.87	5.83	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.200	0.96	2.767	28.21	4.333	1.91	5.90	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.267	3.35	2.833	12.43	4.400	1.91	5.97	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.567	5.74	3.133	12.43	4.700	1.91	6.27	0.48

			TOTALS
Max.Eff.Inten.(mm/hr)=	43.98	21.88	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.02 (ii)	2.27 (ii)	
Unit Hyd. Tpeak (min)=	4.00	4.00	
Unit Hyd. peak (cms)=	0.41	0.41	
PEAK FLOW (cms)=	0.03	0.00	0.028 (iii)
TIME TO PEAK (hrs)=	2.70	2.73	2.73
RUNOFF VOLUME (mm)=	46.81	17.90	46.80
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.37	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0011):	30.62	0.044	9.30	18.28
+ ID2= 2 (0030):	0.23	0.028	2.73	46.80
ID = 3 (0029):	30.85	0.044	9.30	18.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0029)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0029):	30.85	0.044	9.30	18.49
+ ID2= 2 (0033):	4.56	0.219	2.83	18.57
ID = 1 (0029):	35.41	0.248	2.77	18.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0034) ID= 1 DT= 5.0 min

Area (ha)= 16.98 Curve Number (CN)= 80.0
Ia (mm)= 6.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.60

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.74	3.250	12.43	4.83	0.96
0.167	0.00	1.750	5.74	3.333	6.69	4.92	0.96
0.250	0.00	1.833	16.25	3.417	6.69	5.00	0.96

0.333	0.96	1.917	16.25	3.500	6.69	5.08	0.96
0.417	0.96	2.000	16.25	3.583	6.69	5.17	0.96
0.500	0.96	2.083	16.25	3.667	6.69	5.25	0.96
0.583	0.96	2.167	16.25	3.750	6.69	5.33	0.96
0.667	0.96	2.250	16.25	3.833	3.82	5.42	0.96
0.750	0.96	2.333	43.98	3.917	3.82	5.50	0.96
0.833	0.96	2.417	43.98	4.000	3.82	5.58	0.96
0.917	0.96	2.500	43.98	4.083	3.82	5.67	0.96
1.000	0.96	2.583	43.98	4.167	3.82	5.75	0.96
1.083	0.96	2.667	43.98	4.250	3.82	5.83	0.96
1.167	0.96	2.750	43.98	4.333	1.91	5.92	0.96
1.250	0.96	2.833	12.43	4.417	1.91	6.00	0.96
1.333	5.74	2.917	12.43	4.500	1.91	6.08	0.96
1.417	5.74	3.000	12.43	4.583	1.91	6.17	0.96
1.500	5.74	3.083	12.43	4.667	1.91	6.25	0.96
1.583	5.74	3.167	12.43	4.750	1.91		

Unit Hyd Qpeak (cms)= 1.081

PEAK FLOW (cms)= 0.417 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 16.599
TOTAL RAINFALL (mm)= 47.810
RUNOFF COEFFICIENT = 0.347

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

CALIB NASHYD (0031)	Area (ha)= 4.52	Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.41	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.74	3.250	12.43	4.83	0.96
0.167	0.00	1.750	5.74	3.333	6.69	4.92	0.96
0.250	0.00	1.833	16.25	3.417	6.69	5.00	0.96
0.333	0.96	1.917	16.25	3.500	6.69	5.08	0.96
0.417	0.96	2.000	16.25	3.583	6.69	5.17	0.96
0.500	0.96	2.083	16.25	3.667	6.69	5.25	0.96
0.583	0.96	2.167	16.25	3.750	6.69	5.33	0.96
0.667	0.96	2.250	16.25	3.833	3.82	5.42	0.96
0.750	0.96	2.333	43.98	3.917	3.82	5.50	0.96
0.833	0.96	2.417	43.98	4.000	3.82	5.58	0.96
0.917	0.96	2.500	43.98	4.083	3.82	5.67	0.96
1.000	0.96	2.583	43.98	4.167	3.82	5.75	0.96
1.083	0.96	2.667	43.98	4.250	3.82	5.83	0.96
1.167	0.96	2.750	43.98	4.333	1.91	5.92	0.96
1.250	0.96	2.833	12.43	4.417	1.91	6.00	0.96
1.333	5.74	2.917	12.43	4.500	1.91	6.08	0.96
1.417	5.74	3.000	12.43	4.583	1.91	6.17	0.96
1.500	5.74	3.083	12.43	4.667	1.91	6.25	0.96
1.583	5.74	3.167	12.43	4.750	1.91		

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.111 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 13.698
TOTAL RAINFALL (mm)= 47.810
RUNOFF COEFFICIENT = 0.287

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

ADD HYD (0039)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0029):	35.41	0.248	2.77	18.50
	+ ID2= 2 (0031):	4.52	0.111	3.08	13.70
	ID = 3 (0039):	39.93	0.333	2.83	17.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ADD HYD  (  0039)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0039):    39.93   0.333     2.83    17.96
      + ID2= 2 (  0034):    16.98   0.417     3.33    16.60
        ================================================
        ID = 1 (  0039):    56.91   0.662     3.10    17.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| NASHYD   (  0036)|   Area    (ha)=   3.51   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

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


                          ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
0.083    0.00 | 1.667    5.74 | 3.250   12.43 |  4.83    0.96
0.167    0.00 | 1.750    5.74 | 3.333    6.69 |  4.92    0.96
0.250    0.00 | 1.833   16.25 | 3.417    6.69 |  5.00    0.96
0.333    0.96 | 1.917   16.25 | 3.500    6.69 |  5.08    0.96
0.417    0.96 | 2.000   16.25 | 3.583    6.69 |  5.17    0.96
0.500    0.96 | 2.083   16.25 | 3.667    6.69 |  5.25    0.96
0.583    0.96 | 2.167   16.25 | 3.750    6.69 |  5.33    0.96
0.667    0.96 | 2.250   16.25 | 3.833    3.82 |  5.42    0.96
0.750    0.96 | 2.333   43.98 | 3.917    3.82 |  5.50    0.96
0.833    0.96 | 2.417   43.98 | 4.000    3.82 |  5.58    0.96
0.917    0.96 | 2.500   43.98 | 4.083    3.82 |  5.67    0.96
1.000    0.96 | 2.583   43.98 | 4.167    3.82 |  5.75    0.96
1.083    0.96 | 2.667   43.98 | 4.250    3.82 |  5.83    0.96
1.167    0.96 | 2.750   43.98 | 4.333    1.91 |  5.92    0.96
1.250    0.96 | 2.833   12.43 | 4.417    1.91 |  6.00    0.96
1.333    5.74 | 2.917   12.43 | 4.500    1.91 |  6.08    0.96
1.417    5.74 | 3.000   12.43 | 4.583    1.91 |  6.17    0.96
1.500    5.74 | 3.083   12.43 | 4.667    1.91 |  6.25    0.96
1.583    5.74 | 3.167   12.43 | 4.750    1.91 |

     Unit Hyd Qpeak  (cms)=   1.490

     PEAK FLOW       (cms)=   0.200 (i)
     TIME TO PEAK    (hrs)=   2.750
     RUNOFF VOLUME    (mm)=  16.590
     TOTAL RAINFALL   (mm)=  47.810
     RUNOFF COEFFICIENT   =   0.347

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

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--------------------
| CALIB            |
| STANDHYD (  1200)|   Area    (ha)=   6.76
|ID= 1 DT= 2.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
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                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.88         0.88
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     212.29        40.00
     Mannings n             =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
0.033    0.00 | 1.600    5.74 | 3.167   12.43 |  4.73    1.91
0.067    0.00 | 1.633    5.74 | 3.200   12.43 |  4.77    1.44
0.100    0.00 | 1.667    5.74 | 3.233   12.43 |  4.80    0.96
0.133    0.00 | 1.700    5.74 | 3.267    9.56 |  4.83    0.96
0.167    0.00 | 1.733    5.74 | 3.300    6.69 |  4.87    0.96
0.200    0.00 | 1.767   10.99 | 3.333    6.69 |  4.90    0.96
0.233    0.00 | 1.800   16.25 | 3.367    6.69 |  4.93    0.96
0.267    0.48 | 1.833   16.25 | 3.400    6.69 |  4.97    0.96
0.300    0.96 | 1.867   16.25 | 3.433    6.69 |  5.00    0.96
0.333    0.96 | 1.900   16.25 | 3.467    6.69 |  5.03    0.96
0.367    0.96 | 1.933   16.25 | 3.500    6.69 |  5.07    0.96
0.400    0.96 | 1.967   16.25 | 3.533    6.69 |  5.10    0.96
```

0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.633	0.96	2.200	16.25	3.767	5.26	5.33	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.700	0.96	2.267	30.11	3.833	3.82	5.40	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.133	0.96	2.700	43.98	4.267	2.87	5.83	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.200	0.96	2.767	28.21	4.333	1.91	5.90	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.267	3.35	2.833	12.43	4.400	1.91	5.97	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.567	5.74	3.133	12.43	4.700	1.91	6.27	0.48

			TOTALS
Max.Eff.Inten.(mm/hr)=	43.98	21.88	
over (min)	6.00	12.00	
Storage Coeff. (min)=	5.57 (ii)	10.16 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.20	0.10	
PEAK FLOW (cms)=	0.71	0.04	0.755 (iii)
TIME TO PEAK (hrs)=	2.73	2.80	2.73
RUNOFF VOLUME (mm)=	46.81	17.90	43.05
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.37	0.90

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0122)	Area (ha)= 5.56
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	1.44
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.133	0.00	1.700	5.74	3.267	9.56	4.83	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.200	0.00	1.767	10.99	3.333	6.69	4.90	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.267	0.48	1.833	16.25	3.400	6.69	4.97	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96

0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.633	0.96	2.200	16.25	3.767	5.26	5.33	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.700	0.96	2.267	30.11	3.833	3.82	5.40	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.133	0.96	2.700	43.98	4.267	2.87	5.83	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.200	0.96	2.767	28.21	4.333	1.91	5.90	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.267	3.35	2.833	12.43	4.400	1.91	5.97	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.567	5.74	3.133	12.43	4.700	1.91	6.27	0.48

			TOTALS
Max.Eff.Inten.(mm/hr)=	43.98	43.68	
over (min)	6.00	6.00	
Storage Coeff. (min)=	5.26 (ii)	5.88 (ii)	
Unit Hyd. Tpeak (min)=	6.00	6.00	
Unit Hyd. peak (cms)=	0.20	0.19	
PEAK FLOW (cms)=	0.68	0.00	0.676 (iii)
TIME TO PEAK (hrs)=	2.73	2.73	2.73
RUNOFF VOLUME (mm)=	46.81	44.38	46.81
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.93	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0002)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0840	0.1513

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0122)	5.560	0.676	2.73	46.81
OUTFLOW: ID= 1 (0002)	5.560	0.102	3.77	46.73

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.15
TIME SHIFT OF PEAK FLOW (min)= 62.00
MAXIMUM STORAGE USED (ha.m.)= 0.1846

ADD HYD (0024)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (1200):	6.76	0.755	2.73	43.05
	+ ID2= 2 (0002):	5.56	0.102	3.77	46.73
	ID = 3 (0024):	12.32	0.830	2.73	44.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0012) \| IN= 2---> OUT= 1 \| DT= 2.0 min | OVERFLOW IS OFF |

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2030	0.4395
0.0150	0.3342	0.2360	0.4580
0.0290	0.4309	0.2670	0.4832
0.1610	0.4312	1.1520	0.6099

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0024)	12.320	0.830	2.73	44.71
OUTFLOW: ID= 1 (0012)	12.320	0.029	10.93	29.90

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.49
TIME SHIFT OF PEAK FLOW (min)=492.00
MAXIMUM STORAGE USED (ha.m.)= 0.4309

CALIB STANDHYD (1300) | ID= 1 DT= 2.0 min | Area (ha)= 3.57 Total Imp(%)= 87.30 Dir. Conn.(%)= 87.30

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.12	0.45
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	154.27	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	1.44
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.133	0.00	1.700	5.74	3.267	9.56	4.83	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.200	0.00	1.767	10.99	3.333	6.69	4.90	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.267	0.48	1.833	16.25	3.400	6.69	4.97	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96
0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.633	0.96	2.200	16.25	3.767	5.26	5.33	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.700	0.96	2.267	30.11	3.833	3.82	5.40	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.133	0.96	2.700	43.98	4.267	2.87	5.83	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.200	0.96	2.767	28.21	4.333	1.91	5.90	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.267	3.35	2.833	12.43	4.400	1.91	5.97	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96

1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.567	5.74	3.133	12.43	4.700	1.91	6.27	0.48

Max.Eff.Inten.(mm/hr)=	43.98	21.88	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.60 (ii)	9.14 (ii)	
Unit Hyd. Tpeak (min)=	4.00	10.00	
Unit Hyd. peak (cms)=	0.25	0.12	
			TOTALS
PEAK FLOW (cms)=	0.38	0.02	0.402 (iii)
TIME TO PEAK (hrs)=	2.73	2.80	2.73
RUNOFF VOLUME (mm)=	46.81	17.90	43.14
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.37	0.90

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0133)	Area (ha)= 2.76
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	1.44
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.133	0.00	1.700	5.74	3.267	9.56	4.83	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.200	0.00	1.767	10.99	3.333	6.69	4.90	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.267	0.48	1.833	16.25	3.400	6.69	4.97	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96
0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.633	0.96	2.200	16.25	3.767	5.26	5.33	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.700	0.96	2.267	30.11	3.833	3.82	5.40	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.133	0.96	2.700	43.98	4.267	2.87	5.83	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.200	0.96	2.767	28.21	4.333	1.91	5.90	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.267	3.35	2.833	12.43	4.400	1.91	5.97	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96

```
               1.400    5.74 | 2.967   12.43 | 4.533    1.91 |  6.10    0.96
               1.433    5.74 | 3.000   12.43 | 4.567    1.91 |  6.13    0.96
               1.467    5.74 | 3.033   12.43 | 4.600    1.91 |  6.17    0.96
               1.500    5.74 | 3.067   12.43 | 4.633    1.91 |  6.20    0.96
               1.533    5.74 | 3.100   12.43 | 4.667    1.91 |  6.23    0.96
               1.567    5.74 | 3.133   12.43 | 4.700    1.91 |  6.27    0.48

     Max.Eff.Inten.(mm/hr)=      43.98         0.00
               over (min)         5.00         6.00
     Storage Coeff.  (min)=       4.26 (ii)    4.88 (ii)
     Unit Hyd. Tpeak (min)=       4.00         6.00
     Unit Hyd. peak  (cms)=       0.27         0.21
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.34         0.00          0.337 (iii)
     TIME TO PEAK    (hrs)=       2.73         0.00           2.73
     RUNOFF VOLUME    (mm)=      46.81         0.00          46.76
     TOTAL RAINFALL   (mm)=      47.81        47.81          47.81
     RUNOFF COEFFICIENT   =       0.98         0.00           0.98

***** WARNING: THE PERVIOUS AREA HAS NO FLOW .

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  99.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0001)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0420      0.0751

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0133)      2.760      0.337      2.73       46.76
   OUTFLOW: ID= 1 (  0001)      2.760      0.051      3.73       46.60

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 15.19
                  TIME SHIFT OF PEAK FLOW         (min)= 60.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0914

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0027)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     2.76   0.051     3.73    46.60
      + ID2= 2 (  1300):     3.57   0.402     2.73    43.14
        ================================================
        ID = 3 (  0027):     6.33   0.442     2.73    44.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0013)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1040      0.2272
                          0.0080     0.1711   |   0.1210      0.2380
                          0.0150     0.2214   |   0.1370      0.2516
                          0.0830     0.2217   |   0.5920      0.3236

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0027)      6.330      0.442      2.73       44.65
   OUTFLOW: ID= 1 (  0013)      6.330      0.015     10.67       30.38

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  3.39
                  TIME SHIFT OF PEAK FLOW         (min)=476.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2214

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0012):    12.32   0.029    10.93    29.90
      + ID2= 2 (  0013):     6.33   0.015    10.67    30.38
```

```
        ================================================
        ID = 3 (  0035):    18.65   0.044    10.83    30.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0035):    18.65   0.044    10.83    30.06
      + ID2= 2 (  0036):     3.51   0.200     2.75    16.59
        ================================================
        ID = 1 (  0035):    22.16   0.208     2.73    27.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0035):    22.16   0.208     2.73    27.93
      + ID2= 2 (  0039):    56.91   0.662     3.10    17.55
        ================================================
        ID = 3 (  0040):    79.07   0.746     3.17    20.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\9085dcd5
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\9085dcd5


DATE: 03-01-2024                          TIME: 01:27:01

USER:


COMMENTS: _____________________________________________________________


--------------------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 03 10yr 6hr AES           **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              68f9ca60-68a4-457b-842b-1f5eebf71d66\2cf98f01
| Ptotal= 55.69 mm |    Comments: 10yr/6hr
--------------------
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
                0.00     0.00 |  1.75    18.94 |  3.50     7.80 |  5.25     1.11
                0.25     1.11 |  2.00    18.94 |  3.75     4.46 |  5.50     1.11
                0.50     1.11 |  2.25    51.24 |  4.00     4.46 |  5.75     1.11
                0.75     1.11 |  2.50    51.24 |  4.25     2.23 |  6.00     1.11
                1.00     1.11 |  2.75    14.48 |  4.50     2.23 |
                1.25     6.68 |  3.00    14.48 |  4.75     1.11 |
                1.50     6.68 |  3.25     7.80 |  5.00     1.11 |
```

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--------------------
| CALIB              |
| NASHYD   (  0033)|   Area    (ha)=   4.56   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22
```

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	6.68	3.250	14.48	4.83	1.11
0.167	0.00	1.750	6.68	3.333	7.80	4.92	1.11
0.250	0.00	1.833	18.94	3.417	7.80	5.00	1.11
0.333	1.11	1.917	18.94	3.500	7.80	5.08	1.11
0.417	1.11	2.000	18.94	3.583	7.80	5.17	1.11
0.500	1.11	2.083	18.94	3.667	7.80	5.25	1.11
0.583	1.11	2.167	18.94	3.750	7.80	5.33	1.11
0.667	1.11	2.250	18.94	3.833	4.46	5.42	1.11
0.750	1.11	2.333	51.24	3.917	4.46	5.50	1.11
0.833	1.11	2.417	51.24	4.000	4.46	5.58	1.11
0.917	1.11	2.500	51.24	4.083	4.46	5.67	1.11
1.000	1.11	2.583	51.24	4.167	4.46	5.75	1.11
1.083	1.11	2.667	51.24	4.250	4.46	5.83	1.11
1.167	1.11	2.750	51.24	4.333	2.23	5.92	1.11
1.250	1.11	2.833	14.48	4.417	2.23	6.00	1.11
1.333	6.68	2.917	14.48	4.500	2.23	6.08	1.11
1.417	6.68	3.000	14.48	4.583	2.23	6.17	1.11
1.500	6.68	3.083	14.48	4.667	2.23	6.25	1.11
1.583	6.68	3.167	14.48	4.750	2.23		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.285 (i)
TIME TO PEAK (hrs)= 2.833
RUNOFF VOLUME (mm)= 24.107
TOTAL RAINFALL (mm)= 55.690
RUNOFF COEFFICIENT = 0.433

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

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| CALIB              |
| STANDHYD (  1100)|   Area    (ha)=  24.52
|ID= 1 DT= 2.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
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		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.67
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.133	0.00	1.700	6.68	3.267	11.14	4.83	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.200	0.00	1.767	12.81	3.333	7.80	4.90	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.267	0.56	1.833	18.94	3.400	7.80	4.97	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.633	1.11	2.200	18.94	3.767	6.13	5.33	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11

0.700	1.11	2.267	35.09	3.833	4.46	5.40	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.133	1.11	2.700	51.24	4.267	3.35	5.83	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.200	1.11	2.767	32.86	4.333	2.23	5.90	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.267	3.90	2.833	14.48	4.400	2.23	5.97	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.567	6.68	3.133	14.48	4.700	2.23	6.27	0.56

			TOTALS
Max.Eff.Inten.(mm/hr)=	51.24	28.22	
over (min)	8.00	14.00	
Storage Coeff. (min)=	7.72 (ii)	12.47 (ii)	
Unit Hyd. Tpeak (min)=	8.00	14.00	
Unit Hyd. peak (cms)=	0.14	0.09	
PEAK FLOW (cms)=	2.86	0.23	3.072 (iii)
TIME TO PEAK (hrs)=	2.73	2.83	2.73
RUNOFF VOLUME (mm)=	54.69	23.30	49.67
TOTAL RAINFALL (mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT =	0.98	0.42	0.89

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0111)	Area (ha)= 6.10
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	6.09	0.01
Dep. Storage (mm)=	1.00	1.00
Average Slope (%)=	1.00	2.00
Length (m)=	201.66	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.67
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.133	0.00	1.700	6.68	3.267	11.14	4.83	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.200	0.00	1.767	12.81	3.333	7.80	4.90	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.267	0.56	1.833	18.94	3.400	7.80	4.97	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11

0.633	1.11	2.200	18.94	3.767	6.13	5.33	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.700	1.11	2.267	35.09	3.833	4.46	5.40	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.133	1.11	2.700	51.24	4.267	3.35	5.83	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.200	1.11	2.767	32.86	4.333	2.23	5.90	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.267	3.90	2.833	14.48	4.400	2.23	5.97	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.567	6.68	3.133	14.48	4.700	2.23	6.27	0.56

Max.Eff.Inten.(mm/hr)=	51.24	50.98		
over (min)	6.00	6.00		
Storage Coeff. (min)=	5.08 (ii)	5.67 (ii)		
Unit Hyd. Tpeak (min)=	6.00	6.00		
Unit Hyd. peak (cms)=	0.21	0.19		
			TOTALS	
PEAK FLOW (cms)=	0.86	0.00	0.865 (iii)	
TIME TO PEAK (hrs)=	2.73	2.73	2.73	
RUNOFF VOLUME (mm)=	54.69	52.24	54.69	
TOTAL RAINFALL (mm)=	55.69	55.69	55.69	
RUNOFF COEFFICIENT =	0.98	0.94	0.98	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0003)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0920	0.1659

**** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0111)	6.100	0.865	2.73	54.69
OUTFLOW: ID= 1 (0003)	6.100	0.131	3.77	54.61

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.16
TIME SHIFT OF PEAK FLOW (min)= 62.00
MAXIMUM STORAGE USED (ha.m.)= 0.2366

ADD HYD (0050)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (1100):	24.52	3.072	2.73	49.67	
+ ID2= 2 (0003):	6.10	0.131	3.77	54.61	
ID = 3 (0050):	30.62	3.170	2.73	50.65	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0011)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 2.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE

	(cms)	(ha.m.)		(cms)	(ha.m.)
	0.0000	0.0000		0.4686	1.2877
	0.0158	0.8925		0.5484	1.3960
	0.0439	1.1554		0.6220	1.5142
	0.3705	1.1796		2.8520	2.3383

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0050)	30.620	3.170	2.73	50.65
OUTFLOW: ID= 1 (0011)	30.620	0.370	4.37	25.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.66
TIME SHIFT OF PEAK FLOW (min)= 98.00
MAXIMUM STORAGE USED (ha.m.)= 1.1796

CALIB STANDHYD (0030) ID= 1 DT= 2.0 min	Area (ha)= 0.23	Total Imp(%)= 99.99	Dir. Conn.(%)= 99.99

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.23	0.00
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	39.16	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.67
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.133	0.00	1.700	6.68	3.267	11.14	4.83	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.200	0.00	1.767	12.81	3.333	7.80	4.90	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.267	0.56	1.833	18.94	3.400	7.80	4.97	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.633	1.11	2.200	18.94	3.767	6.13	5.33	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.700	1.11	2.267	35.09	3.833	4.46	5.40	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.133	1.11	2.700	51.24	4.267	3.35	5.83	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.200	1.11	2.767	32.86	4.333	2.23	5.90	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.267	3.90	2.833	14.48	4.400	2.23	5.97	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.567	6.68	3.133	14.48	4.700	2.23	6.27	0.56

Max.Eff.Inten.(mm/hr)=		51.24	28.22
	over (min)	5.00	4.00

```
     Storage Coeff.  (min)=       1.90 (ii)    2.13 (ii)
     Unit Hyd. Tpeak (min)=       4.00         4.00
     Unit Hyd. peak  (cms)=       0.42         0.42
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.03         0.00          0.033 (iii)
     TIME TO PEAK    (hrs)=       2.70         2.73           2.73
     RUNOFF VOLUME    (mm)=      54.69        23.30          54.68
     TOTAL RAINFALL   (mm)=      55.69        55.69          55.69
     RUNOFF COEFFICIENT   =       0.98         0.42           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0029)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0011):    30.62   0.370     4.37    25.72
     + ID2= 2 (  0030):     0.23   0.033     2.73    54.68
       ================================================
       ID = 3 (  0029):    30.85   0.371     4.37    25.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0029)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0029):    30.85   0.371     4.37    25.94
     + ID2= 2 (  0033):     4.56   0.285     2.83    24.11
       ================================================
       ID = 1 (  0029):    35.41   0.409     4.37    25.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| NASHYD   (  0034)|   Area    (ha)=  16.98   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.60

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    6.68 | 3.250   14.48 |  4.83    1.11
               0.167    0.00 | 1.750    6.68 | 3.333    7.80 |  4.92    1.11
               0.250    0.00 | 1.833   18.94 | 3.417    7.80 |  5.00    1.11
               0.333    1.11 | 1.917   18.94 | 3.500    7.80 |  5.08    1.11
               0.417    1.11 | 2.000   18.94 | 3.583    7.80 |  5.17    1.11
               0.500    1.11 | 2.083   18.94 | 3.667    7.80 |  5.25    1.11
               0.583    1.11 | 2.167   18.94 | 3.750    7.80 |  5.33    1.11
               0.667    1.11 | 2.250   18.94 | 3.833    4.46 |  5.42    1.11
               0.750    1.11 | 2.333   51.24 | 3.917    4.46 |  5.50    1.11
               0.833    1.11 | 2.417   51.24 | 4.000    4.46 |  5.58    1.11
               0.917    1.11 | 2.500   51.24 | 4.083    4.46 |  5.67    1.11
               1.000    1.11 | 2.583   51.24 | 4.167    4.46 |  5.75    1.11
               1.083    1.11 | 2.667   51.24 | 4.250    4.46 |  5.83    1.11
               1.167    1.11 | 2.750   51.24 | 4.333    2.23 |  5.92    1.11
               1.250    1.11 | 2.833   14.48 | 4.417    2.23 |  6.00    1.11
               1.333    6.68 | 2.917   14.48 | 4.500    2.23 |  6.08    1.11
               1.417    6.68 | 3.000   14.48 | 4.583    2.23 |  6.17    1.11
               1.500    6.68 | 3.083   14.48 | 4.667    2.23 |  6.25    1.11
               1.583    6.68 | 3.167   14.48 | 4.750    2.23 |

     Unit Hyd Qpeak  (cms)=   1.081

     PEAK FLOW       (cms)=   0.552 (i)
     TIME TO PEAK    (hrs)=   3.333
     RUNOFF VOLUME    (mm)=  21.813
     TOTAL RAINFALL   (mm)=  55.690
     RUNOFF COEFFICIENT   =   0.392

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB            |
| NASHYD   (  0031)|   Area    (ha)=   4.52   Curve Number   (CN)= 77.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.41

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    6.68 | 3.250   14.48 |  4.83    1.11
               0.167    0.00 | 1.750    6.68 | 3.333    7.80 |  4.92    1.11
               0.250    0.00 | 1.833   18.94 | 3.417    7.80 |  5.00    1.11
               0.333    1.11 | 1.917   18.94 | 3.500    7.80 |  5.08    1.11
               0.417    1.11 | 2.000   18.94 | 3.583    7.80 |  5.17    1.11
               0.500    1.11 | 2.083   18.94 | 3.667    7.80 |  5.25    1.11
               0.583    1.11 | 2.167   18.94 | 3.750    7.80 |  5.33    1.11
               0.667    1.11 | 2.250   18.94 | 3.833    4.46 |  5.42    1.11
               0.750    1.11 | 2.333   51.24 | 3.917    4.46 |  5.50    1.11
               0.833    1.11 | 2.417   51.24 | 4.000    4.46 |  5.58    1.11
               0.917    1.11 | 2.500   51.24 | 4.083    4.46 |  5.67    1.11
               1.000    1.11 | 2.583   51.24 | 4.167    4.46 |  5.75    1.11
               1.083    1.11 | 2.667   51.24 | 4.250    4.46 |  5.83    1.11
               1.167    1.11 | 2.750   51.24 | 4.333    2.23 |  5.92    1.11
               1.250    1.11 | 2.833   14.48 | 4.417    2.23 |  6.00    1.11
               1.333    6.68 | 2.917   14.48 | 4.500    2.23 |  6.08    1.11
               1.417    6.68 | 3.000   14.48 | 4.583    2.23 |  6.17    1.11
               1.500    6.68 | 3.083   14.48 | 4.667    2.23 |  6.25    1.11
               1.583    6.68 | 3.167   14.48 | 4.750    2.23 |

     Unit Hyd Qpeak  (cms)=   0.421

     PEAK FLOW       (cms)=   0.152 (i)
     TIME TO PEAK    (hrs)=   3.083
     RUNOFF VOLUME    (mm)=  18.404
     TOTAL RAINFALL   (mm)=  55.690
     RUNOFF COEFFICIENT   =   0.330

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

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--------------------
| ADD HYD  (  0039)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0029):    35.41   0.409     4.37    25.70
      + ID2= 2 (  0031):     4.52   0.152     3.08    18.40
        ================================================
        ID = 3 (  0039):    39.93   0.457     4.33    24.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (  0039)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0039):    39.93   0.457     4.33    24.88
      + ID2= 2 (  0034):    16.98   0.552     3.33    21.81
        ================================================
        ID = 1 (  0039):    56.91   0.879     3.10    23.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| NASHYD   (  0036)|   Area    (ha)=   3.51   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    6.68 | 3.250   14.48 |  4.83    1.11
               0.167    0.00 | 1.750    6.68 | 3.333    7.80 |  4.92    1.11
               0.250    0.00 | 1.833   18.94 | 3.417    7.80 |  5.00    1.11
```

0.333	1.11	1.917	18.94	3.500	7.80	5.08	1.11
0.417	1.11	2.000	18.94	3.583	7.80	5.17	1.11
0.500	1.11	2.083	18.94	3.667	7.80	5.25	1.11
0.583	1.11	2.167	18.94	3.750	7.80	5.33	1.11
0.667	1.11	2.250	18.94	3.833	4.46	5.42	1.11
0.750	1.11	2.333	51.24	3.917	4.46	5.50	1.11
0.833	1.11	2.417	51.24	4.000	4.46	5.58	1.11
0.917	1.11	2.500	51.24	4.083	4.46	5.67	1.11
1.000	1.11	2.583	51.24	4.167	4.46	5.75	1.11
1.083	1.11	2.667	51.24	4.250	4.46	5.83	1.11
1.167	1.11	2.750	51.24	4.333	2.23	5.92	1.11
1.250	1.11	2.833	14.48	4.417	2.23	6.00	1.11
1.333	6.68	2.917	14.48	4.500	2.23	6.08	1.11
1.417	6.68	3.000	14.48	4.583	2.23	6.17	1.11
1.500	6.68	3.083	14.48	4.667	2.23	6.25	1.11
1.583	6.68	3.167	14.48	4.750	2.23		

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.259 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 21.743
TOTAL RAINFALL (mm)= 55.690
RUNOFF COEFFICIENT = 0.390

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

CALIB	
STANDHYD (1200)	Area (ha)= 6.76
ID= 1 DT= 2.0 min	Total Imp(%)= 87.00 Dir. Conn.(%)= 87.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.88	0.88
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	212.29	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.67
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.133	0.00	1.700	6.68	3.267	11.14	4.83	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.200	0.00	1.767	12.81	3.333	7.80	4.90	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.267	0.56	1.833	18.94	3.400	7.80	4.97	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.633	1.11	2.200	18.94	3.767	6.13	5.33	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.700	1.11	2.267	35.09	3.833	4.46	5.40	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.133	1.11	2.700	51.24	4.267	3.35	5.83	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.200	1.11	2.767	32.86	4.333	2.23	5.90	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.267	3.90	2.833	14.48	4.400	2.23	5.97	1.11

1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.567	6.68	3.133	14.48	4.700	2.23	6.27	0.56

Max.Eff.Inten.(mm/hr)=	51.24	28.22	
over (min)	6.00	10.00	
Storage Coeff. (min)=	5.24 (ii)	9.56 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.20	0.12	
			TOTALS
PEAK FLOW (cms)=	0.83	0.06	0.889 (iii)
TIME TO PEAK (hrs)=	2.73	2.80	2.73
RUNOFF VOLUME (mm)=	54.69	23.30	50.61
TOTAL RAINFALL (mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT =	0.98	0.42	0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0122)	Area (ha)= 5.56
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.67
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.133	0.00	1.700	6.68	3.267	11.14	4.83	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.200	0.00	1.767	12.81	3.333	7.80	4.90	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.267	0.56	1.833	18.94	3.400	7.80	4.97	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.633	1.11	2.200	18.94	3.767	6.13	5.33	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.700	1.11	2.267	35.09	3.833	4.46	5.40	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.133	1.11	2.700	51.24	4.267	3.35	5.83	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.200	1.11	2.767	32.86	4.333	2.23	5.90	1.11

1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.267	3.90	2.833	14.48	4.400	2.23	5.97	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.567	6.68	3.133	14.48	4.700	2.23	6.27	0.56

			TOTALS
Max.Eff.Inten.(mm/hr)=	51.24	50.98	
over (min)	5.00	6.00	
Storage Coeff. (min)=	4.95 (ii)	5.53 (ii)	
Unit Hyd. Tpeak (min)=	4.00	6.00	
Unit Hyd. peak (cms)=	0.24	0.20	
PEAK FLOW (cms)=	0.79	0.00	0.790 (iii)
TIME TO PEAK (hrs)=	2.73	2.73	2.73
RUNOFF VOLUME (mm)=	54.69	52.24	54.69
TOTAL RAINFALL (mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT =	0.98	0.94	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0002) / IN= 2---> OUT= 1 / DT= 4.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0840	0.1513

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0122)	5.560	0.790	2.73	54.69
OUTFLOW: ID= 1 (0002)	5.560	0.120	3.73	54.60

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.16
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.2156

ADD HYD (0024) / 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1200):	6.76	0.889	2.73	50.61
+ ID2= 2 (0002):	5.56	0.120	3.73	54.60
ID = 3 (0024):	12.32	0.981	2.73	52.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0012) / IN= 2---> OUT= 1 / DT= 2.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.2030	0.4395
	0.0150	0.3342	0.2360	0.4580
	0.0290	0.4309	0.2670	0.4832
	0.1610	0.4312	1.1520	0.6099

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0024)	12.320	0.981	2.73	52.41
OUTFLOW: ID= 1 (0012)	12.320	0.123	5.30	37.42

PEAK FLOW REDUCTION [Qout/Qin](%)= 12.54
TIME SHIFT OF PEAK FLOW (min)=154.00
MAXIMUM STORAGE USED (ha.m.)= 0.4312

CALIB / STANDHYD (1300)	Area (ha)= 3.57

|ID= 1 DT= 2.0 min | Total Imp(%)= 87.30 Dir. Conn.(%)= 87.30

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.12	0.45
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	154.27	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.67
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.133	0.00	1.700	6.68	3.267	11.14	4.83	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.200	0.00	1.767	12.81	3.333	7.80	4.90	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.267	0.56	1.833	18.94	3.400	7.80	4.97	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.633	1.11	2.200	18.94	3.767	6.13	5.33	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.700	1.11	2.267	35.09	3.833	4.46	5.40	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.133	1.11	2.700	51.24	4.267	3.35	5.83	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.200	1.11	2.767	32.86	4.333	2.23	5.90	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.267	3.90	2.833	14.48	4.400	2.23	5.97	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.567	6.68	3.133	14.48	4.700	2.23	6.27	0.56

Max.Eff.Inten.	(mm/hr)=	51.24	28.22	
	over (min)	5.00	10.00	
Storage Coeff.	(min)=	4.33 (ii)	8.59 (ii)	
Unit Hyd. Tpeak	(min)=	4.00	10.00	
Unit Hyd. peak	(cms)=	0.27	0.12	
				TOTALS
PEAK FLOW	(cms)=	0.44	0.03	0.473 (iii)
TIME TO PEAK	(hrs)=	2.73	2.80	2.73
RUNOFF VOLUME	(mm)=	54.69	23.30	50.70
TOTAL RAINFALL	(mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT	=	0.98	0.42	0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.

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

CALIB	
STANDHYD (0133)	Area (ha)= 2.76
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.67
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.133	0.00	1.700	6.68	3.267	11.14	4.83	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.200	0.00	1.767	12.81	3.333	7.80	4.90	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.267	0.56	1.833	18.94	3.400	7.80	4.97	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.633	1.11	2.200	18.94	3.767	6.13	5.33	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.700	1.11	2.267	35.09	3.833	4.46	5.40	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.133	1.11	2.700	51.24	4.267	3.35	5.83	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.200	1.11	2.767	32.86	4.333	2.23	5.90	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.267	3.90	2.833	14.48	4.400	2.23	5.97	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.567	6.68	3.133	14.48	4.700	2.23	6.27	0.56

				TOTALS
Max.Eff.Inten.(mm/hr)=		51.24	2.64	
over (min)		5.00	6.00	
Storage Coeff. (min)=		4.01 (ii)	4.59 (ii)	
Unit Hyd. Tpeak (min)=		4.00	6.00	
Unit Hyd. peak (cms)=		0.28	0.22	
PEAK FLOW	(cms)=	0.39	0.00	0.392 (iii)
TIME TO PEAK	(hrs)=	2.73	4.27	2.73
RUNOFF VOLUME	(mm)=	54.69	3.03	54.64
TOTAL RAINFALL	(mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT	=	0.98	0.05	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0001)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0420      0.0751

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0133)      2.760      0.392      2.73      54.64
   OUTFLOW: ID= 1 (  0001)      2.760      0.060      3.73      54.47

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 15.22
                  TIME SHIFT OF PEAK FLOW         (min)= 60.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1068

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0027)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     2.76   0.060     3.73    54.47
      + ID2= 2 (  1300):     3.57   0.473     2.73    50.70
        ================================================
        ID = 3 (  0027):     6.33   0.520     2.73    52.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0013)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1040      0.2272
                          0.0080     0.1711   |   0.1210      0.2380
                          0.0150     0.2214   |   0.1370      0.2516
                          0.0830     0.2217   |   0.5920      0.3236

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0027)      6.330      0.520      2.73      52.35
   OUTFLOW: ID= 1 (  0013)      6.330      0.069      5.10      37.90

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.26
                  TIME SHIFT OF PEAK FLOW         (min)=142.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2217

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0012):    12.32   0.123     5.30    37.42
      + ID2= 2 (  0013):     6.33   0.069     5.10    37.90
        ================================================
        ID = 3 (  0035):    18.65   0.183     5.30    37.58

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0035):    18.65   0.183     5.30    37.58
      + ID2= 2 (  0036):     3.51   0.259     2.75    21.74
        ================================================
        ID = 1 (  0035):    22.16   0.269     2.73    35.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0035):    22.16   0.269     2.73    35.07
      + ID2= 2 (  0039):    56.91   0.879     3.10    23.96
        ================================================
        ID = 3 (  0040):    79.07   0.985     3.17    27.08
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\84b9a54e
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\84b9a54e

DATE: 03-01-2024 TIME: 01:27:01

USER:

COMMENTS: _____

****
** SIMULATION : Run 04 25yr 6hr AES **
****

| READ STORM | Ptotal= 65.59 mm | Filename: C:\Users\CAPP078249\AppData\Local\Temp\68f9ca60-68a4-457b-842b-1f5eebf71d66\64693e58 Comments: 25yr/6hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	1.75	22.30	3.50	9.18	5.25	1.31
0.25	1.31	2.00	22.30	3.75	5.25	5.50	1.31
0.50	1.31	2.25	60.35	4.00	5.25	5.75	1.31
0.75	1.31	2.50	60.35	4.25	2.62	6.00	1.31
1.00	1.31	2.75	17.06	4.50	2.62		
1.25	7.87	3.00	17.06	4.75	1.31		
1.50	7.87	3.25	9.18	5.00	1.31		

CALIB NASHYD (0033) ID= 1 DT= 5.0 min	Area (ha)= 4.56	Curve Number (CN)= 82.0	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00	U.H. Tp(hrs)= 0.22

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	7.87	3.250	17.06	4.83	1.31
0.167	0.00	1.750	7.87	3.333	9.18	4.92	1.31
0.250	0.00	1.833	22.30	3.417	9.18	5.00	1.31
0.333	1.31	1.917	22.30	3.500	9.18	5.08	1.31
0.417	1.31	2.000	22.30	3.583	9.18	5.17	1.31
0.500	1.31	2.083	22.30	3.667	9.18	5.25	1.31
0.583	1.31	2.167	22.30	3.750	9.18	5.33	1.31
0.667	1.31	2.250	22.30	3.833	5.25	5.42	1.31
0.750	1.31	2.333	60.35	3.917	5.25	5.50	1.31
0.833	1.31	2.417	60.35	4.000	5.25	5.58	1.31
0.917	1.31	2.500	60.35	4.083	5.25	5.67	1.31
1.000	1.31	2.583	60.35	4.167	5.25	5.75	1.31

1.083	1.31	2.667	60.35	4.250	5.25	5.83	1.31
1.167	1.31	2.750	60.35	4.333	2.62	5.92	1.31
1.250	1.31	2.833	17.06	4.417	2.62	6.00	1.31
1.333	7.87	2.917	17.06	4.500	2.62	6.08	1.31
1.417	7.87	3.000	17.06	4.583	2.62	6.17	1.31
1.500	7.87	3.083	17.06	4.667	2.62	6.25	1.31
1.583	7.87	3.167	17.06	4.750	2.62		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.374 (i)
TIME TO PEAK (hrs)= 2.833
RUNOFF VOLUME (mm)= 31.512
TOTAL RAINFALL (mm)= 65.590
RUNOFF COEFFICIENT = 0.480

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

CALIB	
STANDHYD (1100)	Area (ha)= 24.52
ID= 1 DT= 2.0 min	Total Imp(%)= 84.00 Dir. Conn.(%)= 84.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.97
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.133	0.00	1.700	7.87	3.267	13.12	4.83	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.200	0.00	1.767	15.08	3.333	9.18	4.90	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.267	0.66	1.833	22.30	3.400	9.18	4.97	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.633	1.31	2.200	22.30	3.767	7.22	5.33	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.700	1.31	2.267	41.32	3.833	5.25	5.40	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.133	1.31	2.700	60.35	4.267	3.94	5.83	1.31
1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31
1.200	1.31	2.767	38.71	4.333	2.62	5.90	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.267	4.59	2.833	17.06	4.400	2.62	5.97	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31
1.533	7.87	3.100	17.06	4.667	2.62	6.23	1.31
1.567	7.87	3.133	17.06	4.700	2.62	6.27	0.66

Max.Eff.Inten.(mm/hr)=	60.35	36.60	
over (min)	8.00	12.00	
Storage Coeff. (min)=	7.23 (ii)	11.68 (ii)	
Unit Hyd. Tpeak (min)=	8.00	12.00	
Unit Hyd. peak (cms)=	0.15	0.10	
			TOTALS
PEAK FLOW (cms)=	3.39	0.32	3.684 (iii)
TIME TO PEAK (hrs)=	2.73	2.80	2.73
RUNOFF VOLUME (mm)=	64.59	30.55	59.14
TOTAL RAINFALL (mm)=	65.59	65.59	65.59
RUNOFF COEFFICIENT =	0.98	0.47	0.90

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0111) | Area (ha)= 6.10
ID= 1 DT= 2.0 min | Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.97
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.133	0.00	1.700	7.87	3.267	13.12	4.83	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.200	0.00	1.767	15.08	3.333	9.18	4.90	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.267	0.66	1.833	22.30	3.400	9.18	4.97	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.633	1.31	2.200	22.30	3.767	7.22	5.33	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.700	1.31	2.267	41.32	3.833	5.25	5.40	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.133	1.31	2.700	60.35	4.267	3.94	5.83	1.31
1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31
1.200	1.31	2.767	38.71	4.333	2.62	5.90	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.267	4.59	2.833	17.06	4.400	2.62	5.97	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31

```
              1.533    7.87 | 3.100   17.06 | 4.667    2.62 |  6.23    1.31
              1.567    7.87 | 3.133   17.06 | 4.700    2.62 |  6.27    0.66

     Max.Eff.Inten.(mm/hr)=      60.35        60.12
               over (min)         5.00         6.00
     Storage Coeff.  (min)=       4.76 (ii)    5.31 (ii)
     Unit Hyd. Tpeak (min)=       4.00         6.00
     Unit Hyd. peak  (cms)=       0.25         0.20
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.02         0.00          1.021 (iii)
     TIME TO PEAK    (hrs)=       2.73         2.73           2.73
     RUNOFF VOLUME    (mm)=      64.59        62.12          64.59
     TOTAL RAINFALL   (mm)=      65.59        65.59          65.59
     RUNOFF COEFFICIENT   =       0.98         0.95           0.98


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  99.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0920      0.1659
     **** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0111)      6.100     1.021      2.73       64.59
   OUTFLOW: ID= 1 (  0003)      6.100     0.155      3.73       64.51

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 15.18
                  TIME SHIFT OF PEAK FLOW         (min)= 60.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2793

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0050)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  1100):     24.52   3.684     2.73     59.14
     + ID2= 2 (  0003):      6.10   0.155     3.73     64.51
       ================================================
       ID = 3 (  0050):     30.62   3.804     2.73     60.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0011)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.4686      1.2877
                          0.0158     0.8925   |   0.5484      1.3960
                          0.0439     1.1554   |   0.6220      1.5142
                          0.3705     1.1796   |   2.8520      2.3383

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0050)     30.620     3.804      2.73       60.21
   OUTFLOW: ID= 1 (  0011)     30.620     0.469      4.33       35.15

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.32
                  TIME SHIFT OF PEAK FLOW         (min)= 96.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.2877

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0030)|   Area    (ha)=   0.23
|ID= 1 DT= 2.0 min |   Total Imp(%)=  99.99   Dir. Conn.(%)=  99.99
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23         0.00
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      39.16        40.00
     Mannings n           =      0.013        0.250
```

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.97
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.133	0.00	1.700	7.87	3.267	13.12	4.83	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.200	0.00	1.767	15.08	3.333	9.18	4.90	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.267	0.66	1.833	22.30	3.400	9.18	4.97	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.633	1.31	2.200	22.30	3.767	7.22	5.33	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.700	1.31	2.267	41.32	3.833	5.25	5.40	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.133	1.31	2.700	60.35	4.267	3.94	5.83	1.31
1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31
1.200	1.31	2.767	38.71	4.333	2.62	5.90	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.267	4.59	2.833	17.06	4.400	2.62	5.97	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31
1.533	7.87	3.100	17.06	4.667	2.62	6.23	1.31
1.567	7.87	3.133	17.06	4.700	2.62	6.27	0.66

Max.Eff.Inten.(mm/hr)=	60.35	36.60		
over (min)	5.00	2.00		
Storage Coeff. (min)=	1.78 (ii)	2.00 (ii)		
Unit Hyd. Tpeak (min)=	4.00	2.00		
Unit Hyd. peak (cms)=	0.43	0.55		
			TOTALS	
PEAK FLOW (cms)=	0.04	0.00	0.039 (iii)	
TIME TO PEAK (hrs)=	2.67	2.73	2.73	
RUNOFF VOLUME (mm)=	64.59	30.55	64.58	
TOTAL RAINFALL (mm)=	65.59	65.59	65.59	
RUNOFF COEFFICIENT =	0.98	0.47	0.98	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0011):		30.62	0.469	4.33	35.15
+ ID2= 2 (0030):		0.23	0.039	2.73	64.58

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        ID = 3 (  0029):    30.85   0.471     4.27    35.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (  0029)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0029):    30.85   0.471     4.27    35.37
      + ID2= 2 (  0033):     4.56   0.374     2.83    31.51
        ================================================
        ID = 1 (  0029):    35.41   0.556     3.30    34.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0034)|   Area    (ha)=  16.98   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.60

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


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs    mm/hr |    hrs    mm/hr |'    hrs    mm/hr |    hrs    mm/hr
 0.083     0.00 | 1.667     7.87 | 3.250    17.06 |  4.83     1.31
 0.167     0.00 | 1.750     7.87 | 3.333     9.18 |  4.92     1.31
 0.250     0.00 | 1.833    22.30 | 3.417     9.18 |  5.00     1.31
 0.333     1.31 | 1.917    22.30 | 3.500     9.18 |  5.08     1.31
 0.417     1.31 | 2.000    22.30 | 3.583     9.18 |  5.17     1.31
 0.500     1.31 | 2.083    22.30 | 3.667     9.18 |  5.25     1.31
 0.583     1.31 | 2.167    22.30 | 3.750     9.18 |  5.33     1.31
 0.667     1.31 | 2.250    22.30 | 3.833     5.25 |  5.42     1.31
 0.750     1.31 | 2.333    60.35 | 3.917     5.25 |  5.50     1.31
 0.833     1.31 | 2.417    60.35 | 4.000     5.25 |  5.58     1.31
 0.917     1.31 | 2.500    60.35 | 4.083     5.25 |  5.67     1.31
 1.000     1.31 | 2.583    60.35 | 4.167     5.25 |  5.75     1.31
 1.083     1.31 | 2.667    60.35 | 4.250     5.25 |  5.83     1.31
 1.167     1.31 | 2.750    60.35 | 4.333     2.62 |  5.92     1.31
 1.250     1.31 | 2.833    17.06 | 4.417     2.62 |  6.00     1.31
 1.333     7.87 | 2.917    17.06 | 4.500     2.62 |  6.08     1.31
 1.417     7.87 | 3.000    17.06 | 4.583     2.62 |  6.17     1.31
 1.500     7.87 | 3.083    17.06 | 4.667     2.62 |  6.25     1.31
 1.583     7.87 | 3.167    17.06 | 4.750     2.62 |

     Unit Hyd Qpeak  (cms)=   1.081

     PEAK FLOW       (cms)=   0.735 (i)
     TIME TO PEAK    (hrs)=   3.333
     RUNOFF VOLUME    (mm)=  28.848
     TOTAL RAINFALL   (mm)=  65.590
     RUNOFF COEFFICIENT   =   0.440

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

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--------------------
| CALIB            |
| NASHYD   (  0031)|   Area    (ha)=   4.52   Curve Number   (CN)= 77.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.41

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


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs    mm/hr |    hrs    mm/hr |'    hrs    mm/hr |    hrs    mm/hr
 0.083     0.00 | 1.667     7.87 | 3.250    17.06 |  4.83     1.31
 0.167     0.00 | 1.750     7.87 | 3.333     9.18 |  4.92     1.31
 0.250     0.00 | 1.833    22.30 | 3.417     9.18 |  5.00     1.31
 0.333     1.31 | 1.917    22.30 | 3.500     9.18 |  5.08     1.31
 0.417     1.31 | 2.000    22.30 | 3.583     9.18 |  5.17     1.31
 0.500     1.31 | 2.083    22.30 | 3.667     9.18 |  5.25     1.31
 0.583     1.31 | 2.167    22.30 | 3.750     9.18 |  5.33     1.31
 0.667     1.31 | 2.250    22.30 | 3.833     5.25 |  5.42     1.31
 0.750     1.31 | 2.333    60.35 | 3.917     5.25 |  5.50     1.31
 0.833     1.31 | 2.417    60.35 | 4.000     5.25 |  5.58     1.31
 0.917     1.31 | 2.500    60.35 | 4.083     5.25 |  5.67     1.31
 1.000     1.31 | 2.583    60.35 | 4.167     5.25 |  5.75     1.31
 1.083     1.31 | 2.667    60.35 | 4.250     5.25 |  5.83     1.31
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1.167	1.31	2.750	60.35	4.333	2.62	5.92	1.31
1.250	1.31	2.833	17.06	4.417	2.62	6.00	1.31
1.333	7.87	2.917	17.06	4.500	2.62	6.08	1.31
1.417	7.87	3.000	17.06	4.583	2.62	6.17	1.31
1.500	7.87	3.083	17.06	4.667	2.62	6.25	1.31
1.583	7.87	3.167	17.06	4.750	2.62		

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.207 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 24.848
TOTAL RAINFALL (mm)= 65.590
RUNOFF COEFFICIENT = 0.379

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

ADD HYD (0039)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0029):	35.41	0.556	3.30	34.88
+ ID2= 2 (0031):	4.52	0.207	3.00	24.85
ID = 3 (0039):	39.93	0.742	3.30	33.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0039)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0039):	39.93	0.742	3.30	33.74
+ ID2= 2 (0034):	16.98	0.735	3.33	28.85
ID = 1 (0039):	56.91	1.477	3.30	32.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0036) | ID= 1 DT= 5.0 min

Area (ha)= 3.51 Curve Number (CN)= 81.0
Ia (mm)= 6.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.09

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	7.87	3.250	17.06	4.83	1.31
0.167	0.00	1.750	7.87	3.333	9.18	4.92	1.31
0.250	0.00	1.833	22.30	3.417	9.18	5.00	1.31
0.333	1.31	1.917	22.30	3.500	9.18	5.08	1.31
0.417	1.31	2.000	22.30	3.583	9.18	5.17	1.31
0.500	1.31	2.083	22.30	3.667	9.18	5.25	1.31
0.583	1.31	2.167	22.30	3.750	9.18	5.33	1.31
0.667	1.31	2.250	22.30	3.833	5.25	5.42	1.31
0.750	1.31	2.333	60.35	3.917	5.25	5.50	1.31
0.833	1.31	2.417	60.35	4.000	5.25	5.58	1.31
0.917	1.31	2.500	60.35	4.083	5.25	5.67	1.31
1.000	1.31	2.583	60.35	4.167	5.25	5.75	1.31
1.083	1.31	2.667	60.35	4.250	5.25	5.83	1.31
1.167	1.31	2.750	60.35	4.333	2.62	5.92	1.31
1.250	1.31	2.833	17.06	4.417	2.62	6.00	1.31
1.333	7.87	2.917	17.06	4.500	2.62	6.08	1.31
1.417	7.87	3.000	17.06	4.583	2.62	6.17	1.31
1.500	7.87	3.083	17.06	4.667	2.62	6.25	1.31
1.583	7.87	3.167	17.06	4.750	2.62		

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.338 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 28.673
TOTAL RAINFALL (mm)= 65.590
RUNOFF COEFFICIENT = 0.437

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

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| CALIB            |
| STANDHYD (  1200)|   Area    (ha)=   6.76
|ID= 1 DT= 2.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
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                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.88          0.88
     Dep. Storage     (mm)=       1.00          5.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     212.29         40.00
     Mannings n           =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
               hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
             0.033     0.00 | 1.600     7.87 | 3.167    17.06 |  4.73     2.62
             0.067     0.00 | 1.633     7.87 | 3.200    17.06 |  4.77     1.97
             0.100     0.00 | 1.667     7.87 | 3.233    17.06 |  4.80     1.31
             0.133     0.00 | 1.700     7.87 | 3.267    13.12 |  4.83     1.31
             0.167     0.00 | 1.733     7.87 | 3.300     9.18 |  4.87     1.31
             0.200     0.00 | 1.767    15.08 | 3.333     9.18 |  4.90     1.31
             0.233     0.00 | 1.800    22.30 | 3.367     9.18 |  4.93     1.31
             0.267     0.66 | 1.833    22.30 | 3.400     9.18 |  4.97     1.31
             0.300     1.31 | 1.867    22.30 | 3.433     9.18 |  5.00     1.31
             0.333     1.31 | 1.900    22.30 | 3.467     9.18 |  5.03     1.31
             0.367     1.31 | 1.933    22.30 | 3.500     9.18 |  5.07     1.31
             0.400     1.31 | 1.967    22.30 | 3.533     9.18 |  5.10     1.31
             0.433     1.31 | 2.000    22.30 | 3.567     9.18 |  5.13     1.31
             0.467     1.31 | 2.033    22.30 | 3.600     9.18 |  5.17     1.31
             0.500     1.31 | 2.067    22.30 | 3.633     9.18 |  5.20     1.31
             0.533     1.31 | 2.100    22.30 | 3.667     9.18 |  5.23     1.31
             0.567     1.31 | 2.133    22.30 | 3.700     9.18 |  5.27     1.31
             0.600     1.31 | 2.167    22.30 | 3.733     9.18 |  5.30     1.31
             0.633     1.31 | 2.200    22.30 | 3.767     7.22 |  5.33     1.31
             0.667     1.31 | 2.233    22.30 | 3.800     5.25 |  5.37     1.31
             0.700     1.31 | 2.267    41.32 | 3.833     5.25 |  5.40     1.31
             0.733     1.31 | 2.300    60.35 | 3.867     5.25 |  5.43     1.31
             0.767     1.31 | 2.333    60.35 | 3.900     5.25 |  5.47     1.31
             0.800     1.31 | 2.367    60.35 | 3.933     5.25 |  5.50     1.31
             0.833     1.31 | 2.400    60.35 | 3.967     5.25 |  5.53     1.31
             0.867     1.31 | 2.433    60.35 | 4.000     5.25 |  5.57     1.31
             0.900     1.31 | 2.467    60.35 | 4.033     5.25 |  5.60     1.31
             0.933     1.31 | 2.500    60.35 | 4.067     5.25 |  5.63     1.31
             0.967     1.31 | 2.533    60.35 | 4.100     5.25 |  5.67     1.31
             1.000     1.31 | 2.567    60.35 | 4.133     5.25 |  5.70     1.31
             1.033     1.31 | 2.600    60.35 | 4.167     5.25 |  5.73     1.31
             1.067     1.31 | 2.633    60.35 | 4.200     5.25 |  5.77     1.31
             1.100     1.31 | 2.667    60.35 | 4.233     5.25 |  5.80     1.31
             1.133     1.31 | 2.700    60.35 | 4.267     3.94 |  5.83     1.31
             1.167     1.31 | 2.733    60.35 | 4.300     2.62 |  5.87     1.31
             1.200     1.31 | 2.767    38.71 | 4.333     2.62 |  5.90     1.31
             1.233     1.31 | 2.800    17.06 | 4.367     2.62 |  5.93     1.31
             1.267     4.59 | 2.833    17.06 | 4.400     2.62 |  5.97     1.31
             1.300     7.87 | 2.867    17.06 | 4.433     2.62 |  6.00     1.31
             1.333     7.87 | 2.900    17.06 | 4.467     2.62 |  6.03     1.31
             1.367     7.87 | 2.933    17.06 | 4.500     2.62 |  6.07     1.31
             1.400     7.87 | 2.967    17.06 | 4.533     2.62 |  6.10     1.31
             1.433     7.87 | 3.000    17.06 | 4.567     2.62 |  6.13     1.31
             1.467     7.87 | 3.033    17.06 | 4.600     2.62 |  6.17     1.31
             1.500     7.87 | 3.067    17.06 | 4.633     2.62 |  6.20     1.31
             1.533     7.87 | 3.100    17.06 | 4.667     2.62 |  6.23     1.31
             1.567     7.87 | 3.133    17.06 | 4.700     2.62 |  6.27     0.66

    Max.Eff.Inten.(mm/hr)=      60.35         36.60
              over (min)         5.00         10.00
    Storage Coeff.  (min)=       4.91 (ii)     8.95 (ii)
    Unit Hyd. Tpeak (min)=       4.00         10.00
    Unit Hyd. peak  (cms)=       0.24          0.12
                                                          *TOTALS*
    PEAK FLOW       (cms)=       0.98          0.08          1.058 (iii)
    TIME TO PEAK    (hrs)=       2.73          2.80           2.73
    RUNOFF VOLUME    (mm)=      64.59         30.55          60.16
    TOTAL RAINFALL   (mm)=      65.59         65.59          65.59
    RUNOFF COEFFICIENT   =       0.98          0.47           0.92


      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
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(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)= 5.56	
STANDHYD (0122)	Total Imp(%)= 99.90	Dir. Conn.(%)= 99.90
ID= 1 DT= 2.0 min		

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.97
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.133	0.00	1.700	7.87	3.267	13.12	4.83	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.200	0.00	1.767	15.08	3.333	9.18	4.90	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.267	0.66	1.833	22.30	3.400	9.18	4.97	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.633	1.31	2.200	22.30	3.767	7.22	5.33	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.700	1.31	2.267	41.32	3.833	5.25	5.40	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.133	1.31	2.700	60.35	4.267	3.94	5.83	1.31
1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31
1.200	1.31	2.767	38.71	4.333	2.62	5.90	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.267	4.59	2.833	17.06	4.400	2.62	5.97	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31
1.533	7.87	3.100	17.06	4.667	2.62	6.23	1.31
1.567	7.87	3.133	17.06	4.700	2.62	6.27	0.66

				TOTALS
Max.Eff.Inten.(mm/hr)=		60.35	60.12	
over (min)		5.00	6.00	
Storage Coeff.	(min)=	4.63 (ii)	5.18 (ii)	
Unit Hyd. Tpeak	(min)=	4.00	6.00	
Unit Hyd. peak	(cms)=	0.25	0.21	
PEAK FLOW	(cms)=	0.93	0.00	0.931 (iii)
TIME TO PEAK	(hrs)=	2.73	2.73	2.73
RUNOFF VOLUME	(mm)=	64.59	62.12	64.59
TOTAL RAINFALL	(mm)=	65.59	65.59	65.59
RUNOFF COEFFICIENT	=	0.98	0.95	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0002) | IN= 2---> OUT= 1 | DT= 4.0 min	OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0840	0.1513

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0122)	5.560	0.931	2.73	64.59
OUTFLOW: ID= 1 (0002)	5.560	0.141	3.73	64.51

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.19
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.2545

ADD HYD (0024) | 1 + 2 = 3 |	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1200):	6.76	1.058	2.73	60.16
+ ID2= 2 (0002):	5.56	0.141	3.73	64.51
ID = 3 (0024):	12.32	1.168	2.73	62.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0012) | IN= 2---> OUT= 1 | DT= 2.0 min	OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2030	0.4395
0.0150	0.3342	0.2360	0.4580
0.0290	0.4309	0.2670	0.4832
0.1610	0.4312	1.1520	0.6099

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0024)	12.320	1.168	2.73	62.12
OUTFLOW: ID= 1 (0012)	12.320	0.203	4.37	46.93

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.36
TIME SHIFT OF PEAK FLOW (min)= 98.00
MAXIMUM STORAGE USED (ha.m.)= 0.4395

CALIB | STANDHYD (1300) |ID= 1 DT= 2.0 min |	Area (ha)= 3.57 Total Imp(%)= 87.30 Dir. Conn.(%)= 87.30

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.12	0.45
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	154.27	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.97
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.133	0.00	1.700	7.87	3.267	13.12	4.83	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.200	0.00	1.767	15.08	3.333	9.18	4.90	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.267	0.66	1.833	22.30	3.400	9.18	4.97	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31

0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.633	1.31	2.200	22.30	3.767	7.22	5.33	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.700	1.31	2.267	41.32	3.833	5.25	5.40	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.133	1.31	2.700	60.35	4.267	3.94	5.83	1.31
1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31
1.200	1.31	2.767	38.71	4.333	2.62	5.90	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.267	4.59	2.833	17.06	4.400	2.62	5.97	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31
1.533	7.87	3.100	17.06	4.667	2.62	6.23	1.31
1.567	7.87	3.133	17.06	4.700	2.62	6.27	0.66

Max.Eff.Inten.(mm/hr)=	60.35	36.60		
over (min)	5.00	10.00		
Storage Coeff. (min)=	4.06 (ii)	8.05 (ii)		
Unit Hyd. Tpeak (min)=	4.00	10.00		
Unit Hyd. peak (cms)=	0.28	0.13		
			TOTALS	
PEAK FLOW (cms)=	0.52	0.04	0.561 (iii)	
TIME TO PEAK (hrs)=	2.73	2.77	2.73	
RUNOFF VOLUME (mm)=	64.59	30.55	60.27	
TOTAL RAINFALL (mm)=	65.59	65.59	65.59	
RUNOFF COEFFICIENT =	0.98	0.47	0.92	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0133)	Area (ha)= 2.76
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.97
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.133	0.00	1.700	7.87	3.267	13.12	4.83	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.200	0.00	1.767	15.08	3.333	9.18	4.90	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.267	0.66	1.833	22.30	3.400	9.18	4.97	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31

0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.633	1.31	2.200	22.30	3.767	7.22	5.33	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.700	1.31	2.267	41.32	3.833	5.25	5.40	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.133	1.31	2.700	60.35	4.267	3.94	5.83	1.31
1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31
1.200	1.31	2.767	38.71	4.333	2.62	5.90	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.267	4.59	2.833	17.06	4.400	2.62	5.97	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31
1.533	7.87	3.100	17.06	4.667	2.62	6.23	1.31
1.567	7.87	3.133	17.06	4.700	2.62	6.27	0.66

			TOTALS
Max.Eff.Inten.(mm/hr)=	60.35	12.45	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.75 (ii)	4.30 (ii)	
Unit Hyd. Tpeak (min)=	4.00	6.00	
Unit Hyd. peak (cms)=	0.29	0.23	
PEAK FLOW (cms)=	0.46	0.00	0.462 (iii)
TIME TO PEAK (hrs)=	2.73	3.30	2.73
RUNOFF VOLUME (mm)=	64.59	12.41	64.54
TOTAL RAINFALL (mm)=	65.59	65.59	65.59
RUNOFF COEFFICIENT =	0.98	0.19	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0001)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0420	0.0751

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0133)	2.760	0.462	2.73	64.54
OUTFLOW: ID= 1 (0001)	2.760	0.070	3.67	64.37

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.25
TIME SHIFT OF PEAK FLOW (min)= 56.00
MAXIMUM STORAGE USED (ha.m.)= 0.1260

ADD HYD (0027)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0001):	2.76	0.070	3.67	64.37
	+ ID2= 2 (1300):	3.57	0.561	2.73	60.27
	ID = 3 (0027):	6.33	0.617	2.73	62.06

```
     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0013)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1040      0.2272
                          0.0080     0.1711   |   0.1210      0.2380
                          0.0150     0.2214   |   0.1370      0.2516
                          0.0830     0.2217   |   0.5920      0.3236

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0027)      6.330      0.617      2.73      62.06
   OUTFLOW: ID= 1 (  0013)      6.330      0.104      4.33      47.41

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 16.86
                  TIME SHIFT OF PEAK FLOW         (min)= 96.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2272

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0012):    12.32   0.203     4.37    46.93
     + ID2= 2 (  0013):     6.33   0.104     4.33    47.41
       ================================================
       ID = 3 (  0035):    18.65   0.307     4.37    47.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0035):    18.65   0.307     4.37    47.09
     + ID2= 2 (  0036):     3.51   0.338     2.75    28.67
       ================================================
       ID = 1 (  0035):    22.16   0.350     2.73    44.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0035):    22.16   0.350     2.73    44.17
     + ID2= 2 (  0039):    56.91   1.477     3.30    32.28
       ================================================
       ID = 3 (  0040):    79.07   1.603     3.30    35.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\a27dca30
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\a27dca30
```

DATE: 03-01-2024 TIME: 01:27:02

USER:

COMMENTS: _____

****
** SIMULATION : Run 05 50yr 6hr AES **
****

READ STORM	Filename: C:\Users\CAPP078249\AppData\Local\Temp\68f9ca60-68a4-457b-842b-1f5eebf71d66\6fadecc3
Ptotal= 73.00 mm	Comments: 50yr/6hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	1.75	24.82	3.50	10.22	5.25	1.46
0.25	1.46	2.00	24.82	3.75	5.84	5.50	1.46
0.50	1.46	2.25	67.16	4.00	5.84	5.75	1.46
0.75	1.46	2.50	67.16	4.25	2.92	6.00	1.46
1.00	1.46	2.75	18.98	4.50	2.92		
1.25	8.76	3.00	18.98	4.75	1.46		
1.50	8.76	3.25	10.22	5.00	1.46		

CALIB NASHYD (0033) ID= 1 DT= 5.0 min	Area (ha)= 4.56	Curve Number (CN)= 82.0
	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.22	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	8.76	3.250	18.98	4.83	1.46
0.167	0.00	1.750	8.76	3.333	10.22	4.92	1.46
0.250	0.00	1.833	24.82	3.417	10.22	5.00	1.46
0.333	1.46	1.917	24.82	3.500	10.22	5.08	1.46
0.417	1.46	2.000	24.82	3.583	10.22	5.17	1.46
0.500	1.46	2.083	24.82	3.667	10.22	5.25	1.46
0.583	1.46	2.167	24.82	3.750	10.22	5.33	1.46
0.667	1.46	2.250	24.82	3.833	5.84	5.42	1.46
0.750	1.46	2.333	67.16	3.917	5.84	5.50	1.46
0.833	1.46	2.417	67.16	4.000	5.84	5.58	1.46
0.917	1.46	2.500	67.16	4.083	5.84	5.67	1.46
1.000	1.46	2.583	67.16	4.167	5.84	5.75	1.46
1.083	1.46	2.667	67.16	4.250	5.84	5.83	1.46
1.167	1.46	2.750	67.16	4.333	2.92	5.92	1.46
1.250	1.46	2.833	18.98	4.417	2.92	6.00	1.46
1.333	8.76	2.917	18.98	4.500	2.92	6.08	1.46
1.417	8.76	3.000	18.98	4.583	2.92	6.17	1.46
1.500	8.76	3.083	18.98	4.667	2.92	6.25	1.46
1.583	8.76	3.167	18.98	4.750	2.92		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.442 (i)
TIME TO PEAK (hrs)= 2.833
RUNOFF VOLUME (mm)= 37.315
TOTAL RAINFALL (mm)= 73.000
RUNOFF COEFFICIENT = 0.511

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

CALIB STANDHYD (1100) ID= 1 DT= 2.0 min	Area (ha)= 24.52	
	Total Imp(%)= 84.00	Dir. Conn.(%)= 84.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	20.60	3.92
Dep. Storage (mm)=	1.00	5.00

Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	2.19
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.133	0.00	1.700	8.76	3.267	14.60	4.83	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.200	0.00	1.767	16.79	3.333	10.22	4.90	1.46
0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.267	0.73	1.833	24.82	3.400	10.22	4.97	1.46
0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.633	1.46	2.200	24.82	3.767	8.03	5.33	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.700	1.46	2.267	45.99	3.833	5.84	5.40	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.133	1.46	2.700	67.16	4.267	4.38	5.83	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.200	1.46	2.767	43.07	4.333	2.92	5.90	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.267	5.11	2.833	18.98	4.400	2.92	5.97	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.567	8.76	3.133	18.98	4.700	2.92	6.27	0.73

Max.Eff.Inten.(mm/hr)=		67.16	43.10	
over (min)		6.00	12.00	
Storage Coeff. (min)=		6.93 (ii)	11.19 (ii)	
Unit Hyd. Tpeak (min)=		6.00	12.00	
Unit Hyd. peak (cms)=		0.17	0.10	
				TOTALS
PEAK FLOW	(cms)=	3.79	0.38	4.151 (iii)
TIME TO PEAK	(hrs)=	2.73	2.80	2.73
RUNOFF VOLUME	(mm)=	72.00	36.24	66.28
TOTAL RAINFALL	(mm)=	73.00	73.00	73.00
RUNOFF COEFFICIENT	=	0.99	0.50	0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		
STANDHYD (0111)	Area (ha)=	6.10
ID= 1 DT= 2.0 min	Total Imp(%)=	99.90 Dir. Conn.(%)= 99.90

	IMPERVIOUS	PERVIOUS (i)

Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	2.19
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.133	0.00	1.700	8.76	3.267	14.60	4.83	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.200	0.00	1.767	16.79	3.333	10.22	4.90	1.46
0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.267	0.73	1.833	24.82	3.400	10.22	4.97	1.46
0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.633	1.46	2.200	24.82	3.767	8.03	5.33	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.700	1.46	2.267	45.99	3.833	5.84	5.40	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.133	1.46	2.700	67.16	4.267	4.38	5.83	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.200	1.46	2.767	43.07	4.333	2.92	5.90	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.267	5.11	2.833	18.98	4.400	2.92	5.97	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.567	8.76	3.133	18.98	4.700	2.92	6.27	0.73

Max.Eff.Inten.(mm/hr)=		67.16	66.95	
over (min)		5.00	6.00	
Storage Coeff. (min)=		4.56 (ii)	5.09 (ii)	
Unit Hyd. Tpeak (min)=		4.00	6.00	
Unit Hyd. peak (cms)=		0.26	0.21	
				TOTALS
PEAK FLOW	(cms)=	1.14	0.00	1.136 (iii)
TIME TO PEAK	(hrs)=	2.73	2.73	2.73
RUNOFF VOLUME	(mm)=	72.00	69.52	72.00
TOTAL RAINFALL	(mm)=	73.00	73.00	73.00
RUNOFF COEFFICIENT	=	0.99	0.95	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0003)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE

```
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0920      0.1659
     **** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0111)      6.100      1.136      2.73      72.00
   OUTFLOW: ID= 1 (  0003)      6.100      0.173      3.73      71.92

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 15.19
                    TIME SHIFT OF PEAK FLOW         (min)= 60.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.3113

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--------------------
| ADD HYD  (  0050)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  1100):    24.52   4.151     2.73    66.28
      + ID2= 2 (  0003):     6.10   0.173     3.73    71.92
        ================================================
        ID = 3 (  0050):    30.62   4.285     2.73    67.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0011)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.4686      1.2877
                         0.0158     0.8925   |   0.5484      1.3960
                         0.0439     1.1554   |   0.6220      1.5142
                         0.3705     1.1796   |   2.8520      2.3383

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0050)     30.620      4.285      2.73      67.40
   OUTFLOW: ID= 1 (  0011)     30.620      0.548      4.27      42.26

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.80
                    TIME SHIFT OF PEAK FLOW         (min)= 92.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  1.3960

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--------------------
| CALIB            |
| STANDHYD (  0030)|   Area    (ha)=   0.23
|ID= 1 DT= 2.0 min |   Total Imp(%)=  99.99   Dir. Conn.(%)=  99.99
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23         0.00
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      39.16        40.00
     Mannings n             =    0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
  0.033    0.00 | 1.600    8.76 | 3.167   18.98 |  4.73    2.92
  0.067    0.00 | 1.633    8.76 | 3.200   18.98 |  4.77    2.19
  0.100    0.00 | 1.667    8.76 | 3.233   18.98 |  4.80    1.46
  0.133    0.00 | 1.700    8.76 | 3.267   14.60 |  4.83    1.46
  0.167    0.00 | 1.733    8.76 | 3.300   10.22 |  4.87    1.46
  0.200    0.00 | 1.767   16.79 | 3.333   10.22 |  4.90    1.46
  0.233    0.00 | 1.800   24.82 | 3.367   10.22 |  4.93    1.46
  0.267    0.73 | 1.833   24.82 | 3.400   10.22 |  4.97    1.46
  0.300    1.46 | 1.867   24.82 | 3.433   10.22 |  5.00    1.46
  0.333    1.46 | 1.900   24.82 | 3.467   10.22 |  5.03    1.46
  0.367    1.46 | 1.933   24.82 | 3.500   10.22 |  5.07    1.46
  0.400    1.46 | 1.967   24.82 | 3.533   10.22 |  5.10    1.46
  0.433    1.46 | 2.000   24.82 | 3.567   10.22 |  5.13    1.46
  0.467    1.46 | 2.033   24.82 | 3.600   10.22 |  5.17    1.46
  0.500    1.46 | 2.067   24.82 | 3.633   10.22 |  5.20    1.46
  0.533    1.46 | 2.100   24.82 | 3.667   10.22 |  5.23    1.46
  0.567    1.46 | 2.133   24.82 | 3.700   10.22 |  5.27    1.46
  0.600    1.46 | 2.167   24.82 | 3.733   10.22 |  5.30    1.46
  0.633    1.46 | 2.200   24.82 | 3.767    8.03 |  5.33    1.46
  0.667    1.46 | 2.233   24.82 | 3.800    5.84 |  5.37    1.46
```

0.700	1.46	2.267	45.99	3.833	5.84	5.40	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.133	1.46	2.700	67.16	4.267	4.38	5.83	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.200	1.46	2.767	43.07	4.333	2.92	5.90	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.267	5.11	2.833	18.98	4.400	2.92	5.97	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.567	8.76	3.133	18.98	4.700	2.92	6.27	0.73

Max.Eff.Inten.(mm/hr)=	67.16	43.10		
over (min)	5.00	2.00		
Storage Coeff. (min)=	1.71 (ii)	1.91 (ii)		
Unit Hyd. Tpeak (min)=	4.00	2.00		
Unit Hyd. peak (cms)=	0.44	0.56		
			TOTALS	
PEAK FLOW (cms)=	0.04	0.00	0.043 (iii)	
TIME TO PEAK (hrs)=	2.67	2.73	2.73	
RUNOFF VOLUME (mm)=	72.00	36.24	71.99	
TOTAL RAINFALL (mm)=	73.00	73.00	73.00	
RUNOFF COEFFICIENT =	0.99	0.50	0.99	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0011):		30.62	0.548	4.27	42.26
+ ID2= 2 (0030):		0.23	0.043	2.73	71.99
ID = 3 (0029):		30.85	0.552	4.23	42.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0029):		30.85	0.552	4.23	42.48
+ ID2= 2 (0033):		4.56	0.442	2.83	37.31
ID = 1 (0029):		35.41	0.708	3.03	41.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0034)			
ID= 1 DT= 5.0 min	Area (ha)= 16.98	Curve Number (CN)= 80.0	
	Ia (mm)= 6.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.60		

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	8.76	3.250	18.98	4.83	1.46
0.167	0.00	1.750	8.76	3.333	10.22	4.92	1.46
0.250	0.00	1.833	24.82	3.417	10.22	5.00	1.46
0.333	1.46	1.917	24.82	3.500	10.22	5.08	1.46
0.417	1.46	2.000	24.82	3.583	10.22	5.17	1.46
0.500	1.46	2.083	24.82	3.667	10.22	5.25	1.46
0.583	1.46	2.167	24.82	3.750	10.22	5.33	1.46
0.667	1.46	2.250	24.82	3.833	5.84	5.42	1.46
0.750	1.46	2.333	67.16	3.917	5.84	5.50	1.46
0.833	1.46	2.417	67.16	4.000	5.84	5.58	1.46
0.917	1.46	2.500	67.16	4.083	5.84	5.67	1.46
1.000	1.46	2.583	67.16	4.167	5.84	5.75	1.46
1.083	1.46	2.667	67.16	4.250	5.84	5.83	1.46
1.167	1.46	2.750	67.16	4.333	2.92	5.92	1.46
1.250	1.46	2.833	18.98	4.417	2.92	6.00	1.46
1.333	8.76	2.917	18.98	4.500	2.92	6.08	1.46
1.417	8.76	3.000	18.98	4.583	2.92	6.17	1.46
1.500	8.76	3.083	18.98	4.667	2.92	6.25	1.46
1.583	8.76	3.167	18.98	4.750	2.92		

Unit Hyd Qpeak (cms)= 1.081

PEAK FLOW (cms)= 0.880 (i)
TIME TO PEAK (hrs)= 3.250
RUNOFF VOLUME (mm)= 34.398
TOTAL RAINFALL (mm)= 73.000
RUNOFF COEFFICIENT = 0.471

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

CALIB NASHYD (0031) ID= 1 DT= 5.0 min	Area (ha)= 4.52	Curve Number (CN)= 77.0
	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.41	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	8.76	3.250	18.98	4.83	1.46
0.167	0.00	1.750	8.76	3.333	10.22	4.92	1.46
0.250	0.00	1.833	24.82	3.417	10.22	5.00	1.46
0.333	1.46	1.917	24.82	3.500	10.22	5.08	1.46
0.417	1.46	2.000	24.82	3.583	10.22	5.17	1.46
0.500	1.46	2.083	24.82	3.667	10.22	5.25	1.46
0.583	1.46	2.167	24.82	3.750	10.22	5.33	1.46
0.667	1.46	2.250	24.82	3.833	5.84	5.42	1.46
0.750	1.46	2.333	67.16	3.917	5.84	5.50	1.46
0.833	1.46	2.417	67.16	4.000	5.84	5.58	1.46
0.917	1.46	2.500	67.16	4.083	5.84	5.67	1.46
1.000	1.46	2.583	67.16	4.167	5.84	5.75	1.46
1.083	1.46	2.667	67.16	4.250	5.84	5.83	1.46
1.167	1.46	2.750	67.16	4.333	2.92	5.92	1.46
1.250	1.46	2.833	18.98	4.417	2.92	6.00	1.46
1.333	8.76	2.917	18.98	4.500	2.92	6.08	1.46
1.417	8.76	3.000	18.98	4.583	2.92	6.17	1.46
1.500	8.76	3.083	18.98	4.667	2.92	6.25	1.46
1.583	8.76	3.167	18.98	4.750	2.92		

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.253 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 29.989
TOTAL RAINFALL (mm)= 73.000
RUNOFF COEFFICIENT = 0.411

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

ADD HYD (0039) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0029):	35.41	0.708	3.03	41.81
+ ID2= 2 (0031):	4.52	0.253	3.00	29.99
ID = 3 (0039):	39.93	0.960	3.03	40.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0039)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3 + 2 = 1	ID1= 3 (0039):	39.93	0.960	3.03	40.48
	+ ID2= 2 (0034):	16.98	0.880	3.25	34.40
	ID = 1 (0039):	56.91	1.805	3.23	38.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0036) ID= 1 DT= 5.0 min				
	Area (ha)=	3.51	Curve Number (CN)=	81.0
	Ia (mm)=	6.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.09		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	8.76	3.250	18.98	4.83	1.46
0.167	0.00	1.750	8.76	3.333	10.22	4.92	1.46
0.250	0.00	1.833	24.82	3.417	10.22	5.00	1.46
0.333	1.46	1.917	24.82	3.500	10.22	5.08	1.46
0.417	1.46	2.000	24.82	3.583	10.22	5.17	1.46
0.500	1.46	2.083	24.82	3.667	10.22	5.25	1.46
0.583	1.46	2.167	24.82	3.750	10.22	5.33	1.46
0.667	1.46	2.250	24.82	3.833	5.84	5.42	1.46
0.750	1.46	2.333	67.16	3.917	5.84	5.50	1.46
0.833	1.46	2.417	67.16	4.000	5.84	5.58	1.46
0.917	1.46	2.500	67.16	4.083	5.84	5.67	1.46
1.000	1.46	2.583	67.16	4.167	5.84	5.75	1.46
1.083	1.46	2.667	67.16	4.250	5.84	5.83	1.46
1.167	1.46	2.750	67.16	4.333	2.92	5.92	1.46
1.250	1.46	2.833	18.98	4.417	2.92	6.00	1.46
1.333	8.76	2.917	18.98	4.500	2.92	6.08	1.46
1.417	8.76	3.000	18.98	4.583	2.92	6.17	1.46
1.500	8.76	3.083	18.98	4.667	2.92	6.25	1.46
1.583	8.76	3.167	18.98	4.750	2.92		

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.398 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 34.125
TOTAL RAINFALL (mm)= 73.000
RUNOFF COEFFICIENT = 0.467

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

CALIB STANDHYD (1200) ID= 1 DT= 2.0 min				
	Area (ha)=	6.76		
	Total Imp(%)=	87.00	Dir. Conn.(%)=	87.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.88	0.88
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	212.29	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	2.19
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.133	0.00	1.700	8.76	3.267	14.60	4.83	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.200	0.00	1.767	16.79	3.333	10.22	4.90	1.46
0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.267	0.73	1.833	24.82	3.400	10.22	4.97	1.46

0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.633	1.46	2.200	24.82	3.767	8.03	5.33	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.700	1.46	2.267	45.99	3.833	5.84	5.40	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.133	1.46	2.700	67.16	4.267	4.38	5.83	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.200	1.46	2.767	43.07	4.333	2.92	5.90	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.267	5.11	2.833	18.98	4.400	2.92	5.97	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.567	8.76	3.133	18.98	4.700	2.92	6.27	0.73

Max.Eff.Inten.(mm/hr)=	67.16	43.10		
over (min)	5.00	10.00		
Storage Coeff. (min)=	4.71 (ii)	8.57 (ii)		
Unit Hyd. Tpeak (min)=	4.00	10.00		
Unit Hyd. peak (cms)=	0.25	0.12		
			TOTALS	
PEAK FLOW (cms)=	1.10	0.09	1.185 (iii)	
TIME TO PEAK (hrs)=	2.73	2.77	2.73	
RUNOFF VOLUME (mm)=	72.00	36.24	67.35	
TOTAL RAINFALL (mm)=	73.00	73.00	73.00	
RUNOFF COEFFICIENT =	0.99	0.50	0.92	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0122)	Area (ha)=	5.56	
ID= 1 DT= 2.0 min	Total Imp(%)=	99.90	Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	2.19
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.133	0.00	1.700	8.76	3.267	14.60	4.83	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.200	0.00	1.767	16.79	3.333	10.22	4.90	1.46

0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.267	0.73	1.833	24.82	3.400	10.22	4.97	1.46
0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.633	1.46	2.200	24.82	3.767	8.03	5.33	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.700	1.46	2.267	45.99	3.833	5.84	5.40	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.133	1.46	2.700	67.16	4.267	4.38	5.83	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.200	1.46	2.767	43.07	4.333	2.92	5.90	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.267	5.11	2.833	18.98	4.400	2.92	5.97	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.567	8.76	3.133	18.98	4.700	2.92	6.27	0.73

Max.Eff.Inten.(mm/hr)=	67.16	66.95		
over (min)	5.00	6.00		
Storage Coeff. (min)=	4.44 (ii)	4.96 (ii)		
Unit Hyd. Tpeak (min)=	4.00	6.00		
Unit Hyd. peak (cms)=	0.26	0.21		
			TOTALS	
PEAK FLOW (cms)=	1.03	0.00	1.036 (iii)	
TIME TO PEAK (hrs)=	2.73	2.73	2.73	
RUNOFF VOLUME (mm)=	72.00	69.52	72.00	
TOTAL RAINFALL (mm)=	73.00	73.00	73.00	
RUNOFF COEFFICIENT =	0.99	0.95	0.99	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0002)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0840	0.1513

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0122)	5.560	1.036	2.73	72.00
OUTFLOW: ID= 1 (0002)	5.560	0.157	3.73	71.92

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.20
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.2836

ADD HYD (0024)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)

```
       ID1= 1 (  1200):     6.76   1.185     2.73    67.35
     + ID2= 2 (  0002):     5.56   0.157     3.73    71.92
       ================================================
       ID = 3 (  0024):    12.32   1.308     2.73    69.41

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0012)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2030     0.4395
                          0.0150     0.3342   |   0.2360     0.4580
                          0.0290     0.4309   |   0.2670     0.4832
                          0.1610     0.4312   |   1.1520     0.6099

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0024)     12.320     1.308      2.73      69.41
   OUTFLOW: ID= 1 (  0012)     12.320     0.236      4.33      54.09

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 18.04
                  TIME SHIFT OF PEAK FLOW         (min)= 96.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.4580

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--------------------
| CALIB            |
| STANDHYD (  1300)|   Area    (ha)=   3.57
|ID= 1 DT= 2.0 min |   Total Imp(%)=  87.30   Dir. Conn.(%)=  87.30
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.12         0.45
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     154.27        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.033    0.00 | 1.600    8.76 | 3.167   18.98 |  4.73    2.92
 0.067    0.00 | 1.633    8.76 | 3.200   18.98 |  4.77    2.19
 0.100    0.00 | 1.667    8.76 | 3.233   18.98 |  4.80    1.46
 0.133    0.00 | 1.700    8.76 | 3.267   14.60 |  4.83    1.46
 0.167    0.00 | 1.733    8.76 | 3.300   10.22 |  4.87    1.46
 0.200    0.00 | 1.767   16.79 | 3.333   10.22 |  4.90    1.46
 0.233    0.00 | 1.800   24.82 | 3.367   10.22 |  4.93    1.46
 0.267    0.73 | 1.833   24.82 | 3.400   10.22 |  4.97    1.46
 0.300    1.46 | 1.867   24.82 | 3.433   10.22 |  5.00    1.46
 0.333    1.46 | 1.900   24.82 | 3.467   10.22 |  5.03    1.46
 0.367    1.46 | 1.933   24.82 | 3.500   10.22 |  5.07    1.46
 0.400    1.46 | 1.967   24.82 | 3.533   10.22 |  5.10    1.46
 0.433    1.46 | 2.000   24.82 | 3.567   10.22 |  5.13    1.46
 0.467    1.46 | 2.033   24.82 | 3.600   10.22 |  5.17    1.46
 0.500    1.46 | 2.067   24.82 | 3.633   10.22 |  5.20    1.46
 0.533    1.46 | 2.100   24.82 | 3.667   10.22 |  5.23    1.46
 0.567    1.46 | 2.133   24.82 | 3.700   10.22 |  5.27    1.46
 0.600    1.46 | 2.167   24.82 | 3.733   10.22 |  5.30    1.46
 0.633    1.46 | 2.200   24.82 | 3.767    8.03 |  5.33    1.46
 0.667    1.46 | 2.233   24.82 | 3.800    5.84 |  5.37    1.46
 0.700    1.46 | 2.267   45.99 | 3.833    5.84 |  5.40    1.46
 0.733    1.46 | 2.300   67.16 | 3.867    5.84 |  5.43    1.46
 0.767    1.46 | 2.333   67.16 | 3.900    5.84 |  5.47    1.46
 0.800    1.46 | 2.367   67.16 | 3.933    5.84 |  5.50    1.46
 0.833    1.46 | 2.400   67.16 | 3.967    5.84 |  5.53    1.46
 0.867    1.46 | 2.433   67.16 | 4.000    5.84 |  5.57    1.46
 0.900    1.46 | 2.467   67.16 | 4.033    5.84 |  5.60    1.46
 0.933    1.46 | 2.500   67.16 | 4.067    5.84 |  5.63    1.46
 0.967    1.46 | 2.533   67.16 | 4.100    5.84 |  5.67    1.46
 1.000    1.46 | 2.567   67.16 | 4.133    5.84 |  5.70    1.46
 1.033    1.46 | 2.600   67.16 | 4.167    5.84 |  5.73    1.46
 1.067    1.46 | 2.633   67.16 | 4.200    5.84 |  5.77    1.46
 1.100    1.46 | 2.667   67.16 | 4.233    5.84 |  5.80    1.46
 1.133    1.46 | 2.700   67.16 | 4.267    4.38 |  5.83    1.46
 1.167    1.46 | 2.733   67.16 | 4.300    2.92 |  5.87    1.46
 1.200    1.46 | 2.767   43.07 | 4.333    2.92 |  5.90    1.46
 1.233    1.46 | 2.800   18.98 | 4.367    2.92 |  5.93    1.46
 1.267    5.11 | 2.833   18.98 | 4.400    2.92 |  5.97    1.46
 1.300    8.76 | 2.867   18.98 | 4.433    2.92 |  6.00    1.46
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1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.567	8.76	3.133	18.98	4.700	2.92	6.27	0.73

Max.Eff.Inten.(mm/hr)=	67.16	43.10	
over (min)	5.00	8.00	
Storage Coeff. (min)=	3.89 (ii)	7.71 (ii)	
Unit Hyd. Tpeak (min)=	4.00	8.00	
Unit Hyd. peak (cms)=	0.28	0.14	
			TOTALS
PEAK FLOW (cms)=	0.58	0.05	0.629 (iii)
TIME TO PEAK (hrs)=	2.73	2.77	2.73
RUNOFF VOLUME (mm)=	72.00	36.24	67.46
TOTAL RAINFALL (mm)=	73.00	73.00	73.00
RUNOFF COEFFICIENT =	0.99	0.50	0.92

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0133)	Area (ha)= 2.76
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	2.19
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.133	0.00	1.700	8.76	3.267	14.60	4.83	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.200	0.00	1.767	16.79	3.333	10.22	4.90	1.46
0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.267	0.73	1.833	24.82	3.400	10.22	4.97	1.46
0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.633	1.46	2.200	24.82	3.767	8.03	5.33	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.700	1.46	2.267	45.99	3.833	5.84	5.40	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.133	1.46	2.700	67.16	4.267	4.38	5.83	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.200	1.46	2.767	43.07	4.333	2.92	5.90	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46

1.267	5.11	2.833	18.98	4.400	2.92	5.97	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.567	8.76	3.133	18.98	4.700	2.92	6.27	0.73

			TOTALS
Max.Eff.Inten.(mm/hr)=	67.16	17.92	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.60 (ii)	4.12 (ii)	
Unit Hyd. Tpeak (min)=	4.00	6.00	
Unit Hyd. peak (cms)=	0.30	0.24	
PEAK FLOW (cms)=	0.51	0.00	0.514 (iii)
TIME TO PEAK (hrs)=	2.73	3.23	2.73
RUNOFF VOLUME (mm)=	72.00	19.70	71.95
TOTAL RAINFALL (mm)=	73.00	73.00	73.00
RUNOFF COEFFICIENT =	0.99	0.27	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0001) | IN= 2---> OUT= 1 | DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0420	0.0751

OVERFLOW IS OFF

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0133)	2.760	0.514	2.73	71.95
OUTFLOW: ID= 1 (0001)	2.760	0.079	3.63	71.78

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.27
TIME SHIFT OF PEAK FLOW (min)= 54.00
MAXIMUM STORAGE USED (ha.m.)= 0.1405

ADD HYD (0027) | 1 + 2 = 3 |	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0001):	2.76	0.079	3.63	71.78
+ ID2= 2 (1300):	3.57	0.629	2.73	67.46
ID = 3 (0027):	6.33	0.692	2.73	69.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0013) | IN= 2---> OUT= 1 | DT= 2.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1040	0.2272
	0.0080	0.1711	0.1210	0.2380
	0.0150	0.2214	0.1370	0.2516
	0.0830	0.2217	0.5920	0.3236

OVERFLOW IS OFF

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0027)	6.330	0.692	2.73	69.34
OUTFLOW: ID= 1 (0013)	6.330	0.121	4.30	54.56

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.48
TIME SHIFT OF PEAK FLOW (min)= 94.00
MAXIMUM STORAGE USED (ha.m.)= 0.2380

ADD HYD (0035) | 1 + 2 = 3 |	AREA	QPEAK	TPEAK	R.V.

```
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0012):    12.32   0.236     4.33    54.09
      + ID2= 2 (  0013):     6.33   0.121     4.30    54.56
        ================================================
        ID = 3 (  0035):    18.65   0.357     4.33    54.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------


--------------------
| ADD HYD  (  0035)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0035):    18.65   0.357     4.33    54.25
      + ID2= 2 (  0036):     3.51   0.398     2.75    34.12
        ================================================
        ID = 1 (  0035):    22.16   0.412     2.73    51.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------


--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0035):    22.16   0.412     2.73    51.06
      + ID2= 2 (  0039):    56.91   1.805     3.23    38.66
        ================================================
        ID = 3 (  0040):    79.07   2.070     3.43    42.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\c4154f3d
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\c4154f3d


DATE: 03-01-2024                          TIME: 01:27:03

USER:


COMMENTS: _____________________________________________________________


--------------------------------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 06 100yr 6hr AES          **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              68f9ca60-68a4-457b-842b-1f5eebf71d66\ca56a851
| Ptotal= 80.31 mm |    Comments: 100yr/6hr
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.75   27.30 |  3.50   11.24 |  5.25    1.61
                0.25    1.61 |  2.00   27.30 |  3.75    6.42 |  5.50    1.61
                0.50    1.61 |  2.25   73.88 |  4.00    6.42 |  5.75    1.61
                0.75    1.61 |  2.50   73.88 |  4.25    3.21 |  6.00    1.61
```

1.00	1.61	2.75	20.88	4.50	3.21		
1.25	9.64	3.00	20.88	4.75	1.61		
1.50	9.64	3.25	11.24	5.00	1.61		

CALIB					
NASHYD (0033)	Area (ha)=	4.56	Curve Number (CN)=	82.0	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.22			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	9.64	3.250	20.88	4.83	1.61
0.167	0.00	1.750	9.64	3.333	11.24	4.92	1.61
0.250	0.00	1.833	27.30	3.417	11.24	5.00	1.61
0.333	1.61	1.917	27.30	3.500	11.24	5.08	1.61
0.417	1.61	2.000	27.30	3.583	11.24	5.17	1.61
0.500	1.61	2.083	27.30	3.667	11.24	5.25	1.61
0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61
1.500	9.64	3.083	20.88	4.667	3.21	6.25	1.61
1.583	9.64	3.167	20.88	4.750	3.21		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.512 (i)
TIME TO PEAK (hrs)= 2.833
RUNOFF VOLUME (mm)= 43.216
TOTAL RAINFALL (mm)= 80.310
RUNOFF COEFFICIENT = 0.538

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

CALIB					
STANDHYD (1100)	Area (ha)=	24.52			
ID= 1 DT= 2.0 min	Total Imp(%)=	84.00	Dir. Conn.(%)=	84.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	2.41
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.133	0.00	1.700	9.64	3.267	16.06	4.83	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.200	0.00	1.767	18.47	3.333	11.24	4.90	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.267	0.81	1.833	27.30	3.400	11.24	4.97	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61

0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.633	1.61	2.200	27.30	3.767	8.83	5.33	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.700	1.61	2.267	50.59	3.833	6.42	5.40	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61
1.133	1.61	2.700	73.88	4.267	4.82	5.83	1.61
1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61
1.200	1.61	2.767	47.38	4.333	3.21	5.90	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.267	5.63	2.833	20.88	4.400	3.21	5.97	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.567	9.64	3.133	20.88	4.700	3.21	6.27	0.81

Max.Eff.Inten.(mm/hr)=	73.88	49.65	
over (min)	6.00	12.00	
Storage Coeff. (min)=	6.67 (ii)	10.77 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.17	0.10	
			TOTALS
PEAK FLOW (cms)=	4.18	0.45	4.602 (iii)
TIME TO PEAK (hrs)=	2.73	2.80	2.73
RUNOFF VOLUME (mm)=	79.31	42.05	73.35
TOTAL RAINFALL (mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT =	0.99	0.52	0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0111)	Area (ha)= 6.10
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	2.41
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.133	0.00	1.700	9.64	3.267	16.06	4.83	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.200	0.00	1.767	18.47	3.333	11.24	4.90	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.267	0.81	1.833	27.30	3.400	11.24	4.97	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61

0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.633	1.61	2.200	27.30	3.767	8.83	5.33	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.700	1.61	2.267	50.59	3.833	6.42	5.40	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61
1.133	1.61	2.700	73.88	4.267	4.82	5.83	1.61
1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61
1.200	1.61	2.767	47.38	4.333	3.21	5.90	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.267	5.63	2.833	20.88	4.400	3.21	5.97	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.567	9.64	3.133	20.88	4.700	3.21	6.27	0.81

			TOTALS
Max.Eff.Inten.(mm/hr)=	73.88	73.69	
over (min)	5.00	6.00	
Storage Coeff. (min)=	4.39 (ii)	4.90 (ii)	
Unit Hyd. Tpeak (min)=	4.00	6.00	
Unit Hyd. peak (cms)=	0.26	0.21	
PEAK FLOW (cms)=	1.25	0.00	1.250 (iii)
TIME TO PEAK (hrs)=	2.73	2.73	2.73
RUNOFF VOLUME (mm)=	79.31	76.82	79.31
TOTAL RAINFALL (mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT =	0.99	0.96	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0003)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0920	0.1659

**** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0111)	6.100	1.250	2.73	79.31
OUTFLOW: ID= 1 (0003)	6.100	0.190	3.73	79.23

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.20
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.3428

ADD HYD (0050)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1100):		24.52	4.602	2.73	73.35
+ ID2= 2 (0003):		6.10	0.190	3.73	79.23
ID = 3 (0050):		30.62	4.751	2.73	74.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0011)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 2.0 min | OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 0.4686 1.2877
0.0158 0.8925 | 0.5484 1.3960
0.0439 1.1554 | 0.6220 1.5142
0.3705 1.1796 | 2.8520 2.3383

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0050)	30.620	4.751	2.73	74.52
OUTFLOW: ID= 1 (0011)	30.620	0.622	4.20	49.30

PEAK FLOW REDUCTION [Qout/Qin](%)= 13.09
TIME SHIFT OF PEAK FLOW (min)= 88.00
MAXIMUM STORAGE USED (ha.m.)= 1.5142

| CALIB |
| STANDHYD (0030)| Area (ha)= 0.23
|ID= 1 DT= 2.0 min | Total Imp(%)= 99.99 Dir. Conn.(%)= 99.99

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.23	0.00
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	39.16	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	2.41
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.133	0.00	1.700	9.64	3.267	16.06	4.83	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.200	0.00	1.767	18.47	3.333	11.24	4.90	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.267	0.81	1.833	27.30	3.400	11.24	4.97	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.633	1.61	2.200	27.30	3.767	8.83	5.33	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.700	1.61	2.267	50.59	3.833	6.42	5.40	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61
1.133	1.61	2.700	73.88	4.267	4.82	5.83	1.61
1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61
1.200	1.61	2.767	47.38	4.333	3.21	5.90	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.267	5.63	2.833	20.88	4.400	3.21	5.97	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.567	9.64	3.133	20.88	4.700	3.21	6.27	0.81

```
     Max.Eff.Inten.(mm/hr)=      73.88        49.65
                 over (min)       5.00         2.00
     Storage Coeff.  (min)=       1.64 (ii)    1.84 (ii)
     Unit Hyd. Tpeak (min)=       4.00         2.00
     Unit Hyd. peak  (cms)=       0.44         0.57
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.05         0.00          0.047 (iii)
     TIME TO PEAK    (hrs)=       2.67         2.73           2.73
     RUNOFF VOLUME    (mm)=      79.31        42.05          79.30
     TOTAL RAINFALL   (mm)=      80.31        80.31          80.31
     RUNOFF COEFFICIENT   =       0.99         0.52           0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0029)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0011):    30.62   0.622     4.20    49.30
     + ID2= 2 (  0030):     0.23   0.047     2.73    79.30
       ================================================
       ID = 3 (  0029):    30.85   0.626     4.20    49.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0029)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0029):    30.85   0.626     4.20    49.52
     + ID2= 2 (  0033):     4.56   0.512     2.83    43.22
       ================================================
       ID = 1 (  0029):    35.41   0.879     2.93    48.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0034)|   Area    (ha)=  16.98   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.60

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


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    0.00 | 1.667    9.64 | 3.250   20.88 |  4.83    1.61
 0.167    0.00 | 1.750    9.64 | 3.333   11.24 |  4.92    1.61
 0.250    0.00 | 1.833   27.30 | 3.417   11.24 |  5.00    1.61
 0.333    1.61 | 1.917   27.30 | 3.500   11.24 |  5.08    1.61
 0.417    1.61 | 2.000   27.30 | 3.583   11.24 |  5.17    1.61
 0.500    1.61 | 2.083   27.30 | 3.667   11.24 |  5.25    1.61
 0.583    1.61 | 2.167   27.30 | 3.750   11.24 |  5.33    1.61
 0.667    1.61 | 2.250   27.30 | 3.833    6.42 |  5.42    1.61
 0.750    1.61 | 2.333   73.88 | 3.917    6.42 |  5.50    1.61
 0.833    1.61 | 2.417   73.88 | 4.000    6.42 |  5.58    1.61
 0.917    1.61 | 2.500   73.88 | 4.083    6.42 |  5.67    1.61
 1.000    1.61 | 2.583   73.88 | 4.167    6.42 |  5.75    1.61
 1.083    1.61 | 2.667   73.88 | 4.250    6.42 |  5.83    1.61
 1.167    1.61 | 2.750   73.88 | 4.333    3.21 |  5.92    1.61
 1.250    1.61 | 2.833   20.88 | 4.417    3.21 |  6.00    1.61
 1.333    9.64 | 2.917   20.88 | 4.500    3.21 |  6.08    1.61
 1.417    9.64 | 3.000   20.88 | 4.583    3.21 |  6.17    1.61
 1.500    9.64 | 3.083   20.88 | 4.667    3.21 |  6.25    1.61
 1.583    9.64 | 3.167   20.88 | 4.750    3.21 |

     Unit Hyd Qpeak  (cms)=   1.081

     PEAK FLOW       (cms)=   1.030 (i)
     TIME TO PEAK    (hrs)=   3.250
     RUNOFF VOLUME    (mm)=  40.068
     TOTAL RAINFALL   (mm)=  80.310
```

RUNOFF COEFFICIENT = 0.499

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

CALIB NASHYD (0031) | ID= 1 DT= 5.0 min	Area (ha)= 4.52 Curve Number (CN)= 77.0 Ia (mm)= 8.00 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= 0.41

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	9.64	3.250	20.88	4.83	1.61
0.167	0.00	1.750	9.64	3.333	11.24	4.92	1.61
0.250	0.00	1.833	27.30	3.417	11.24	5.00	1.61
0.333	1.61	1.917	27.30	3.500	11.24	5.08	1.61
0.417	1.61	2.000	27.30	3.583	11.24	5.17	1.61
0.500	1.61	2.083	27.30	3.667	11.24	5.25	1.61
0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61
1.500	9.64	3.083	20.88	4.667	3.21	6.25	1.61
1.583	9.64	3.167	20.88	4.750	3.21		

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.299 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 35.282
TOTAL RAINFALL (mm)= 80.310
RUNOFF COEFFICIENT = 0.439

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

ADD HYD (0039) | 1 + 2 = 3 |	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0029):	35.41	0.879	2.93	48.71
+ ID2= 2 (0031):	4.52	0.299	3.00	35.28
ID = 3 (0039):	39.93	1.170	2.93	47.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0039) | 3 + 2 = 1 |	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0039):	39.93	1.170	2.93	47.19
+ ID2= 2 (0034):	16.98	1.030	3.25	40.07
ID = 1 (0039):	56.91	2.122	3.17	45.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0036) | ID= 1 DT= 5.0 min	Area (ha)= 3.51 Curve Number (CN)= 81.0 Ia (mm)= 6.00 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= 0.09

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr

0.083	0.00	1.667	9.64	3.250	20.88	4.83	1.61
0.167	0.00	1.750	9.64	3.333	11.24	4.92	1.61
0.250	0.00	1.833	27.30	3.417	11.24	5.00	1.61
0.333	1.61	1.917	27.30	3.500	11.24	5.08	1.61
0.417	1.61	2.000	27.30	3.583	11.24	5.17	1.61
0.500	1.61	2.083	27.30	3.667	11.24	5.25	1.61
0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61
1.500	9.64	3.083	20.88	4.667	3.21	6.25	1.61
1.583	9.64	3.167	20.88	4.750	3.21		

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.460 (i)
TIME TO PEAK (hrs)= 2.750
RUNOFF VOLUME (mm)= 39.686
TOTAL RAINFALL (mm)= 80.310
RUNOFF COEFFICIENT = 0.494

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

CALIB	
STANDHYD (1200)	Area (ha)= 6.76
ID= 1 DT= 2.0 min	Total Imp(%)= 87.00 Dir. Conn.(%)= 87.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.88	0.88
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	212.29	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	2.41
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.133	0.00	1.700	9.64	3.267	16.06	4.83	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.200	0.00	1.767	18.47	3.333	11.24	4.90	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.267	0.81	1.833	27.30	3.400	11.24	4.97	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.633	1.61	2.200	27.30	3.767	8.83	5.33	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.700	1.61	2.267	50.59	3.833	6.42	5.40	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61
1.133	1.61	2.700	73.88	4.267	4.82	5.83	1.61
1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61

1.200	1.61	2.767	47.38	4.333	3.21	5.90	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.267	5.63	2.833	20.88	4.400	3.21	5.97	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.567	9.64	3.133	20.88	4.700	3.21	6.27	0.81

Max.Eff.Inten.(mm/hr)=	73.88	49.65	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.53 (ii)	8.25 (ii)	
Unit Hyd. Tpeak (min)=	4.00	10.00	
Unit Hyd. peak (cms)=	0.26	0.13	
			TOTALS
PEAK FLOW (cms)=	1.21	0.11	1.310 (iii)
TIME TO PEAK (hrs)=	2.73	2.77	2.73
RUNOFF VOLUME (mm)=	79.31	42.05	74.47
TOTAL RAINFALL (mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT =	0.99	0.52	0.93

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0122)	Area (ha)= 5.56
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	2.41
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.133	0.00	1.700	9.64	3.267	16.06	4.83	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.200	0.00	1.767	18.47	3.333	11.24	4.90	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.267	0.81	1.833	27.30	3.400	11.24	4.97	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.633	1.61	2.200	27.30	3.767	8.83	5.33	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.700	1.61	2.267	50.59	3.833	6.42	5.40	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61

```
                1.133    1.61 | 2.700   73.88 | 4.267    4.82 |  5.83    1.61
                1.167    1.61 | 2.733   73.88 | 4.300    3.21 |  5.87    1.61
                1.200    1.61 | 2.767   47.38 | 4.333    3.21 |  5.90    1.61
                1.233    1.61 | 2.800   20.88 | 4.367    3.21 |  5.93    1.61
                1.267    5.63 | 2.833   20.88 | 4.400    3.21 |  5.97    1.61
                1.300    9.64 | 2.867   20.88 | 4.433    3.21 |  6.00    1.61
                1.333    9.64 | 2.900   20.88 | 4.467    3.21 |  6.03    1.61
                1.367    9.64 | 2.933   20.88 | 4.500    3.21 |  6.07    1.61
                1.400    9.64 | 2.967   20.88 | 4.533    3.21 |  6.10    1.61
                1.433    9.64 | 3.000   20.88 | 4.567    3.21 |  6.13    1.61
                1.467    9.64 | 3.033   20.88 | 4.600    3.21 |  6.17    1.61
                1.500    9.64 | 3.067   20.88 | 4.633    3.21 |  6.20    1.61
                1.533    9.64 | 3.100   20.88 | 4.667    3.21 |  6.23    1.61
                1.567    9.64 | 3.133   20.88 | 4.700    3.21 |  6.27    0.81

     Max.Eff.Inten.(mm/hr)=      73.88        73.69
                 over (min)       5.00         6.00
     Storage Coeff.  (min)=       4.27 (ii)    4.77 (ii)
     Unit Hyd. Tpeak (min)=       4.00         6.00
     Unit Hyd. peak  (cms)=       0.27         0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.14         0.00          1.140 (iii)
     TIME TO PEAK    (hrs)=       2.73         2.73           2.73
     RUNOFF VOLUME    (mm)=      79.31        76.82          79.31
     TOTAL RAINFALL   (mm)=      80.31        80.31          80.31
     RUNOFF COEFFICIENT   =       0.99         0.96           0.99


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  99.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0002)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0840      0.1513

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0122)      5.560      1.140      2.73      79.31
   OUTFLOW: ID= 1 (  0002)      5.560      0.173      3.73      79.22

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 15.21
                   TIME SHIFT OF PEAK FLOW         (min)= 60.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.3123

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--------------------
| ADD HYD  (  0024)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  1200):     6.76   1.310     2.73    74.47
      + ID2= 2 (  0002):     5.56   0.173     3.73    79.22
        ==================================================
        ID = 3 (  0024):    12.32   1.446     2.73    76.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| RESERVOIR(  0012)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2030      0.4395
                          0.0150     0.3342   |   0.2360      0.4580
                          0.0290     0.4309   |   0.2670      0.4832
                          0.1610     0.4312   |   1.1520      0.6099

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0024)     12.320      1.446      2.73      76.61
   OUTFLOW: ID= 1 (  0012)     12.320      0.267      4.30      61.17

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 18.46
                   TIME SHIFT OF PEAK FLOW         (min)= 94.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.4832

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| CALIB            |
| STANDHYD (  1300)|   Area    (ha)=   3.57
|ID= 1 DT= 2.0 min |   Total Imp(%)=  87.30   Dir. Conn.(%)=  87.30
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.12          0.45
     Dep. Storage     (mm)=       1.00          5.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     154.27         40.00
     Mannings n           =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	2.41
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.133	0.00	1.700	9.64	3.267	16.06	4.83	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.200	0.00	1.767	18.47	3.333	11.24	4.90	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.267	0.81	1.833	27.30	3.400	11.24	4.97	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.633	1.61	2.200	27.30	3.767	8.83	5.33	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.700	1.61	2.267	50.59	3.833	6.42	5.40	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61
1.133	1.61	2.700	73.88	4.267	4.82	5.83	1.61
1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61
1.200	1.61	2.767	47.38	4.333	3.21	5.90	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.267	5.63	2.833	20.88	4.400	3.21	5.97	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.567	9.64	3.133	20.88	4.700	3.21	6.27	0.81

Max.Eff.Inten.(mm/hr)=	73.88	49.65	
over (min)	5.00	8.00	
Storage Coeff. (min)=	3.74 (ii)	7.42 (ii)	
Unit Hyd. Tpeak (min)=	4.00	8.00	
Unit Hyd. peak (cms)=	0.29	0.15	
			TOTALS
PEAK FLOW (cms)=	0.64	0.06	0.696 (iii)
TIME TO PEAK (hrs)=	2.73	2.77	2.73
RUNOFF VOLUME (mm)=	79.31	42.05	74.58
TOTAL RAINFALL (mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT =	0.99	0.52	0.93

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD (  0133)|   Area    (ha)=   2.76
|ID= 1 DT= 2.0 min |   Total Imp(%)=  99.90   Dir. Conn.(%)=  99.90
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.76          0.00
     Dep. Storage     (mm)=       1.00         51.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     135.65         40.00
     Mannings n           =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.033    0.00 | 1.600    9.64 | 3.167   20.88 |  4.73    3.21
             0.067    0.00 | 1.633    9.64 | 3.200   20.88 |  4.77    2.41
             0.100    0.00 | 1.667    9.64 | 3.233   20.88 |  4.80    1.61
             0.133    0.00 | 1.700    9.64 | 3.267   16.06 |  4.83    1.61
             0.167    0.00 | 1.733    9.64 | 3.300   11.24 |  4.87    1.61
             0.200    0.00 | 1.767   18.47 | 3.333   11.24 |  4.90    1.61
             0.233    0.00 | 1.800   27.30 | 3.367   11.24 |  4.93    1.61
             0.267    0.81 | 1.833   27.30 | 3.400   11.24 |  4.97    1.61
             0.300    1.61 | 1.867   27.30 | 3.433   11.24 |  5.00    1.61
             0.333    1.61 | 1.900   27.30 | 3.467   11.24 |  5.03    1.61
             0.367    1.61 | 1.933   27.30 | 3.500   11.24 |  5.07    1.61
             0.400    1.61 | 1.967   27.30 | 3.533   11.24 |  5.10    1.61
             0.433    1.61 | 2.000   27.30 | 3.567   11.24 |  5.13    1.61
             0.467    1.61 | 2.033   27.30 | 3.600   11.24 |  5.17    1.61
             0.500    1.61 | 2.067   27.30 | 3.633   11.24 |  5.20    1.61
             0.533    1.61 | 2.100   27.30 | 3.667   11.24 |  5.23    1.61
             0.567    1.61 | 2.133   27.30 | 3.700   11.24 |  5.27    1.61
             0.600    1.61 | 2.167   27.30 | 3.733   11.24 |  5.30    1.61
             0.633    1.61 | 2.200   27.30 | 3.767    8.83 |  5.33    1.61
             0.667    1.61 | 2.233   27.30 | 3.800    6.42 |  5.37    1.61
             0.700    1.61 | 2.267   50.59 | 3.833    6.42 |  5.40    1.61
             0.733    1.61 | 2.300   73.88 | 3.867    6.42 |  5.43    1.61
             0.767    1.61 | 2.333   73.88 | 3.900    6.42 |  5.47    1.61
             0.800    1.61 | 2.367   73.88 | 3.933    6.42 |  5.50    1.61
             0.833    1.61 | 2.400   73.88 | 3.967    6.42 |  5.53    1.61
             0.867    1.61 | 2.433   73.88 | 4.000    6.42 |  5.57    1.61
             0.900    1.61 | 2.467   73.88 | 4.033    6.42 |  5.60    1.61
             0.933    1.61 | 2.500   73.88 | 4.067    6.42 |  5.63    1.61
             0.967    1.61 | 2.533   73.88 | 4.100    6.42 |  5.67    1.61
             1.000    1.61 | 2.567   73.88 | 4.133    6.42 |  5.70    1.61
             1.033    1.61 | 2.600   73.88 | 4.167    6.42 |  5.73    1.61
             1.067    1.61 | 2.633   73.88 | 4.200    6.42 |  5.77    1.61
             1.100    1.61 | 2.667   73.88 | 4.233    6.42 |  5.80    1.61
             1.133    1.61 | 2.700   73.88 | 4.267    4.82 |  5.83    1.61
             1.167    1.61 | 2.733   73.88 | 4.300    3.21 |  5.87    1.61
             1.200    1.61 | 2.767   47.38 | 4.333    3.21 |  5.90    1.61
             1.233    1.61 | 2.800   20.88 | 4.367    3.21 |  5.93    1.61
             1.267    5.63 | 2.833   20.88 | 4.400    3.21 |  5.97    1.61
             1.300    9.64 | 2.867   20.88 | 4.433    3.21 |  6.00    1.61
             1.333    9.64 | 2.900   20.88 | 4.467    3.21 |  6.03    1.61
             1.367    9.64 | 2.933   20.88 | 4.500    3.21 |  6.07    1.61
             1.400    9.64 | 2.967   20.88 | 4.533    3.21 |  6.10    1.61
             1.433    9.64 | 3.000   20.88 | 4.567    3.21 |  6.13    1.61
             1.467    9.64 | 3.033   20.88 | 4.600    3.21 |  6.17    1.61
             1.500    9.64 | 3.067   20.88 | 4.633    3.21 |  6.20    1.61
             1.533    9.64 | 3.100   20.88 | 4.667    3.21 |  6.23    1.61
             1.567    9.64 | 3.133   20.88 | 4.700    3.21 |  6.27    0.81

    Max.Eff.Inten.(mm/hr)=      73.88         34.99
                over (min)       5.00          4.00
    Storage Coeff.  (min)=       3.46 (ii)     3.97 (ii)
    Unit Hyd. Tpeak (min)=       4.00          4.00
    Unit Hyd. peak  (cms)=       0.31          0.28
                                                          *TOTALS*
    PEAK FLOW       (cms)=       0.57          0.00          0.566 (iii)
    TIME TO PEAK    (hrs)=       2.73          2.77           2.73
    RUNOFF VOLUME    (mm)=      79.31         26.95          79.26
    TOTAL RAINFALL   (mm)=      80.31         80.31          80.31
    RUNOFF COEFFICIENT   =       0.99          0.34           0.99


      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  99.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
```

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0001) IN= 2---> OUT= 1 DT= 4.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0420	0.0751

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0133)	2.760	0.566	2.73	79.26
OUTFLOW: ID= 1 (0001)	2.760	0.087	3.60	79.09

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.29
TIME SHIFT OF PEAK FLOW (min)= 52.00
MAXIMUM STORAGE USED (ha.m.)= 0.1547

ADD HYD (0027) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0001):	2.76	0.087	3.60	79.09
+ ID2= 2 (1300):	3.57	0.696	2.73	74.58
ID = 3 (0027):	6.33	0.765	2.73	76.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0013) IN= 2---> OUT= 1 DT= 2.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1040	0.2272
	0.0080	0.1711	0.1210	0.2380
	0.0150	0.2214	0.1370	0.2516
	0.0830	0.2217	0.5920	0.3236

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0027)	6.330	0.765	2.73	76.55
OUTFLOW: ID= 1 (0013)	6.330	0.137	4.30	61.64

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.94
TIME SHIFT OF PEAK FLOW (min)= 94.00
MAXIMUM STORAGE USED (ha.m.)= 0.2516

ADD HYD (0035) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0012):	12.32	0.267	4.30	61.17
+ ID2= 2 (0013):	6.33	0.137	4.30	61.64
ID = 3 (0035):	18.65	0.404	4.30	61.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0035) 3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0035):	18.65	0.404	4.30	61.33
+ ID2= 2 (0036):	3.51	0.460	2.75	39.69
ID = 1 (0035):	22.16	0.476	2.73	57.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0040) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0035):	22.16	0.476	2.73	57.90
+ ID2= 2 (0039):	56.91	2.122	3.17	45.06

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        ==================================================
        ID = 3 (  0040):    79.07   2.581     3.23    48.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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==============================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\58e7017b
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\58e7017b


DATE: 03-01-2024                          TIME: 01:27:04

USER:


COMMENTS: _____________________________________________________________


------------------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 07 hurrhaz.stm           **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              68f9ca60-68a4-457b-842b-1f5eebf71d66\629303c6
| Ptotal=212.00 mm |    Comments: HURRICANE HAZEL DESIGN STORM:
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    6.00 |  3.00   13.00 |  6.00   23.00 |  9.00   53.00
                0.25    6.00 |  3.25   13.00 |  6.25   23.00 |  9.25   53.00
                0.50    6.00 |  3.50   13.00 |  6.50   23.00 |  9.50   53.00
                0.75    6.00 |  3.75   13.00 |  6.75   23.00 |  9.75   53.00
                1.00    4.00 |  4.00   17.00 |  7.00   13.00 | 10.00   38.00
                1.25    4.00 |  4.25   17.00 |  7.25   13.00 | 10.25   38.00
                1.50    4.00 |  4.50   17.00 |  7.50   13.00 | 10.50   38.00
                1.75    4.00 |  4.75   17.00 |  7.75   13.00 | 10.75   38.00
                2.00    6.00 |  5.00   13.00 |  8.00   13.00 | 11.00   13.00
                2.25    6.00 |  5.25   13.00 |  8.25   13.00 | 11.25   13.00
                2.50    6.00 |  5.50   13.00 |  8.50   13.00 | 11.50   13.00
                2.75    6.00 |  5.75   13.00 |  8.75   13.00 | 11.75   13.00

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| CALIB            |
| NASHYD   (  0033)|   Area    (ha)=   4.56   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

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


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.00 | 3.083   13.00 | 6.083   23.00 |  9.08   53.00
               0.167    6.00 | 3.167   13.00 | 6.167   23.00 |  9.17   53.00
               0.250    6.00 | 3.250   13.00 | 6.250   23.00 |  9.25   53.00
               0.333    6.00 | 3.333   13.00 | 6.333   23.00 |  9.33   53.00
```

0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.614 (i)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 162.861
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.768

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

CALIB STANDHYD (1100) ID= 1 DT= 2.0 min	Area (ha)= 24.52 Total Imp(%)= 84.00 Dir. Conn.(%)= 84.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00

0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	48.78	
over (min)	8.00	14.00	
Storage Coeff. (min)=	7.61 (ii)	12.30 (ii)	
Unit Hyd. Tpeak (min)=	8.00	14.00	
Unit Hyd. peak (cms)=	0.15	0.09	
			TOTALS
PEAK FLOW (cms)=	3.03	0.52	3.551 (iii)
TIME TO PEAK (hrs)=	10.00	10.00	10.00
RUNOFF VOLUME (mm)=	211.00	160.73	202.96
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	1.00	0.76	0.96

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0111)	Area (ha)= 6.10
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00

2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	52.99	
over (min)	6.00	6.00	
Storage Coeff. (min)=	5.02 (ii)	5.59 (ii)	
Unit Hyd. Tpeak (min)=	6.00	6.00	
Unit Hyd. peak (cms)=	0.21	0.20	
			TOTALS
PEAK FLOW (cms)=	0.90	0.00	0.898 (iii)
TIME TO PEAK (hrs)=	9.97	9.97	9.97
RUNOFF VOLUME (mm)=	210.99	208.46	211.00
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	1.00	0.98	1.00

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0003)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0920	0.1659

**** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0111)	6.100	0.898	9.97	211.00
OUTFLOW: ID= 1 (0003)	6.100	0.375	11.13	210.92

PEAK FLOW REDUCTION [Qout/Qin](%)= 41.80
TIME SHIFT OF PEAK FLOW (min)= 70.00
MAXIMUM STORAGE USED (ha.m.)= 0.6771

ADD HYD (0050)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.52	3.551	10.00	202.96
+ ID2= 2 (0003):	6.10	0.375	11.13	210.92
ID = 3 (0050):	30.62	3.856	10.00	204.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0011)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 2.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE

	(cms)	(ha.m.)		(cms)	(ha.m.)
	0.0000	0.0000		0.4686	1.2877
	0.0158	0.8925		0.5484	1.3960
	0.0439	1.1554		0.6220	1.5142
	0.3705	1.1796		2.8520	2.3383

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0050)	30.620	3.856	10.00	204.54
OUTFLOW: ID= 1 (0011)	30.620	2.852	11.03	177.56

PEAK FLOW REDUCTION [Qout/Qin](%)= 73.96
TIME SHIFT OF PEAK FLOW (min)= 62.00
MAXIMUM STORAGE USED (ha.m.)= 2.3383

CALIB STANDHYD (0030) ID= 1 DT= 2.0 min	Area (ha)= 0.23 Total Imp(%)= 99.99 Dir. Conn.(%)= 99.99

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.23	0.00
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	39.16	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00

1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	48.78	
over (min)	5.00	4.00	
Storage Coeff. (min)=	1.88 (ii)	2.11 (ii)	
Unit Hyd. Tpeak (min)=	4.00	4.00	
Unit Hyd. peak (cms)=	0.42	0.40	
			TOTALS
PEAK FLOW (cms)=	0.03	0.00	0.034 (iii)
TIME TO PEAK (hrs)=	9.53	10.00	9.80
RUNOFF VOLUME (mm)=	211.00	160.73	210.99
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	1.00	0.76	1.00

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0011):	30.62	2.852	11.03	177.56
+ ID2= 2 (0030):	0.23	0.034	9.80	210.99
ID = 3 (0029):	30.85	2.874	11.00	177.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0029) 3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0029):	30.85	2.874	11.00	177.81
+ ID2= 2 (0033):	4.56	0.614	10.00	162.86
ID = 1 (0029):	35.41	3.329	11.00	175.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0034)	Area (ha)=	16.98	Curve Number (CN)=	80.0	
ID= 1 DT= 5.0 min	Ia (mm)=	6.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.60			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 1.081

PEAK FLOW (cms)= 1.884 (i)
TIME TO PEAK (hrs)= 10.417
RUNOFF VOLUME (mm)= 157.458
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.743

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

CALIB					
NASHYD (0031)	Area (ha)=	4.52	Curve Number (CN)=	77.0	
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.41			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00

0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.534 (i)
TIME TO PEAK (hrs)= 10.167
RUNOFF VOLUME (mm)= 148.681
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.701

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

ADD HYD (0039) | 1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0029):		35.41	3.329	11.00	175.88
+ ID2= 2 (0031):		4.52	0.534	10.17	148.68
ID = 3 (0039):		39.93	3.825	10.23	172.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0039) | 3 + 2 = 1		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0039):		39.93	3.825	10.23	172.80
+ ID2= 2 (0034):		16.98	1.884	10.42	157.46
ID = 1 (0039):		56.91	5.688	10.33	168.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB | NASHYD (0036) |ID= 1 DT= 5.0 min				
	Area (ha)=	3.51	Curve Number (CN)=	81.0
	Ia (mm)=	6.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.09		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00

0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.457 (i)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 153.754
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.725

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

CALIB			
STANDHYD (1200)	Area (ha)= 6.76		
ID= 1 DT= 2.0 min	Total Imp(%)= 87.00	Dir. Conn.(%)= 87.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.88	0.88
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	212.29	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00

0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	48.78	
over (min)	6.00	10.00	
Storage Coeff. (min)=	5.17 (ii)	9.43 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.21	0.12	
			TOTALS
PEAK FLOW (cms)=	0.87	0.12	0.984 (iii)
TIME TO PEAK (hrs)=	9.97	10.00	10.00
RUNOFF VOLUME (mm)=	211.00	160.73	204.46
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	1.00	0.76	0.96

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0122)	Area (ha)= 5.56
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00

2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	52.99		
over (min)	5.00	6.00		
Storage Coeff. (min)=	4.88 (ii)	5.45 (ii)		
Unit Hyd. Tpeak (min)=	4.00	6.00		
Unit Hyd. peak (cms)=	0.24	0.20		
			TOTALS	
PEAK FLOW (cms)=	0.82	0.00	0.819 (iii)	
TIME TO PEAK (hrs)=	9.97	9.97	9.97	
RUNOFF VOLUME (mm)=	211.00	208.46	211.00	
TOTAL RAINFALL (mm)=	212.00	212.00	212.00	
RUNOFF COEFFICIENT =	1.00	0.98	1.00	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0002)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0840	0.1513

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0122)	5.560	0.819	9.97	211.00
OUTFLOW: ID= 1 (0002)	5.560	0.343	11.10	210.91

PEAK FLOW REDUCTION [Qout/Qin](%)= 41.85
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.6170

ADD HYD (0024)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (1200):	6.76	0.984	10.00	204.46
	+ ID2= 2 (0002):	5.56	0.343	11.10	210.91
	ID = 3 (0024):	12.32	1.264	10.00	207.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0012)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 2.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.2030	0.4395
	0.0150	0.3342	0.2360	0.4580
	0.0290	0.4309	0.2670	0.4832
	0.1610	0.4312	1.1520	0.6099

	AREA	QPEAK	TPEAK	R.V.

	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0024)	12.320	1.264	10.00	207.37
OUTFLOW: ID= 1 (0012)	12.320	1.152	10.10	189.05

PEAK FLOW REDUCTION [Qout/Qin](%)= 91.13
TIME SHIFT OF PEAK FLOW (min)= 6.00
MAXIMUM STORAGE USED (ha.m.)= 0.6099

CALIB STANDHYD (1300)	Area (ha)= 3.57
ID= 1 DT= 2.0 min	Total Imp(%)= 87.30 Dir. Conn.(%)= 87.30

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.12	0.45
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	154.27	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00

1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	48.78	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.27 (ii)	8.48 (ii)	
Unit Hyd. Tpeak (min)=	4.00	10.00	
Unit Hyd. peak (cms)=	0.27	0.13	
			TOTALS
PEAK FLOW (cms)=	0.46	0.06	0.520 (iii)
TIME TO PEAK (hrs)=	9.97	10.00	10.00
RUNOFF VOLUME (mm)=	211.00	160.73	204.61
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	1.00	0.76	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0133)	Area (ha)= 2.76
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00

0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	52.97
over (min)	5.00	6.00
Storage Coeff. (min)=	3.95 (ii)	4.53 (ii)
Unit Hyd. Tpeak (min)=	4.00	6.00
Unit Hyd. peak (cms)=	0.28	0.22

			TOTALS
PEAK FLOW (cms)=	0.41	0.00	0.406 (iii)
TIME TO PEAK (hrs)=	9.93	10.00	9.97
RUNOFF VOLUME (mm)=	211.00	158.47	210.95
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	1.00	0.75	1.00

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0001)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0420	0.0751

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0133)	2.760	0.406	9.97	210.95
OUTFLOW: ID= 1 (0001)	2.760	0.171	11.10	210.78

PEAK FLOW REDUCTION [Qout/Qin](%)= 42.05
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.3057

ADD HYD (0027)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0001):	2.76	0.171	11.10	210.78
+ ID2= 2 (1300):	3.57	0.520	10.00	204.61
ID = 3 (0027):	6.33	0.660	10.00	207.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0013)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 2.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1040	0.2272
	0.0080	0.1711	0.1210	0.2380
	0.0150	0.2214	0.1370	0.2516
	0.0830	0.2217	0.5920	0.3236

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0027)	6.330	0.660	10.00	207.30
OUTFLOW: ID= 1 (0013)	6.330	0.592	10.07	189.50

PEAK FLOW REDUCTION [Qout/Qin](%)= 89.62
TIME SHIFT OF PEAK FLOW (min)= 4.00
MAXIMUM STORAGE USED (ha.m.)= 0.3236

ADD HYD (0035)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0012):	12.32	1.152	10.10	189.05
+ ID2= 2 (0013):	6.33	0.592	10.07	189.50
ID = 3 (0035):	18.65	1.744	10.10	189.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0035)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0035):	18.65	1.744	10.10	189.20
+ ID2= 2 (0036):	3.51	0.457	10.00	153.75

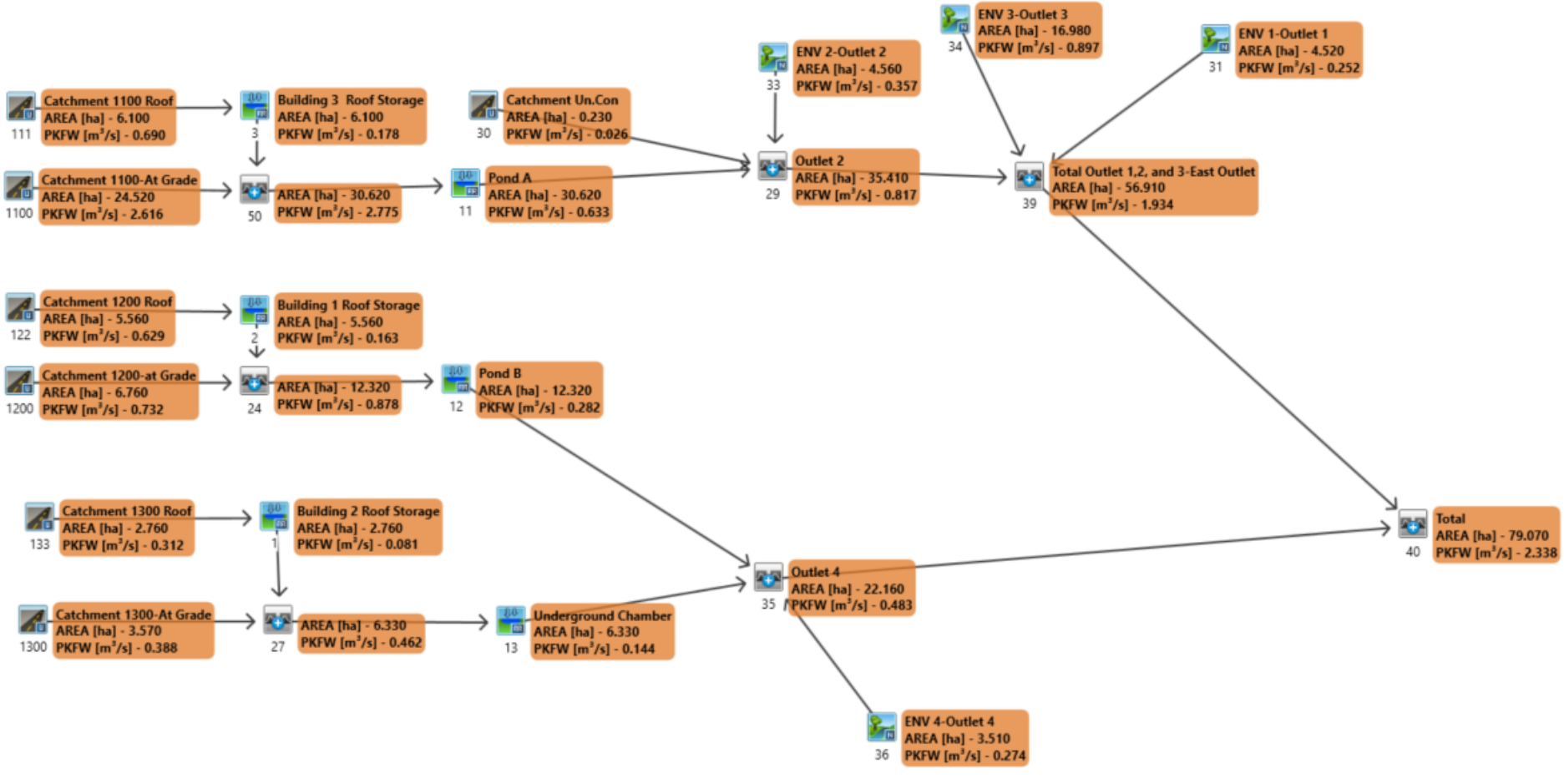
```
        ID = 1 (  0035):    22.16   2.175    10.00   183.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------


--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0035):    22.16   2.175    10.00   183.59
      + ID2= 2 (  0039):    56.91   5.688    10.33   168.22
        ================================================
        ID = 3 (  0040):    79.07   7.716    10.23   172.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

 FINISH
================================================================================================================
```


Catchment 1100 Roof
AREA [ha] - 6.100
PKFW [m³/s] - 0.690
111
Building 3 Roof Storage
AREA [ha] - 6.100
PKFW [m³/s] - 0.178
3
Catchment Un.Con
AREA [ha] - 0.230
PKFW [m³/s] - 0.026
30
ENV 2-Outlet 2
AREA [ha] - 4.560
PKFW [m³/s] - 0.357
33
ENV 3-Outlet 3
AREA [ha] - 16.980
PKFW [m³/s] - 0.897
34
ENV 1-Outlet 1
AREA [ha] - 4.520
PKFW [m³/s] - 0.252
31
Catchment 1100-At Grade
AREA [ha] - 24.520
PKFW [m³/s] - 2.616
1100
AREA [ha] - 30.620
PKFW [m³/s] - 2.775
50
Pond A
AREA [ha] - 30.620
PKFW [m³/s] - 0.633
11
Outlet 2
AREA [ha] - 35.410
PKFW [m³/s] - 0.817
29
Total Outlet 1,2, and 3-East Outlet
AREA [ha] - 56.910
PKFW [m³/s] - 1.934
39
Catchment 1200 Roof
AREA [ha] - 5.560
PKFW [m³/s] - 0.629
122
Building 1 Roof Storage
AREA [ha] - 5.560
PKFW [m³/s] - 0.163
2
Catchment 1200-at Grade
AREA [ha] - 6.760
PKFW [m³/s] - 0.732
1200
AREA [ha] - 12.320
PKFW [m³/s] - 0.878
24
Pond B
AREA [ha] - 12.320
PKFW [m³/s] - 0.282
12
Catchment 1300 Roof
AREA [ha] - 2.760
PKFW [m³/s] - 0.312
133
Building 2 Roof Storage
AREA [ha] - 2.760
PKFW [m³/s] - 0.081
1
Catchment 1300-At Grade
AREA [ha] - 3.570
PKFW [m³/s] - 0.388
1300
AREA [ha] - 6.330
PKFW [m³/s] - 0.462
27
Underground Chamber
AREA [ha] - 6.330
PKFW [m³/s] - 0.144
13
Outlet 4
AREA [ha] - 22.160
PKFW [m³/s] - 0.483
35
Total
AREA [ha] - 79.070
PKFW [m³/s] - 2.338
40
ENV 4-Outlet 4
AREA [ha] - 3.510
PKFW [m³/s] - 0.274
36

```
==========================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\3a0075ca
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\3a0075ca


DATE: 03-01-2024                          TIME: 01:17:36

USER:



COMMENTS: _____________________________________________________________

----------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 01 2YR12HR                **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              8a0d0ce7-501d-4e6c-b5b0-013bae96712b\384f4442
| Ptotal= 42.00 mm |    Comments: 2yr/12hr
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	7.14	6.50	2.94	9.75	0.42
0.25	0.42	3.50	7.14	6.75	2.94	10.00	0.42
0.50	0.42	3.75	7.14	7.00	2.94	10.25	0.42
0.75	0.42	4.00	7.14	7.25	1.68	10.50	0.42
1.00	0.42	4.25	19.32	7.50	1.68	10.75	0.42
1.25	0.42	4.50	19.32	7.75	1.68	11.00	0.42
1.50	0.42	4.75	19.32	8.00	1.68	11.25	0.42
1.75	0.42	5.00	19.32	8.25	0.84	11.50	0.42
2.00	0.42	5.25	5.46	8.50	0.84	11.75	0.42
2.25	2.52	5.50	5.46	8.75	0.84	12.00	0.42
2.50	2.52	5.75	5.46	9.00	0.84		
2.75	2.52	6.00	5.46	9.25	0.42		
3.00	2.52	6.25	2.94	9.50	0.42		

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| CALIB            |
| NASHYD   (  0033)|   Area    (ha)=   4.56   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

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


                        ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42

0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.108 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 14.740
TOTAL RAINFALL (mm)= 42.000
RUNOFF COEFFICIENT = 0.351

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

CALIB
STANDHYD (1100)
ID= 1 DT= 2.0 min

Area (ha)= 24.52
Total Imp(%)= 84.00 Dir. Conn.(%)= 84.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.63
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.133	0.00	3.200	2.52	6.267	4.20	9.33	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.200	0.00	3.267	4.83	6.333	2.94	9.40	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.267	0.21	3.333	7.14	6.400	2.94	9.47	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42

0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.133	0.42	4.200	7.14	7.267	2.31	10.33	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.200	0.42	4.267	13.23	7.333	1.68	10.40	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.133	0.42	5.200	19.32	8.267	1.26	11.33	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.200	0.42	5.267	12.39	8.333	0.84	11.40	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.267	1.47	5.333	5.46	8.400	0.84	11.47	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.067	2.52	6.133	5.46	9.200	0.84	12.27	0.21

Max.Eff.Inten.(mm/hr)=	19.32	9.23	
over (min)	12.00	20.00	
Storage Coeff. (min)=	11.40 (ii)	18.42 (ii)	
Unit Hyd. Tpeak (min)=	12.00	20.00	
Unit Hyd. peak (cms)=	0.10	0.06	
			TOTALS
PEAK FLOW (cms)=	1.10	0.08	1.174 (iii)
TIME TO PEAK (hrs)=	5.23	5.37	5.23
RUNOFF VOLUME (mm)=	41.00	14.17	36.71
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.34	0.87

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0111)	Area (ha)= 6.10
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.63
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.133	0.00	3.200	2.52	6.267	4.20	9.33	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.200	0.00	3.267	4.83	6.333	2.94	9.40	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.267	0.21	3.333	7.14	6.400	2.94	9.47	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.133	0.42	4.200	7.14	7.267	2.31	10.33	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.200	0.42	4.267	13.23	7.333	1.68	10.40	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42

2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.133	0.42	5.200	19.32	8.267	1.26	11.33	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.200	0.42	5.267	12.39	8.333	0.84	11.40	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.267	1.47	5.333	5.46	8.400	0.84	11.47	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.067	2.52	6.133	5.46	9.200	0.84	12.27	0.21

Max.Eff.Inten.(mm/hr)=	19.32	19.17	
over (min)	8.00	10.00	
Storage Coeff. (min)=	7.51 (ii)	8.37 (ii)	
Unit Hyd. Tpeak (min)=	8.00	10.00	
Unit Hyd. peak (cms)=	0.15	0.13	
			TOTALS
PEAK FLOW (cms)=	0.33	0.00	0.327 (iii)
TIME TO PEAK (hrs)=	5.23	5.23	5.23
RUNOFF VOLUME (mm)=	41.00	38.59	41.00
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.92	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0003)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0920	0.1659

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0111)	6.100	0.327	5.23	41.00
OUTFLOW: ID= 1 (0003)	6.100	0.084	6.33	40.92

PEAK FLOW REDUCTION [Qout/Qin](%)= 25.58
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.1510

ADD HYD (0050)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.52	1.174	5.23	36.71
+ ID2= 2 (0003):	6.10	0.084	6.33	40.92
ID = 3 (0050):	30.62	1.246	5.23	37.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0011)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 2.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE

	(cms)	(ha.m.)		(cms)	(ha.m.)
	0.0000	0.0000		0.4686	1.2877
	0.0158	0.8925		0.5484	1.3960
	0.0439	1.1554		0.6220	1.5142
	0.3705	1.1796		2.8520	2.3383

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0050)	30.620	1.246	5.23	37.55
OUTFLOW: ID= 1 (0011)	30.620	0.030	13.30	13.62

PEAK FLOW REDUCTION [Qout/Qin](%)= 2.44
TIME SHIFT OF PEAK FLOW (min)=484.00
MAXIMUM STORAGE USED (ha.m.)= 1.0289

CALIB STANDHYD (0030) ID= 1 DT= 2.0 min	Area (ha)= 0.23 Total Imp(%)= 99.99 Dir. Conn.(%)= 99.99

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.23	0.00
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	39.16	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.63
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.133	0.00	3.200	2.52	6.267	4.20	9.33	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.200	0.00	3.267	4.83	6.333	2.94	9.40	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.267	0.21	3.333	7.14	6.400	2.94	9.47	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.133	0.42	4.200	7.14	7.267	2.31	10.33	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.200	0.42	4.267	13.23	7.333	1.68	10.40	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42

1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.133	0.42	5.200	19.32	8.267	1.26	11.33	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.200	0.42	5.267	12.39	8.333	0.84	11.40	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.267	1.47	5.333	5.46	8.400	0.84	11.47	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.067	2.52	6.133	5.46	9.200	0.84	12.27	0.21

Max.Eff.Inten.(mm/hr)=	19.32	9.23		
over (min)	5.00	4.00		
Storage Coeff. (min)=	2.81 (ii)	3.15 (ii)		
Unit Hyd. Tpeak (min)=	4.00	4.00		
Unit Hyd. peak (cms)=	0.34	0.37		
			TOTALS	
PEAK FLOW (cms)=	0.01	0.00	0.012 (iii)	
TIME TO PEAK (hrs)=	4.90	5.23	5.23	
RUNOFF VOLUME (mm)=	41.00	14.17	40.99	
TOTAL RAINFALL (mm)=	42.00	42.00	42.00	
RUNOFF COEFFICIENT =	0.98	0.34	0.98	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0011):		30.62	0.030	13.30	13.62
+ ID2= 2 (0030):		0.23	0.012	5.23	40.99
ID = 3 (0029):		30.85	0.030	13.30	13.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0029):		30.85	0.030	13.30	13.83
+ ID2= 2 (0033):		4.56	0.108	5.25	14.74
ID = 1 (0029):		35.41	0.128	5.23	13.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0034)	Area (ha)=	16.98	Curve Number (CN)=	80.0	
ID= 1 DT= 5.0 min	Ia (mm)=	6.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.60			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42
0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

Unit Hyd Qpeak (cms)= 1.081

PEAK FLOW (cms)= 0.240 (i)
TIME TO PEAK (hrs)= 5.583
RUNOFF VOLUME (mm)= 13.025
TOTAL RAINFALL (mm)= 42.000
RUNOFF COEFFICIENT = 0.310

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

CALIB					
NASHYD (0031)	Area (ha)=	4.52	Curve Number (CN)=	77.0	
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.41			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42

0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.062 (i)
TIME TO PEAK (hrs)= 5.417
RUNOFF VOLUME (mm)= 10.520
TOTAL RAINFALL (mm)= 42.000
RUNOFF COEFFICIENT = 0.250

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

ADD HYD (0039) | 1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 1 (0029):	35.41	0.128	5.23	13.94
+	ID2= 2 (0031):	4.52	0.062	5.42	10.52
	ID = 3 (0039):	39.93	0.184	5.27	13.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0039) | 3 + 2 = 1		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 3 (0039):	39.93	0.184	5.27	13.56
+	ID2= 2 (0034):	16.98	0.240	5.58	13.02
	ID = 1 (0039):	56.91	0.394	5.40	13.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB | NASHYD (0036) | ID= 1 DT= 5.0 min				
	Area (ha)=	3.51	Curve Number (CN)=	81.0
	Ia (mm)=	6.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.09		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42

0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42
0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.084 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 13.047
TOTAL RAINFALL (mm)= 42.000
RUNOFF COEFFICIENT = 0.311

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

CALIB	
STANDHYD (1200)	Area (ha)= 6.76
ID= 1 DT= 2.0 min	Total Imp(%)= 87.00 Dir. Conn.(%)= 87.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.88	0.88
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	212.29	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.63
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.133	0.00	3.200	2.52	6.267	4.20	9.33	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.200	0.00	3.267	4.83	6.333	2.94	9.40	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.267	0.21	3.333	7.14	6.400	2.94	9.47	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42

0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.133	0.42	4.200	7.14	7.267	2.31	10.33	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.200	0.42	4.267	13.23	7.333	1.68	10.40	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.133	0.42	5.200	19.32	8.267	1.26	11.33	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.200	0.42	5.267	12.39	8.333	0.84	11.40	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.267	1.47	5.333	5.46	8.400	0.84	11.47	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.067	2.52	6.133	5.46	9.200	0.84	12.27	0.21

Max.Eff.Inten.(mm/hr)=	19.32	9.23	
over (min)	8.00	16.00	
Storage Coeff. (min)=	7.75 (ii)	14.11 (ii)	
Unit Hyd. Tpeak (min)=	8.00	16.00	
Unit Hyd. peak (cms)=	0.14	0.08	
			TOTALS
PEAK FLOW (cms)=	0.32	0.02	0.334 (iii)
TIME TO PEAK (hrs)=	5.23	5.30	5.23
RUNOFF VOLUME (mm)=	41.00	14.17	37.51
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.34	0.89

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0122)	Area (ha)= 5.56
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.63
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.133	0.00	3.200	2.52	6.267	4.20	9.33	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.200	0.00	3.267	4.83	6.333	2.94	9.40	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.267	0.21	3.333	7.14	6.400	2.94	9.47	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.133	0.42	4.200	7.14	7.267	2.31	10.33	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.200	0.42	4.267	13.23	7.333	1.68	10.40	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42

2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.133	0.42	5.200	19.32	8.267	1.26	11.33	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.200	0.42	5.267	12.39	8.333	0.84	11.40	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.267	1.47	5.333	5.46	8.400	0.84	11.47	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.067	2.52	6.133	5.46	9.200	0.84	12.27	0.21

			TOTALS
Max.Eff.Inten.(mm/hr)=	19.32	19.17	
over (min)	8.00	10.00	
Storage Coeff. (min)=	7.31 (ii)	8.17 (ii)	
Unit Hyd. Tpeak (min)=	8.00	10.00	
Unit Hyd. peak (cms)=	0.15	0.13	
PEAK FLOW (cms)=	0.30	0.00	0.298 (iii)
TIME TO PEAK (hrs)=	5.23	5.23	5.23
RUNOFF VOLUME (mm)=	41.00	38.59	41.00
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.92	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0002)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0840	0.1513

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0122)	5.560	0.298	5.23	41.00
OUTFLOW: ID= 1 (0002)	5.560	0.076	6.33	40.91

PEAK FLOW REDUCTION [Qout/Qin](%)= 25.61
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.1376

ADD HYD (0024)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1200):	6.76	0.334	5.23	37.51
+ ID2= 2 (0002):	5.56	0.076	6.33	40.91
ID = 3 (0024):	12.32	0.400	5.23	39.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0012)	OVERFLOW IS OFF
IN= 2---> OUT= 1	

DT= 2.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.2030	0.4395
	0.0150	0.3342	0.2360	0.4580
	0.0290	0.4309	0.2670	0.4832
	0.1610	0.4312	1.1520	0.6099

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0024)	12.320	0.400	5.23	39.05
OUTFLOW: ID= 1 (0012)	12.320	0.022	14.33	24.67

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.54
TIME SHIFT OF PEAK FLOW (min)=546.00
MAXIMUM STORAGE USED (ha.m.)= 0.3837

CALIB STANDHYD (1300) ID= 1 DT= 2.0 min	Area (ha)= 3.57 Total Imp(%)= 87.30 Dir. Conn.(%)= 87.30

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.12	0.45
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	154.27	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.63
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.133	0.00	3.200	2.52	6.267	4.20	9.33	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.200	0.00	3.267	4.83	6.333	2.94	9.40	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.267	0.21	3.333	7.14	6.400	2.94	9.47	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.133	0.42	4.200	7.14	7.267	2.31	10.33	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.200	0.42	4.267	13.23	7.333	1.68	10.40	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42

1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.133	0.42	5.200	19.32	8.267	1.26	11.33	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.200	0.42	5.267	12.39	8.333	0.84	11.40	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.267	1.47	5.333	5.46	8.400	0.84	11.47	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.067	2.52	6.133	5.46	9.200	0.84	12.27	0.21

Max.Eff.Inten.(mm/hr)=	19.32	9.23		
over (min)	6.00	14.00		
Storage Coeff. (min)=	6.40 (ii)	12.70 (ii)		
Unit Hyd. Tpeak (min)=	6.00	14.00		
Unit Hyd. peak (cms)=	0.18	0.09		
			TOTALS	
PEAK FLOW (cms)=	0.17	0.01	0.177 (iii)	
TIME TO PEAK (hrs)=	5.23	5.30	5.23	
RUNOFF VOLUME (mm)=	41.00	14.17	37.59	
TOTAL RAINFALL (mm)=	42.00	42.00	42.00	
RUNOFF COEFFICIENT =	0.98	0.34	0.90	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0133)	Area (ha)= 2.76
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.63

0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.133	0.00	3.200	2.52	6.267	4.20	9.33	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.200	0.00	3.267	4.83	6.333	2.94	9.40	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.267	0.21	3.333	7.14	6.400	2.94	9.47	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.133	0.42	4.200	7.14	7.267	2.31	10.33	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.200	0.42	4.267	13.23	7.333	1.68	10.40	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.133	0.42	5.200	19.32	8.267	1.26	11.33	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.200	0.42	5.267	12.39	8.333	0.84	11.40	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.267	1.47	5.333	5.46	8.400	0.84	11.47	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42

```
               2.900    2.52 | 5.967    5.46 | 9.033    0.84 | 12.10    0.42
               2.933    2.52 | 6.000    5.46 | 9.067    0.84 | 12.13    0.42
               2.967    2.52 | 6.033    5.46 | 9.100    0.84 | 12.17    0.42
               3.000    2.52 | 6.067    5.46 | 9.133    0.84 | 12.20    0.42
               3.033    2.52 | 6.100    5.46 | 9.167    0.84 | 12.23    0.42
               3.067    2.52 | 6.133    5.46 | 9.200    0.84 | 12.27    0.21

     Max.Eff.Inten.(mm/hr)=      19.32         0.00
               over (min)         6.00         8.00
     Storage Coeff.  (min)=       5.92 (ii)    6.78 (ii)
     Unit Hyd. Tpeak (min)=       6.00         8.00
     Unit Hyd. peak  (cms)=       0.19         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.15         0.00          0.148 (iii)
     TIME TO PEAK    (hrs)=       5.23         0.00           5.23
     RUNOFF VOLUME    (mm)=      41.00         0.00          40.96
     TOTAL RAINFALL   (mm)=      42.00        42.00          42.00
     RUNOFF COEFFICIENT   =       0.98         0.00           0.98

***** WARNING: THE PERVIOUS AREA HAS NO FLOW .

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  99.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0001)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0420      0.0751

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0133)      2.760      0.148      5.23      40.96
   OUTFLOW: ID= 1 (  0001)      2.760      0.038      6.30      40.79

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 25.74
                  TIME SHIFT OF PEAK FLOW         (min)= 64.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0681

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0027)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     2.76   0.038     6.30    40.79
      + ID2= 2 (  1300):     3.57   0.177     5.23    37.59
        ================================================
        ID = 3 (  0027):     6.33   0.211     5.23    38.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0013)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1040      0.2272
                          0.0080     0.1711   |   0.1210      0.2380
                          0.0150     0.2214   |   0.1370      0.2516
                          0.0830     0.2217   |   0.5920      0.3236

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0027)      6.330      0.211      5.23      38.99
   OUTFLOW: ID= 1 (  0013)      6.330      0.012     14.00      25.17

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.48
                  TIME SHIFT OF PEAK FLOW         (min)=526.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1967

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0012):    12.32   0.022    14.33    24.67
      + ID2= 2 (  0013):     6.33   0.012    14.00    25.17
```

```
        ================================================
        ID = 3 (  0035):    18.65   0.034    14.23    24.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0035):    18.65   0.034    14.23    24.84
      + ID2= 2 (  0036):     3.51   0.084     5.25    13.05
        ================================================
        ID = 1 (  0035):    22.16   0.095     5.23    22.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0035):    22.16   0.095     5.23    22.97
      + ID2= 2 (  0039):    56.91   0.394     5.40    13.40
        ================================================
        ID = 3 (  0040):    79.07   0.470     5.27    16.08

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\2d4ac97c
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\2d4ac97c


DATE: 03-01-2024                          TIME: 01:17:36

USER:


COMMENTS: _____________________________________________________________


--------------------------------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 02 5YR12HR                **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              8a0d0ce7-501d-4e6c-b5b0-013bae96712b\545c1c68
| Ptotal= 54.38 mm |    Comments: 5yr/12hr
--------------------
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
                0.00     0.00 |  3.25     9.25 |  6.50     3.81 |  9.75     0.54
                0.25     0.54 |  3.50     9.25 |  6.75     3.81 | 10.00     0.54
                0.50     0.54 |  3.75     9.25 |  7.00     3.81 | 10.25     0.54
                0.75     0.54 |  4.00     9.25 |  7.25     2.18 | 10.50     0.54
                1.00     0.54 |  4.25    25.02 |  7.50     2.18 | 10.75     0.54
                1.25     0.54 |  4.50    25.02 |  7.75     2.18 | 11.00     0.54
                1.50     0.54 |  4.75    25.02 |  8.00     2.18 | 11.25     0.54
```

1.75	0.54	5.00	25.02	8.25	1.09	11.50	0.54
2.00	0.54	5.25	7.07	8.50	1.09	11.75	0.54
2.25	3.26	5.50	7.07	8.75	1.09	12.00	0.54
2.50	3.26	5.75	7.07	9.00	1.09		
2.75	3.26	6.00	7.07	9.25	0.54		
3.00	3.26	6.25	3.81	9.50	0.54		

CALIB NASHYD (0033) ID= 1 DT= 5.0 min	Area (ha)= 4.56	Curve Number (CN)= 82.0
	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.22	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54
2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.169 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 23.162
TOTAL RAINFALL (mm)= 54.380
RUNOFF COEFFICIENT = 0.426

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

CALIB STANDHYD (1100) ID= 1 DT= 2.0 min	Area (ha)= 24.52	
	Total Imp(%)= 84.00	Dir. Conn.(%)= 84.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.81
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.133	0.00	3.200	3.26	6.267	5.44	9.33	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.200	0.00	3.267	6.25	6.333	3.81	9.40	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.267	0.27	3.333	9.25	6.400	3.81	9.47	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.133	0.54	4.200	9.25	7.267	3.00	10.33	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.200	0.54	4.267	17.13	7.333	2.18	10.40	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.133	0.54	5.200	25.02	8.267	1.64	11.33	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.200	0.54	5.267	16.05	8.333	1.09	11.40	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.267	1.90	5.333	7.07	8.400	1.09	11.47	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54

2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.067	3.26	6.133	7.07	9.200	1.09	12.27	0.27

Max.Eff.Inten.(mm/hr)=	25.02	14.22	
over (min)	10.00	18.00	
Storage Coeff. (min)=	10.28 (ii)	16.61 (ii)	
Unit Hyd. Tpeak (min)=	10.00	18.00	
Unit Hyd. peak (cms)=	0.11	0.07	
			TOTALS
PEAK FLOW (cms)=	1.43	0.13	1.552 (iii)
TIME TO PEAK (hrs)=	5.23	5.33	5.23
RUNOFF VOLUME (mm)=	53.38	22.38	48.42
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.41	0.89

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0111)	Area (ha)= 6.10
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.81
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.133	0.00	3.200	3.26	6.267	5.44	9.33	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.200	0.00	3.267	6.25	6.333	3.81	9.40	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.267	0.27	3.333	9.25	6.400	3.81	9.47	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54

1.133	0.54	4.200	9.25	7.267	3.00	10.33	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.200	0.54	4.267	17.13	7.333	2.18	10.40	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.133	0.54	5.200	25.02	8.267	1.64	11.33	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.200	0.54	5.267	16.05	8.333	1.09	11.40	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.267	1.90	5.333	7.07	8.400	1.09	11.47	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.067	3.26	6.133	7.07	9.200	1.09	12.27	0.27

			TOTALS
Max.Eff.Inten.(mm/hr)=	25.02	24.90	
over (min)	6.00	8.00	
Storage Coeff. (min)=	6.77 (ii)	7.55 (ii)	
Unit Hyd. Tpeak (min)=	6.00	8.00	
Unit Hyd. peak (cms)=	0.17	0.15	
PEAK FLOW (cms)=	0.42	0.00	0.424 (iii)
TIME TO PEAK (hrs)=	5.23	5.23	5.23
RUNOFF VOLUME (mm)=	53.38	50.93	53.38
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.94	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0003)| IN= 2---> OUT= 1 | DT= 4.0 min	OVERFLOW IS OFF		OUTFLOW	STORAGE

```
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0920      0.1659
     **** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0111)      6.100      0.424      5.23      53.38
   OUTFLOW: ID= 1 (  0003)      6.100      0.109      6.30      53.30

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 25.69
                    TIME SHIFT OF PEAK FLOW         (min)= 64.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.1964

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--------------------
| ADD HYD  (  0050)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  1100):    24.52   1.552     5.23    48.42
      + ID2= 2 (  0003):     6.10   0.109     6.30    53.30
        ================================================
        ID = 3 (  0050):    30.62   1.648     5.23    49.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0011)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.4686      1.2877
                         0.0158     0.8925   |   0.5484      1.3960
                         0.0439     1.1554   |   0.6220      1.5142
                         0.3705     1.1796   |   2.8520      2.3383

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0050)     30.620      1.648      5.23      49.39
   OUTFLOW: ID= 1 (  0011)     30.620      0.234      8.17      24.05

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 14.23
                    TIME SHIFT OF PEAK FLOW         (min)=176.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  1.1695

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--------------------
| CALIB            |
| STANDHYD (  0030)|   Area    (ha)=   0.23
|ID= 1 DT= 2.0 min |   Total Imp(%)=  99.99   Dir. Conn.(%)=  99.99
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23         0.00
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      39.16        40.00
     Mannings n             =    0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
              0.033     0.00 | 3.100     3.26 | 6.167     7.07 |  9.23     1.09
              0.067     0.00 | 3.133     3.26 | 6.200     7.07 |  9.27     0.81
              0.100     0.00 | 3.167     3.26 | 6.233     7.07 |  9.30     0.54
              0.133     0.00 | 3.200     3.26 | 6.267     5.44 |  9.33     0.54
              0.167     0.00 | 3.233     3.26 | 6.300     3.81 |  9.37     0.54
              0.200     0.00 | 3.267     6.25 | 6.333     3.81 |  9.40     0.54
              0.233     0.00 | 3.300     9.25 | 6.367     3.81 |  9.43     0.54
              0.267     0.27 | 3.333     9.25 | 6.400     3.81 |  9.47     0.54
              0.300     0.54 | 3.367     9.25 | 6.433     3.81 |  9.50     0.54
              0.333     0.54 | 3.400     9.25 | 6.467     3.81 |  9.53     0.54
              0.367     0.54 | 3.433     9.25 | 6.500     3.81 |  9.57     0.54
              0.400     0.54 | 3.467     9.25 | 6.533     3.81 |  9.60     0.54
              0.433     0.54 | 3.500     9.25 | 6.567     3.81 |  9.63     0.54
              0.467     0.54 | 3.533     9.25 | 6.600     3.81 |  9.67     0.54
              0.500     0.54 | 3.567     9.25 | 6.633     3.81 |  9.70     0.54
              0.533     0.54 | 3.600     9.25 | 6.667     3.81 |  9.73     0.54
              0.567     0.54 | 3.633     9.25 | 6.700     3.81 |  9.77     0.54
              0.600     0.54 | 3.667     9.25 | 6.733     3.81 |  9.80     0.54
              0.633     0.54 | 3.700     9.25 | 6.767     3.81 |  9.83     0.54
              0.667     0.54 | 3.733     9.25 | 6.800     3.81 |  9.87     0.54
```

0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.133	0.54	4.200	9.25	7.267	3.00	10.33	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.200	0.54	4.267	17.13	7.333	2.18	10.40	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.133	0.54	5.200	25.02	8.267	1.64	11.33	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.200	0.54	5.267	16.05	8.333	1.09	11.40	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.267	1.90	5.333	7.07	8.400	1.09	11.47	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.067	3.26	6.133	7.07	9.200	1.09	12.27	0.27

			TOTALS
Max.Eff.Inten.(mm/hr)=	25.02	14.22	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.53 (ii)	2.84 (ii)	
Unit Hyd. Tpeak (min)=	4.00	4.00	
Unit Hyd. peak (cms)=	0.36	0.38	
PEAK FLOW (cms)=	0.02	0.00	0.016 (iii)
TIME TO PEAK (hrs)=	4.97	5.23	5.23
RUNOFF VOLUME (mm)=	53.38	22.38	53.37
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.41	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)|	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0011):		30.62	0.234	8.17	24.05
+ ID2= 2 (0030):		0.23	0.016	5.23	53.37
ID = 3 (0029):		30.85	0.236	8.17	24.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0029)|	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0029):		30.85	0.236	8.17	24.26
+ ID2= 2 (0033):		4.56	0.169	5.25	23.16
ID = 1 (0029):		35.41	0.255	8.17	24.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (0034)	Area (ha)= 16.98	Curve Number (CN)= 80.0	
ID= 1 DT= 5.0 min	Ia (mm)= 6.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.60		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54
2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

Unit Hyd Qpeak (cms)= 1.081

```
     PEAK FLOW       (cms)=   0.394 (i)
     TIME TO PEAK    (hrs)=   5.583
     RUNOFF VOLUME    (mm)=  20.920
     TOTAL RAINFALL   (mm)=  54.380
     RUNOFF COEFFICIENT   =   0.385

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

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--------------------
| CALIB              |
| NASHYD   (  0031)|   Area    (ha)=   4.52   Curve Number   (CN)= 77.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.41

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54
2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

```
     Unit Hyd Qpeak  (cms)=   0.421

     PEAK FLOW       (cms)=   0.105 (i)
     TIME TO PEAK    (hrs)=   5.417
     RUNOFF VOLUME    (mm)=  17.594
     TOTAL RAINFALL   (mm)=  54.380
     RUNOFF COEFFICIENT   =   0.324

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

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--------------------
| ADD HYD  (  0039)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (  0029):    35.41   0.255     8.17    24.12
     + ID2= 2 (  0031):     4.52   0.105     5.42    17.59
       ================================================
       ID = 3 (  0039):    39.93   0.293     5.27    23.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (  0039)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK      R.V.
--------------------           (ha)    (cms)    (hrs)      (mm)
       ID1= 3 (  0039):    39.93   0.293     5.27     23.38
     + ID2= 2 (  0034):    16.98   0.394     5.58     20.92
       ================================================
       ID = 1 (  0039):    56.91   0.643     5.40     22.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| NASHYD   (  0036)|   Area    (ha)=   3.51   Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

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


                          ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    0.00 | 3.167    3.26 | 6.250    7.07 |  9.33    0.54
 0.167    0.00 | 3.250    3.26 | 6.333    3.81 |  9.42    0.54
 0.250    0.00 | 3.333    9.25 | 6.417    3.81 |  9.50    0.54
 0.333    0.54 | 3.417    9.25 | 6.500    3.81 |  9.58    0.54
 0.417    0.54 | 3.500    9.25 | 6.583    3.81 |  9.67    0.54
 0.500    0.54 | 3.583    9.25 | 6.667    3.81 |  9.75    0.54
 0.583    0.54 | 3.667    9.25 | 6.750    3.81 |  9.83    0.54
 0.667    0.54 | 3.750    9.25 | 6.833    3.81 |  9.92    0.54
 0.750    0.54 | 3.833    9.25 | 6.917    3.81 | 10.00    0.54
 0.833    0.54 | 3.917    9.25 | 7.000    3.81 | 10.08    0.54
 0.917    0.54 | 4.000    9.25 | 7.083    3.81 | 10.17    0.54
 1.000    0.54 | 4.083    9.25 | 7.167    3.81 | 10.25    0.54
 1.083    0.54 | 4.167    9.25 | 7.250    3.81 | 10.33    0.54
 1.167    0.54 | 4.250    9.25 | 7.333    2.18 | 10.42    0.54
 1.250    0.54 | 4.333   25.02 | 7.417    2.18 | 10.50    0.54
 1.333    0.54 | 4.417   25.02 | 7.500    2.18 | 10.58    0.54
 1.417    0.54 | 4.500   25.02 | 7.583    2.18 | 10.67    0.54
 1.500    0.54 | 4.583   25.02 | 7.667    2.18 | 10.75    0.54
 1.583    0.54 | 4.667   25.02 | 7.750    2.18 | 10.83    0.54
 1.667    0.54 | 4.750   25.02 | 7.833    2.18 | 10.92    0.54
 1.750    0.54 | 4.833   25.02 | 7.917    2.18 | 11.00    0.54
 1.833    0.54 | 4.917   25.02 | 8.000    2.18 | 11.08    0.54
 1.917    0.54 | 5.000   25.02 | 8.083    2.18 | 11.17    0.54
 2.000    0.54 | 5.083   25.02 | 8.167    2.18 | 11.25    0.54
 2.083    0.54 | 5.167   25.02 | 8.250    2.18 | 11.33    0.54
 2.167    0.54 | 5.250   25.02 | 8.333    1.09 | 11.42    0.54
 2.250    0.54 | 5.333    7.07 | 8.417    1.09 | 11.50    0.54
 2.333    3.26 | 5.417    7.07 | 8.500    1.09 | 11.58    0.54
 2.417    3.26 | 5.500    7.07 | 8.583    1.09 | 11.67    0.54
 2.500    3.26 | 5.583    7.07 | 8.667    1.09 | 11.75    0.54
 2.583    3.26 | 5.667    7.07 | 8.750    1.09 | 11.83    0.54
 2.667    3.26 | 5.750    7.07 | 8.833    1.09 | 11.92    0.54
 2.750    3.26 | 5.833    7.07 | 8.917    1.09 | 12.00    0.54
 2.833    3.26 | 5.917    7.07 | 9.000    1.09 | 12.08    0.54
 2.917    3.26 | 6.000    7.07 | 9.083    1.09 | 12.17    0.54
 3.000    3.26 | 6.083    7.07 | 9.167    1.09 | 12.25    0.54
 3.083    3.26 | 6.167    7.07 | 9.250    1.09 |

     Unit Hyd Qpeak  (cms)=   1.490

     PEAK FLOW       (cms)=   0.131 (i)
     TIME TO PEAK    (hrs)=   5.250
     RUNOFF VOLUME    (mm)=  20.862
     TOTAL RAINFALL   (mm)=  54.380
     RUNOFF COEFFICIENT   =   0.384

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

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| CALIB            |
| STANDHYD (  1200)|   Area    (ha)=   6.76
|ID= 1 DT= 2.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
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                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.88          0.88
     Dep. Storage     (mm)=       1.00          5.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     212.29         40.00
     Mannings n           =      0.013         0.250
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NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.81
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.133	0.00	3.200	3.26	6.267	5.44	9.33	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.200	0.00	3.267	6.25	6.333	3.81	9.40	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.267	0.27	3.333	9.25	6.400	3.81	9.47	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.133	0.54	4.200	9.25	7.267	3.00	10.33	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.200	0.54	4.267	17.13	7.333	2.18	10.40	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.133	0.54	5.200	25.02	8.267	1.64	11.33	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.200	0.54	5.267	16.05	8.333	1.09	11.40	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.267	1.90	5.333	7.07	8.400	1.09	11.47	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54

2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.067	3.26	6.133	7.07	9.200	1.09	12.27	0.27

			TOTALS
Max.Eff.Inten.(mm/hr)=	25.02	14.22	
over (min)	6.00	14.00	
Storage Coeff. (min)=	6.99 (ii)	12.73 (ii)	
Unit Hyd. Tpeak (min)=	6.00	14.00	
Unit Hyd. peak (cms)=	0.17	0.09	
PEAK FLOW (cms)=	0.41	0.03	0.439 (iii)
TIME TO PEAK (hrs)=	5.23	5.30	5.23
RUNOFF VOLUME (mm)=	53.38	22.38	49.35
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.41	0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		
STANDHYD (0122)	Area (ha)=	5.56
ID= 1 DT= 2.0 min	Total Imp(%)=	99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.81
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.133	0.00	3.200	3.26	6.267	5.44	9.33	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.200	0.00	3.267	6.25	6.333	3.81	9.40	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.267	0.27	3.333	9.25	6.400	3.81	9.47	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54

1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.133	0.54	4.200	9.25	7.267	3.00	10.33	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.200	0.54	4.267	17.13	7.333	2.18	10.40	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.133	0.54	5.200	25.02	8.267	1.64	11.33	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.200	0.54	5.267	16.05	8.333	1.09	11.40	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.267	1.90	5.333	7.07	8.400	1.09	11.47	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.067	3.26	6.133	7.07	9.200	1.09	12.27	0.27

Max.Eff.Inten.(mm/hr)=	25.02	24.90	
over (min)	6.00	8.00	
Storage Coeff. (min)=	6.59 (ii)	7.36 (ii)	
Unit Hyd. Tpeak (min)=	6.00	8.00	
Unit Hyd. peak (cms)=	0.18	0.15	
			TOTALS
PEAK FLOW (cms)=	0.39	0.00	0.386 (iii)
TIME TO PEAK (hrs)=	5.23	5.23	5.23
RUNOFF VOLUME (mm)=	53.38	50.93	53.38
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.94	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0002)| OVERFLOW IS OFF

| IN= 2---> OUT= 1 |
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0840	0.1513

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0122)	5.560	0.386	5.23	53.38
OUTFLOW: ID= 1 (0002)	5.560	0.099	6.30	53.29

PEAK FLOW REDUCTION [Qout/Qin](%)= 25.71
TIME SHIFT OF PEAK FLOW (min)= 64.00
MAXIMUM STORAGE USED (ha.m.)= 0.1789

ADD HYD (0024)|	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (1200):		6.76	0.439	5.23	49.35
+ ID2= 2 (0002):		5.56	0.099	6.30	53.29
ID = 3 (0024):		12.32	0.527	5.23	51.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0012)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 2.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2030	0.4395
0.0150	0.3342	0.2360	0.4580
0.0290	0.4309	0.2670	0.4832
0.1610	0.4312	1.1520	0.6099

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0024)	12.320	0.527	5.23	51.13
OUTFLOW: ID= 1 (0012)	12.320	0.130	8.63	35.50

PEAK FLOW REDUCTION [Qout/Qin](%)= 24.68
TIME SHIFT OF PEAK FLOW (min)=204.00
MAXIMUM STORAGE USED (ha.m.)= 0.4315

CALIB	
STANDHYD (1300)	Area (ha)= 3.57
ID= 1 DT= 2.0 min	Total Imp(%)= 87.30 Dir. Conn.(%)= 87.30

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.12	0.45
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	154.27	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.81
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.133	0.00	3.200	3.26	6.267	5.44	9.33	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.200	0.00	3.267	6.25	6.333	3.81	9.40	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.267	0.27	3.333	9.25	6.400	3.81	9.47	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54

0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.133	0.54	4.200	9.25	7.267	3.00	10.33	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.200	0.54	4.267	17.13	7.333	2.18	10.40	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.133	0.54	5.200	25.02	8.267	1.64	11.33	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.200	0.54	5.267	16.05	8.333	1.09	11.40	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.267	1.90	5.333	7.07	8.400	1.09	11.47	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.067	3.26	6.133	7.07	9.200	1.09	12.27	0.27

Max.Eff.Inten.(mm/hr)=	25.02	14.22	
over (min)	6.00	12.00	
Storage Coeff. (min)=	5.77 (ii)	11.45 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.19	0.10	
			TOTALS
PEAK FLOW (cms)=	0.22	0.02	0.233 (iii)
TIME TO PEAK (hrs)=	5.23	5.27	5.23
RUNOFF VOLUME (mm)=	53.38	22.38	49.44
TOTAL RAINFALL (mm)=	54.38	54.38	54.38

RUNOFF COEFFICIENT = 0.98 0.41 0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0133)	Area (ha)= 2.76
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.81
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.133	0.00	3.200	3.26	6.267	5.44	9.33	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.200	0.00	3.267	6.25	6.333	3.81	9.40	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.267	0.27	3.333	9.25	6.400	3.81	9.47	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.133	0.54	4.200	9.25	7.267	3.00	10.33	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.200	0.54	4.267	17.13	7.333	2.18	10.40	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54

1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.133	0.54	5.200	25.02	8.267	1.64	11.33	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.200	0.54	5.267	16.05	8.333	1.09	11.40	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.267	1.90	5.333	7.07	8.400	1.09	11.47	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.067	3.26	6.133	7.07	9.200	1.09	12.27	0.27

Max.Eff.Inten.(mm/hr)=	25.02	0.69		
over (min)	6.00	8.00		
Storage Coeff. (min)=	5.34 (ii)	6.11 (ii)		
Unit Hyd. Tpeak (min)=	6.00	8.00		
Unit Hyd. peak (cms)=	0.20	0.17		
			TOTALS	
PEAK FLOW (cms)=	0.19	0.00	0.192 (iii)	
TIME TO PEAK (hrs)=	5.23	9.23	5.23	
RUNOFF VOLUME (mm)=	53.38	1.92	53.33	
TOTAL RAINFALL (mm)=	54.38	54.38	54.38	
RUNOFF COEFFICIENT =	0.98	0.04	0.98	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0001)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0420	0.0751

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0133)	2.760	0.192	5.23	53.33
OUTFLOW: ID= 1 (0001)	2.760	0.050	6.30	53.16

PEAK FLOW REDUCTION [Qout/Qin](%)= 25.85
TIME SHIFT OF PEAK FLOW (min)= 64.00
MAXIMUM STORAGE USED (ha.m.)= 0.0886

ADD HYD (0027)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (0001):	2.76	0.050	6.30	53.16	
+ ID2= 2 (1300):	3.57	0.233	5.23	49.44	
ID = 3 (0027):	6.33	0.277	5.23	51.06	

```
     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0013)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1040      0.2272
                          0.0080     0.1711   |   0.1210      0.2380
                          0.0150     0.2214   |   0.1370      0.2516
                          0.0830     0.2217   |   0.5920      0.3236

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0027)      6.330      0.277      5.23      51.06
   OUTFLOW: ID= 1 (  0013)      6.330      0.058      8.47      35.97

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 20.90
                  TIME SHIFT OF PEAK FLOW         (min)=194.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2216

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0012):    12.32   0.130     8.63    35.50
     + ID2= 2 (  0013):     6.33   0.058     8.47    35.97
       ================================================
       ID = 3 (  0035):    18.65   0.180     8.63    35.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0035):    18.65   0.180     8.63    35.66
     + ID2= 2 (  0036):     3.51   0.131     5.25    20.86
       ================================================
       ID = 1 (  0035):    22.16   0.187     8.63    33.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0035):    22.16   0.187     8.63    33.31
     + ID2= 2 (  0039):    56.91   0.643     5.40    22.65
       ================================================
       ID = 3 (  0040):    79.07   0.762     5.27    25.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\52e19910
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\52e19910


DATE: 03-01-2024                          TIME: 01:17:37
```

USER:

COMMENTS: _____

****
** SIMULATION : Run 03 10YR12HR **
****

READ STORM	Filename: C:\Users\CAPP078249\AppData\Local\Temp\8a0d0ce7-501d-4e6c-b5b0-013bae96712b\ca56f05e
Ptotal= 62.71 mm	Comments: 10yr/12hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	10.66	6.50	4.39	9.75	0.63
0.25	0.63	3.50	10.66	6.75	4.39	10.00	0.63
0.50	0.63	3.75	10.66	7.00	4.39	10.25	0.63
0.75	0.63	4.00	10.66	7.25	2.51	10.50	0.63
1.00	0.63	4.25	28.84	7.50	2.51	10.75	0.63
1.25	0.63	4.50	28.84	7.75	2.51	11.00	0.63
1.50	0.63	4.75	28.84	8.00	2.51	11.25	0.63
1.75	0.63	5.00	28.84	8.25	1.25	11.50	0.63
2.00	0.63	5.25	8.15	8.50	1.25	11.75	0.63
2.25	3.76	5.50	8.15	8.75	1.25	12.00	0.63
2.50	3.76	5.75	8.15	9.00	1.25		
2.75	3.76	6.00	8.15	9.25	0.63		
3.00	3.76	6.25	4.39	9.50	0.63		

CALIB			
NASHYD (0033)	Area (ha)=	4.56	Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.22	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63

2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.213 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 29.313
TOTAL RAINFALL (mm)= 62.710
RUNOFF COEFFICIENT = 0.467

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

CALIB	
STANDHYD (1100)	Area (ha)= 24.52
ID= 1 DT= 2.0 min	Total Imp(%)= 84.00 Dir. Conn.(%)= 84.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.94
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.133	0.00	3.200	3.76	6.267	6.27	9.33	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.200	0.00	3.267	7.21	6.333	4.39	9.40	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.267	0.32	3.333	10.66	6.400	4.39	9.47	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.133	0.63	4.200	10.66	7.267	3.45	10.33	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.200	0.63	4.267	19.75	7.333	2.51	10.40	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63

1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.133	0.63	5.200	28.84	8.267	1.88	11.33	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.200	0.63	5.267	18.50	8.333	1.25	11.40	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.267	2.19	5.333	8.15	8.400	1.25	11.47	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.067	3.76	6.133	8.15	9.200	1.25	12.27	0.31

Max.Eff.Inten.(mm/hr)=	28.84	17.77		
over (min)	10.00	16.00		
Storage Coeff. (min)=	9.71 (ii)	15.69 (ii)		
Unit Hyd. Tpeak (min)=	10.00	16.00		
Unit Hyd. peak (cms)=	0.12	0.07		
			TOTALS	
PEAK FLOW (cms)=	1.65	0.17	1.809 (iii)	
TIME TO PEAK (hrs)=	5.23	5.30	5.23	
RUNOFF VOLUME (mm)=	61.71	28.39	56.38	
TOTAL RAINFALL (mm)=	62.71	62.71	62.71	
RUNOFF COEFFICIENT =	0.98	0.45	0.90	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0111)	Area (ha)= 6.10
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.94
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.133	0.00	3.200	3.76	6.267	6.27	9.33	0.63

0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.200	0.00	3.267	7.21	6.333	4.39	9.40	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.267	0.32	3.333	10.66	6.400	4.39	9.47	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.133	0.63	4.200	10.66	7.267	3.45	10.33	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.200	0.63	4.267	19.75	7.333	2.51	10.40	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.133	0.63	5.200	28.84	8.267	1.88	11.33	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.200	0.63	5.267	18.50	8.333	1.25	11.40	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.267	2.19	5.333	8.15	8.400	1.25	11.47	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63

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               2.967    3.76 | 6.033    8.15 | 9.100    1.25 | 12.17    0.63
               3.000    3.76 | 6.067    8.15 | 9.133    1.25 | 12.20    0.63
               3.033    3.76 | 6.100    8.15 | 9.167    1.25 | 12.23    0.63
               3.067    3.76 | 6.133    8.15 | 9.200    1.25 | 12.27    0.31

     Max.Eff.Inten.(mm/hr)=      28.84        28.74
               over (min)         6.00         8.00
     Storage Coeff.  (min)=       6.40 (ii)    7.13 (ii)
     Unit Hyd. Tpeak (min)=       6.00         8.00
     Unit Hyd. peak  (cms)=       0.18         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.49         0.00          0.489 (iii)
     TIME TO PEAK    (hrs)=       5.23         5.23           5.23
     RUNOFF VOLUME    (mm)=      61.71        59.25          61.71
     TOTAL RAINFALL   (mm)=      62.71        62.71          62.71
     RUNOFF COEFFICIENT   =       0.98         0.94           0.98


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  99.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0920      0.1659
     **** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0111)      6.100      0.489      5.23      61.71
   OUTFLOW: ID= 1 (  0003)      6.100      0.126      6.30      61.63

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 25.74
                  TIME SHIFT OF PEAK FLOW         (min)= 64.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2268

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--------------------
| ADD HYD  (  0050)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  1100):    24.52   1.809     5.23    56.38
     + ID2= 2 (  0003):     6.10   0.126     6.30    61.63
       ================================================
       ID = 3 (  0050):    30.62   1.921     5.23    57.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0011)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.4686      1.2877
                         0.0158     0.8925   |   0.5484      1.3960
                         0.0439     1.1554   |   0.6220      1.5142
                         0.3705     1.1796   |   2.8520      2.3383

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0050)     30.620      1.921      5.23      57.43
   OUTFLOW: ID= 1 (  0011)     30.620      0.389      7.33      31.97

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 20.24
                  TIME SHIFT OF PEAK FLOW         (min)=126.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.1997

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--------------------
| CALIB            |
| STANDHYD (  0030)|   Area    (ha)=   0.23
|ID= 1 DT= 2.0 min |   Total Imp(%)=  99.99   Dir. Conn.(%)=  99.99
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23         0.00
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
```

Length	(m)=	39.16	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.94
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.133	0.00	3.200	3.76	6.267	6.27	9.33	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.200	0.00	3.267	7.21	6.333	4.39	9.40	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.267	0.32	3.333	10.66	6.400	4.39	9.47	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.133	0.63	4.200	10.66	7.267	3.45	10.33	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.200	0.63	4.267	19.75	7.333	2.51	10.40	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.133	0.63	5.200	28.84	8.267	1.88	11.33	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.200	0.63	5.267	18.50	8.333	1.25	11.40	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.267	2.19	5.333	8.15	8.400	1.25	11.47	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63

2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.067	3.76	6.133	8.15	9.200	1.25	12.27	0.31

			TOTALS
Max.Eff.Inten.(mm/hr)=	28.84	17.77	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.39 (ii)	2.69 (ii)	
Unit Hyd. Tpeak (min)=	4.00	4.00	
Unit Hyd. peak (cms)=	0.37	0.37	
PEAK FLOW (cms)=	0.02	0.00	0.018 (iii)
TIME TO PEAK (hrs)=	4.93	5.23	5.23
RUNOFF VOLUME (mm)=	61.71	28.39	61.70
TOTAL RAINFALL (mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT =	0.98	0.45	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0011):	30.62	0.389	7.33	31.97
	+ ID2= 2 (0030):	0.23	0.018	5.23	61.70
	ID = 3 (0029):	30.85	0.391	7.27	32.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
	ID1= 3 (0029):	30.85	0.391	7.27	32.19
	+ ID2= 2 (0033):	4.56	0.213	5.25	29.31
	ID = 1 (0029):	35.41	0.439	6.40	31.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0034)			
ID= 1 DT= 5.0 min	Area (ha)= 16.98	Curve Number (CN)= 80.0	
	Ia (mm)= 6.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.60		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63

0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

Unit Hyd Qpeak (cms)= 1.081

PEAK FLOW (cms)= 0.508 (i)
TIME TO PEAK (hrs)= 5.583
RUNOFF VOLUME (mm)= 26.753
TOTAL RAINFALL (mm)= 62.710
RUNOFF COEFFICIENT = 0.427

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

CALIB			
NASHYD (0031)	Area (ha)=	4.52	Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.41	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63

2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.138 (i)
TIME TO PEAK (hrs)= 5.417
RUNOFF VOLUME (mm)= 22.919
TOTAL RAINFALL (mm)= 62.710
RUNOFF COEFFICIENT = 0.365

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

ADD HYD (0039)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0029):	35.41	0.439	6.40	31.82
	+ ID2= 2 (0031):	4.52	0.138	5.42	22.92
	ID = 3 (0039):	39.93	0.505	6.40	30.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0039)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
	ID1= 3 (0039):	39.93	0.505	6.40	30.81
	+ ID2= 2 (0034):	16.98	0.508	5.58	26.75
	ID = 1 (0039):	56.91	0.844	6.40	29.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0036)	Area (ha)=	3.51	Curve Number (CN)=	81.0	
ID= 1 DT= 5.0 min	Ia (mm)=	6.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.09			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63

2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.164 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 26.611
TOTAL RAINFALL (mm)= 62.710
RUNOFF COEFFICIENT = 0.424

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

CALIB STANDHYD (1200) ID= 1 DT= 2.0 min	Area (ha)= 6.76	Total Imp(%)= 87.00	Dir. Conn.(%)= 87.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.88	0.88
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	212.29	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.94
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.133	0.00	3.200	3.76	6.267	6.27	9.33	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.200	0.00	3.267	7.21	6.333	4.39	9.40	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.267	0.32	3.333	10.66	6.400	4.39	9.47	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.133	0.63	4.200	10.66	7.267	3.45	10.33	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.200	0.63	4.267	19.75	7.333	2.51	10.40	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63

1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.133	0.63	5.200	28.84	8.267	1.88	11.33	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.200	0.63	5.267	18.50	8.333	1.25	11.40	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.267	2.19	5.333	8.15	8.400	1.25	11.47	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.067	3.76	6.133	8.15	9.200	1.25	12.27	0.31

Max.Eff.Inten.(mm/hr)=	28.84	17.77		
over (min)	6.00	14.00		
Storage Coeff. (min)=	6.60 (ii)	12.02 (ii)		
Unit Hyd. Tpeak (min)=	6.00	14.00		
Unit Hyd. peak (cms)=	0.18	0.09		
			TOTALS	
PEAK FLOW (cms)=	0.47	0.04	0.510 (iii)	
TIME TO PEAK (hrs)=	5.23	5.27	5.23	
RUNOFF VOLUME (mm)=	61.71	28.39	57.38	
TOTAL RAINFALL (mm)=	62.71	62.71	62.71	
RUNOFF COEFFICIENT =	0.98	0.45	0.91	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0122)	Area (ha)= 5.56
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.94

0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.133	0.00	3.200	3.76	6.267	6.27	9.33	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.200	0.00	3.267	7.21	6.333	4.39	9.40	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.267	0.32	3.333	10.66	6.400	4.39	9.47	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.133	0.63	4.200	10.66	7.267	3.45	10.33	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.200	0.63	4.267	19.75	7.333	2.51	10.40	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.133	0.63	5.200	28.84	8.267	1.88	11.33	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.200	0.63	5.267	18.50	8.333	1.25	11.40	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.267	2.19	5.333	8.15	8.400	1.25	11.47	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63

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               2.900    3.76 | 5.967    8.15 | 9.033    1.25 | 12.10    0.63
               2.933    3.76 | 6.000    8.15 | 9.067    1.25 | 12.13    0.63
               2.967    3.76 | 6.033    8.15 | 9.100    1.25 | 12.17    0.63
               3.000    3.76 | 6.067    8.15 | 9.133    1.25 | 12.20    0.63
               3.033    3.76 | 6.100    8.15 | 9.167    1.25 | 12.23    0.63
               3.067    3.76 | 6.133    8.15 | 9.200    1.25 | 12.27    0.31

     Max.Eff.Inten.(mm/hr)=      28.84        28.74
                over (min)        6.00         8.00
     Storage Coeff.  (min)=       6.22 (ii)    6.96 (ii)
     Unit Hyd. Tpeak (min)=       6.00         8.00
     Unit Hyd. peak  (cms)=       0.18         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.44         0.00          0.445 (iii)
     TIME TO PEAK    (hrs)=       5.23         5.23           5.23
     RUNOFF VOLUME    (mm)=      61.71        59.25          61.71
     TOTAL RAINFALL   (mm)=      62.71        62.71          62.71
     RUNOFF COEFFICIENT   =       0.98         0.94           0.98


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  99.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0002)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0840      0.1513

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0122)      5.560      0.445      5.23      61.71
   OUTFLOW: ID= 1 (  0002)      5.560      0.115      6.30      61.62

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 25.77
                  TIME SHIFT OF PEAK FLOW         (min)= 64.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2067

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--------------------
| ADD HYD  (  0024)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  1200):     6.76   0.510     5.23    57.38
     + ID2= 2 (  0002):     5.56   0.115     6.30    61.62
       ================================================
       ID = 3 (  0024):    12.32   0.611     5.23    59.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| RESERVOIR(  0012)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2030      0.4395
                          0.0150     0.3342   |   0.2360      0.4580
                          0.0290     0.4309   |   0.2670      0.4832
                          0.1610     0.4312   |   1.1520      0.6099

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0024)     12.320      0.611      5.23      59.29
   OUTFLOW: ID= 1 (  0012)     12.320      0.172      7.37      43.48

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 28.05
                  TIME SHIFT OF PEAK FLOW         (min)=128.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.4333

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--------------------
| CALIB            |
| STANDHYD (  1300)|   Area    (ha)=   3.57
|ID= 1 DT= 2.0 min |   Total Imp(%)=  87.30   Dir. Conn.(%)=  87.30
--------------------

                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.12          0.45
     Dep. Storage     (mm)=       1.00          5.00
```

Average Slope	(%)=	1.00	2.00
Length	(m)=	154.27	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.94
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.133	0.00	3.200	3.76	6.267	6.27	9.33	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.200	0.00	3.267	7.21	6.333	4.39	9.40	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.267	0.32	3.333	10.66	6.400	4.39	9.47	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.133	0.63	4.200	10.66	7.267	3.45	10.33	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.200	0.63	4.267	19.75	7.333	2.51	10.40	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.133	0.63	5.200	28.84	8.267	1.88	11.33	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.200	0.63	5.267	18.50	8.333	1.25	11.40	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.267	2.19	5.333	8.15	8.400	1.25	11.47	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63

2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.067	3.76	6.133	8.15	9.200	1.25	12.27	0.31

Max.Eff.Inten.(mm/hr)=	28.84	17.77	
over (min)	6.00	12.00	
Storage Coeff. (min)=	5.45 (ii)	10.82 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.20	0.10	
			TOTALS
PEAK FLOW (cms)=	0.25	0.02	0.270 (iii)
TIME TO PEAK (hrs)=	5.23	5.27	5.23
RUNOFF VOLUME (mm)=	61.71	28.39	57.48
TOTAL RAINFALL (mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT =	0.98	0.45	0.92

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0133)	Area (ha)= 2.76
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.94
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.133	0.00	3.200	3.76	6.267	6.27	9.33	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.200	0.00	3.267	7.21	6.333	4.39	9.40	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.267	0.32	3.333	10.66	6.400	4.39	9.47	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63

0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.133	0.63	4.200	10.66	7.267	3.45	10.33	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.200	0.63	4.267	19.75	7.333	2.51	10.40	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.133	0.63	5.200	28.84	8.267	1.88	11.33	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.200	0.63	5.267	18.50	8.333	1.25	11.40	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.267	2.19	5.333	8.15	8.400	1.25	11.47	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.067	3.76	6.133	8.15	9.200	1.25	12.27	0.31

Max.Eff.Inten.(mm/hr)=	28.84	3.96	
over (min)	6.00	6.00	
Storage Coeff. (min)=	5.04 (ii)	5.78 (ii)	
Unit Hyd. Tpeak (min)=	6.00	6.00	
Unit Hyd. peak (cms)=	0.21	0.19	
			TOTALS
PEAK FLOW (cms)=	0.22	0.00	0.221 (iii)
TIME TO PEAK (hrs)=	5.23	7.23	5.23
RUNOFF VOLUME (mm)=	61.71	9.61	61.66
TOTAL RAINFALL (mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT =	0.98	0.15	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0001)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0420      0.0751

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0133)      2.760      0.221      5.23      61.66
   OUTFLOW: ID= 1 (  0001)      2.760      0.057      6.30      61.49

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 25.90
                  TIME SHIFT OF PEAK FLOW         (min)= 64.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1023

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0027)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0001):     2.76   0.057     6.30    61.49
     + ID2= 2 (  1300):     3.57   0.270     5.23    57.48
       ================================================
       ID = 3 (  0027):     6.33   0.322     5.23    59.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0013)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1040      0.2272
                          0.0080     0.1711   |   0.1210      0.2380
                          0.0150     0.2214   |   0.1370      0.2516
                          0.0830     0.2217   |   0.5920      0.3236

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0027)      6.330      0.322      5.23      59.23
   OUTFLOW: ID= 1 (  0013)      6.330      0.088      7.33      43.95

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 27.48
                  TIME SHIFT OF PEAK FLOW         (min)=126.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2231

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0012):    12.32   0.172     7.37    43.48
     + ID2= 2 (  0013):     6.33   0.088     7.33    43.95
       ================================================
       ID = 3 (  0035):    18.65   0.260     7.37    43.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0035):    18.65   0.260     7.37    43.64
     + ID2= 2 (  0036):     3.51   0.164     5.25    26.61
       ================================================
       ID = 1 (  0035):    22.16   0.286     7.27    40.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0035):    22.16   0.286     7.27    40.94
     + ID2= 2 (  0039):    56.91   0.844     6.40    29.60
       ================================================
       ID = 3 (  0040):    79.07   0.978     5.27    32.78
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```


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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\98e9a592
Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\98e9a592

DATE: 03-01-2024 TIME: 01:17:37

USER:

COMMENTS: _____

****
** SIMULATION : Run 04 25YR12HR **
****

| READ STORM | Ptotal= 73.10 mm | Filename: C:\Users\CAPP078249\AppData\Local\Temp\8a0d0ce7-501d-4e6c-b5b0-013bae96712b\ec76e1ab Comments: 25yr/12hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	12.43	6.50	5.12	9.75	0.73
0.25	0.73	3.50	12.43	6.75	5.12	10.00	0.73
0.50	0.73	3.75	12.43	7.00	5.12	10.25	0.73
0.75	0.73	4.00	12.43	7.25	2.92	10.50	0.73
1.00	0.73	4.25	33.63	7.50	2.92	10.75	0.73
1.25	0.73	4.50	33.63	7.75	2.92	11.00	0.73
1.50	0.73	4.75	33.63	8.00	2.92	11.25	0.73
1.75	0.73	5.00	33.63	8.25	1.46	11.50	0.73
2.00	0.73	5.25	9.50	8.50	1.46	11.75	0.73
2.25	4.39	5.50	9.50	8.75	1.46	12.00	0.73
2.50	4.39	5.75	9.50	9.00	1.46		
2.75	4.39	6.00	9.50	9.25	0.73		
3.00	4.39	6.25	5.12	9.50	0.73		

CALIB NASHYD (0033) ID= 1 DT= 5.0 min	Area (ha)= 4.56	Curve Number (CN)= 82.0	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00	U.H. Tp(hrs)= 0.22

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.39	6.250	9.50	9.33	0.73
0.167	0.00	3.250	4.39	6.333	5.12	9.42	0.73
0.250	0.00	3.333	12.43	6.417	5.12	9.50	0.73
0.333	0.73	3.417	12.43	6.500	5.12	9.58	0.73
0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73

0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73
1.000	0.73	4.083	12.43	7.167	5.12	10.25	0.73
1.083	0.73	4.167	12.43	7.250	5.12	10.33	0.73
1.167	0.73	4.250	12.43	7.333	2.92	10.42	0.73
1.250	0.73	4.333	33.63	7.417	2.92	10.50	0.73
1.333	0.73	4.417	33.63	7.500	2.92	10.58	0.73
1.417	0.73	4.500	33.63	7.583	2.92	10.67	0.73
1.500	0.73	4.583	33.63	7.667	2.92	10.75	0.73
1.583	0.73	4.667	33.63	7.750	2.92	10.83	0.73
1.667	0.73	4.750	33.63	7.833	2.92	10.92	0.73
1.750	0.73	4.833	33.63	7.917	2.92	11.00	0.73
1.833	0.73	4.917	33.63	8.000	2.92	11.08	0.73
1.917	0.73	5.000	33.63	8.083	2.92	11.17	0.73
2.000	0.73	5.083	33.63	8.167	2.92	11.25	0.73
2.083	0.73	5.167	33.63	8.250	2.92	11.33	0.73
2.167	0.73	5.250	33.63	8.333	1.46	11.42	0.73
2.250	0.73	5.333	9.50	8.417	1.46	11.50	0.73
2.333	4.39	5.417	9.50	8.500	1.46	11.58	0.73
2.417	4.39	5.500	9.50	8.583	1.46	11.67	0.73
2.500	4.39	5.583	9.50	8.667	1.46	11.75	0.73
2.583	4.39	5.667	9.50	8.750	1.46	11.83	0.73
2.667	4.39	5.750	9.50	8.833	1.46	11.92	0.73
2.750	4.39	5.833	9.50	8.917	1.46	12.00	0.73
2.833	4.39	5.917	9.50	9.000	1.46	12.08	0.73
2.917	4.39	6.000	9.50	9.083	1.46	12.17	0.73
3.000	4.39	6.083	9.50	9.167	1.46	12.25	0.73
3.083	4.39	6.167	9.50	9.250	1.46		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.270 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 37.394
TOTAL RAINFALL (mm)= 73.100
RUNOFF COEFFICIENT = 0.512

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

CALIB STANDHYD (1100) ID= 1 DT= 2.0 min	Area (ha)= 24.52 Total Imp(%)= 84.00 Dir. Conn.(%)= 84.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	1.09
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.133	0.00	3.200	4.39	6.267	7.31	9.33	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.200	0.00	3.267	8.41	6.333	5.12	9.40	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.267	0.37	3.333	12.43	6.400	5.12	9.47	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73

0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.133	0.73	4.200	12.43	7.267	4.02	10.33	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.200	0.73	4.267	23.03	7.333	2.92	10.40	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.133	0.73	5.200	33.63	8.267	2.19	11.33	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.200	0.73	5.267	21.57	8.333	1.46	11.40	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.267	2.56	5.333	9.50	8.400	1.46	11.47	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.067	4.39	6.133	9.50	9.200	1.46	12.27	0.36

Max.Eff.Inten.(mm/hr)=	33.63	22.40	
over (min)	10.00	16.00	
Storage Coeff. (min)=	9.13 (ii)	14.76 (ii)	
Unit Hyd. Tpeak (min)=	10.00	16.00	
Unit Hyd. peak (cms)=	0.12	0.07	
			TOTALS
PEAK FLOW (cms)=	1.92	0.21	2.132 (iii)
TIME TO PEAK (hrs)=	5.23	5.30	5.23
RUNOFF VOLUME (mm)=	72.10	36.32	66.38
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.50	0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0111)	Area (ha)= 6.10
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	1.09
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.133	0.00	3.200	4.39	6.267	7.31	9.33	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.200	0.00	3.267	8.41	6.333	5.12	9.40	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.267	0.37	3.333	12.43	6.400	5.12	9.47	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.133	0.73	4.200	12.43	7.267	4.02	10.33	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.200	0.73	4.267	23.03	7.333	2.92	10.40	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73

2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.133	0.73	5.200	33.63	8.267	2.19	11.33	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.200	0.73	5.267	21.57	8.333	1.46	11.40	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.267	2.56	5.333	9.50	8.400	1.46	11.47	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.067	4.39	6.133	9.50	9.200	1.46	12.27	0.36

			TOTALS
Max.Eff.Inten.(mm/hr)=	33.63	33.54	
over (min)	6.00	8.00	
Storage Coeff. (min)=	6.02 (ii)	6.71 (ii)	
Unit Hyd. Tpeak (min)=	6.00	8.00	
Unit Hyd. peak (cms)=	0.19	0.16	
PEAK FLOW (cms)=	0.57	0.00	0.570 (iii)
TIME TO PEAK (hrs)=	5.23	5.23	5.23
RUNOFF VOLUME (mm)=	72.10	69.62	72.10
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.95	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0003)| IN= 2---> OUT= 1 | DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0920	0.1659

**** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0111)	6.100	0.570	5.23	72.10
OUTFLOW: ID= 1 (0003)	6.100	0.147	6.30	72.02

PEAK FLOW REDUCTION [Qout/Qin](%)= 25.78
TIME SHIFT OF PEAK FLOW (min)= 64.00
MAXIMUM STORAGE USED (ha.m.)= 0.2649

ADD HYD (0050)| 1 + 2 = 3 |	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.52	2.132	5.23	66.38
+ ID2= 2 (0003):	6.10	0.147	6.30	72.02
ID = 3 (0050):	30.62	2.263	5.23	67.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| RESERVOIR(  0011)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.4686      1.2877
                          0.0158     0.8925   |   0.5484      1.3960
                          0.0439     1.1554   |   0.6220      1.5142
                          0.3705     1.1796   |   2.8520      2.3383

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0050)     30.620      2.263      5.23      67.50
   OUTFLOW: ID= 1 (  0011)     30.620      0.481      7.00      41.92

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 21.25
                    TIME SHIFT OF PEAK FLOW         (min)=106.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  1.3043

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| CALIB            |
| STANDHYD (  0030)|   Area    (ha)=   0.23
|ID= 1 DT= 2.0 min |   Total Imp(%)=  99.99   Dir. Conn.(%)=  99.99
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23          0.00
     Dep. Storage     (mm)=       1.00          5.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      39.16         40.00
     Mannings n           =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.033    0.00 | 3.100    4.39 | 6.167    9.50 |  9.23    1.46
 0.067    0.00 | 3.133    4.39 | 6.200    9.50 |  9.27    1.09
 0.100    0.00 | 3.167    4.39 | 6.233    9.50 |  9.30    0.73
 0.133    0.00 | 3.200    4.39 | 6.267    7.31 |  9.33    0.73
 0.167    0.00 | 3.233    4.39 | 6.300    5.12 |  9.37    0.73
 0.200    0.00 | 3.267    8.41 | 6.333    5.12 |  9.40    0.73
 0.233    0.00 | 3.300   12.43 | 6.367    5.12 |  9.43    0.73
 0.267    0.37 | 3.333   12.43 | 6.400    5.12 |  9.47    0.73
 0.300    0.73 | 3.367   12.43 | 6.433    5.12 |  9.50    0.73
 0.333    0.73 | 3.400   12.43 | 6.467    5.12 |  9.53    0.73
 0.367    0.73 | 3.433   12.43 | 6.500    5.12 |  9.57    0.73
 0.400    0.73 | 3.467   12.43 | 6.533    5.12 |  9.60    0.73
 0.433    0.73 | 3.500   12.43 | 6.567    5.12 |  9.63    0.73
 0.467    0.73 | 3.533   12.43 | 6.600    5.12 |  9.67    0.73
 0.500    0.73 | 3.567   12.43 | 6.633    5.12 |  9.70    0.73
 0.533    0.73 | 3.600   12.43 | 6.667    5.12 |  9.73    0.73
 0.567    0.73 | 3.633   12.43 | 6.700    5.12 |  9.77    0.73
 0.600    0.73 | 3.667   12.43 | 6.733    5.12 |  9.80    0.73
 0.633    0.73 | 3.700   12.43 | 6.767    5.12 |  9.83    0.73
 0.667    0.73 | 3.733   12.43 | 6.800    5.12 |  9.87    0.73
 0.700    0.73 | 3.767   12.43 | 6.833    5.12 |  9.90    0.73
 0.733    0.73 | 3.800   12.43 | 6.867    5.12 |  9.93    0.73
 0.767    0.73 | 3.833   12.43 | 6.900    5.12 |  9.97    0.73
 0.800    0.73 | 3.867   12.43 | 6.933    5.12 | 10.00    0.73
 0.833    0.73 | 3.900   12.43 | 6.967    5.12 | 10.03    0.73
 0.867    0.73 | 3.933   12.43 | 7.000    5.12 | 10.07    0.73
 0.900    0.73 | 3.967   12.43 | 7.033    5.12 | 10.10    0.73
 0.933    0.73 | 4.000   12.43 | 7.067    5.12 | 10.13    0.73
 0.967    0.73 | 4.033   12.43 | 7.100    5.12 | 10.17    0.73
 1.000    0.73 | 4.067   12.43 | 7.133    5.12 | 10.20    0.73
 1.033    0.73 | 4.100   12.43 | 7.167    5.12 | 10.23    0.73
 1.067    0.73 | 4.133   12.43 | 7.200    5.12 | 10.27    0.73
 1.100    0.73 | 4.167   12.43 | 7.233    5.12 | 10.30    0.73
 1.133    0.73 | 4.200   12.43 | 7.267    4.02 | 10.33    0.73
 1.167    0.73 | 4.233   12.43 | 7.300    2.92 | 10.37    0.73
 1.200    0.73 | 4.267   23.03 | 7.333    2.92 | 10.40    0.73
 1.233    0.73 | 4.300   33.63 | 7.367    2.92 | 10.43    0.73
 1.267    0.73 | 4.333   33.63 | 7.400    2.92 | 10.47    0.73
 1.300    0.73 | 4.367   33.63 | 7.433    2.92 | 10.50    0.73
 1.333    0.73 | 4.400   33.63 | 7.467    2.92 | 10.53    0.73
 1.367    0.73 | 4.433   33.63 | 7.500    2.92 | 10.57    0.73
 1.400    0.73 | 4.467   33.63 | 7.533    2.92 | 10.60    0.73
 1.433    0.73 | 4.500   33.63 | 7.567    2.92 | 10.63    0.73
 1.467    0.73 | 4.533   33.63 | 7.600    2.92 | 10.67    0.73
 1.500    0.73 | 4.567   33.63 | 7.633    2.92 | 10.70    0.73
 1.533    0.73 | 4.600   33.63 | 7.667    2.92 | 10.73    0.73
```

1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.133	0.73	5.200	33.63	8.267	2.19	11.33	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.200	0.73	5.267	21.57	8.333	1.46	11.40	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.267	2.56	5.333	9.50	8.400	1.46	11.47	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.067	4.39	6.133	9.50	9.200	1.46	12.27	0.36

Max.Eff.Inten.(mm/hr)=	33.63	22.40		
over (min)	5.00	4.00		
Storage Coeff. (min)=	2.25 (ii)	2.53 (ii)		
Unit Hyd. Tpeak (min)=	4.00	4.00		
Unit Hyd. peak (cms)=	0.39	0.38		
			TOTALS	
PEAK FLOW (cms)=	0.02	0.00	0.021 (iii)	
TIME TO PEAK (hrs)=	4.97	5.23	5.23	
RUNOFF VOLUME (mm)=	72.10	36.32	72.09	
TOTAL RAINFALL (mm)=	73.10	73.10	73.10	
RUNOFF COEFFICIENT =	0.99	0.50	0.99	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0011):	30.62	0.481	7.00	41.92
+ ID2= 2 (0030):	0.23	0.021	5.23	72.09
ID = 3 (0029):	30.85	0.484	7.00	42.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0029)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)

```
      ID1= 3 (  0029):    30.85   0.484     7.00    42.14
    + ID2= 2 (  0033):     4.56   0.270     5.25    37.39
      ================================================
      ID = 1 (  0029):    35.41   0.558     6.33    41.53

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0034)|   Area    (ha)=  16.98   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.60

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


                        ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
0.083    0.00 | 3.167    4.39 | 6.250    9.50 |  9.33    0.73
0.167    0.00 | 3.250    4.39 | 6.333    5.12 |  9.42    0.73
0.250    0.00 | 3.333   12.43 | 6.417    5.12 |  9.50    0.73
0.333    0.73 | 3.417   12.43 | 6.500    5.12 |  9.58    0.73
0.417    0.73 | 3.500   12.43 | 6.583    5.12 |  9.67    0.73
0.500    0.73 | 3.583   12.43 | 6.667    5.12 |  9.75    0.73
0.583    0.73 | 3.667   12.43 | 6.750    5.12 |  9.83    0.73
0.667    0.73 | 3.750   12.43 | 6.833    5.12 |  9.92    0.73
0.750    0.73 | 3.833   12.43 | 6.917    5.12 | 10.00    0.73
0.833    0.73 | 3.917   12.43 | 7.000    5.12 | 10.08    0.73
0.917    0.73 | 4.000   12.43 | 7.083    5.12 | 10.17    0.73
1.000    0.73 | 4.083   12.43 | 7.167    5.12 | 10.25    0.73
1.083    0.73 | 4.167   12.43 | 7.250    5.12 | 10.33    0.73
1.167    0.73 | 4.250   12.43 | 7.333    2.92 | 10.42    0.73
1.250    0.73 | 4.333   33.63 | 7.417    2.92 | 10.50    0.73
1.333    0.73 | 4.417   33.63 | 7.500    2.92 | 10.58    0.73
1.417    0.73 | 4.500   33.63 | 7.583    2.92 | 10.67    0.73
1.500    0.73 | 4.583   33.63 | 7.667    2.92 | 10.75    0.73
1.583    0.73 | 4.667   33.63 | 7.750    2.92 | 10.83    0.73
1.667    0.73 | 4.750   33.63 | 7.833    2.92 | 10.92    0.73
1.750    0.73 | 4.833   33.63 | 7.917    2.92 | 11.00    0.73
1.833    0.73 | 4.917   33.63 | 8.000    2.92 | 11.08    0.73
1.917    0.73 | 5.000   33.63 | 8.083    2.92 | 11.17    0.73
2.000    0.73 | 5.083   33.63 | 8.167    2.92 | 11.25    0.73
2.083    0.73 | 5.167   33.63 | 8.250    2.92 | 11.33    0.73
2.167    0.73 | 5.250   33.63 | 8.333    1.46 | 11.42    0.73
2.250    0.73 | 5.333    9.50 | 8.417    1.46 | 11.50    0.73
2.333    4.39 | 5.417    9.50 | 8.500    1.46 | 11.58    0.73
2.417    4.39 | 5.500    9.50 | 8.583    1.46 | 11.67    0.73
2.500    4.39 | 5.583    9.50 | 8.667    1.46 | 11.75    0.73
2.583    4.39 | 5.667    9.50 | 8.750    1.46 | 11.83    0.73
2.667    4.39 | 5.750    9.50 | 8.833    1.46 | 11.92    0.73
2.750    4.39 | 5.833    9.50 | 8.917    1.46 | 12.00    0.73
2.833    4.39 | 5.917    9.50 | 9.000    1.46 | 12.08    0.73
2.917    4.39 | 6.000    9.50 | 9.083    1.46 | 12.17    0.73
3.000    4.39 | 6.083    9.50 | 9.167    1.46 | 12.25    0.73
3.083    4.39 | 6.167    9.50 | 9.250    1.46 |

    Unit Hyd Qpeak  (cms)=   1.081

    PEAK FLOW       (cms)=   0.659 (i)
    TIME TO PEAK    (hrs)=   5.583
    RUNOFF VOLUME    (mm)=  34.474
    TOTAL RAINFALL   (mm)=  73.100
    RUNOFF COEFFICIENT   =   0.472

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

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--------------------
| CALIB              |
| NASHYD   (  0031)|   Area    (ha)=   4.52   Curve Number   (CN)= 77.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.41

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


                        ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
0.083    0.00 | 3.167    4.39 | 6.250    9.50 |  9.33    0.73
0.167    0.00 | 3.250    4.39 | 6.333    5.12 |  9.42    0.73
0.250    0.00 | 3.333   12.43 | 6.417    5.12 |  9.50    0.73
0.333    0.73 | 3.417   12.43 | 6.500    5.12 |  9.58    0.73
```

0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73
0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73
1.000	0.73	4.083	12.43	7.167	5.12	10.25	0.73
1.083	0.73	4.167	12.43	7.250	5.12	10.33	0.73
1.167	0.73	4.250	12.43	7.333	2.92	10.42	0.73
1.250	0.73	4.333	33.63	7.417	2.92	10.50	0.73
1.333	0.73	4.417	33.63	7.500	2.92	10.58	0.73
1.417	0.73	4.500	33.63	7.583	2.92	10.67	0.73
1.500	0.73	4.583	33.63	7.667	2.92	10.75	0.73
1.583	0.73	4.667	33.63	7.750	2.92	10.83	0.73
1.667	0.73	4.750	33.63	7.833	2.92	10.92	0.73
1.750	0.73	4.833	33.63	7.917	2.92	11.00	0.73
1.833	0.73	4.917	33.63	8.000	2.92	11.08	0.73
1.917	0.73	5.000	33.63	8.083	2.92	11.17	0.73
2.000	0.73	5.083	33.63	8.167	2.92	11.25	0.73
2.083	0.73	5.167	33.63	8.250	2.92	11.33	0.73
2.167	0.73	5.250	33.63	8.333	1.46	11.42	0.73
2.250	0.73	5.333	9.50	8.417	1.46	11.50	0.73
2.333	4.39	5.417	9.50	8.500	1.46	11.58	0.73
2.417	4.39	5.500	9.50	8.583	1.46	11.67	0.73
2.500	4.39	5.583	9.50	8.667	1.46	11.75	0.73
2.583	4.39	5.667	9.50	8.750	1.46	11.83	0.73
2.667	4.39	5.750	9.50	8.833	1.46	11.92	0.73
2.750	4.39	5.833	9.50	8.917	1.46	12.00	0.73
2.833	4.39	5.917	9.50	9.000	1.46	12.08	0.73
2.917	4.39	6.000	9.50	9.083	1.46	12.17	0.73
3.000	4.39	6.083	9.50	9.167	1.46	12.25	0.73
3.083	4.39	6.167	9.50	9.250	1.46		

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.182 (i)
TIME TO PEAK (hrs)= 5.417
RUNOFF VOLUME (mm)= 30.060
TOTAL RAINFALL (mm)= 73.100
RUNOFF COEFFICIENT = 0.411

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

ADD HYD (0039)		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
1 + 2 = 3	ID1= 1 (0029):	35.41	0.558	6.33	41.53
	+ ID2= 2 (0031):	4.52	0.182	5.42	30.06
	ID = 3 (0039):	39.93	0.689	5.60	40.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0039)		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
3 + 2 = 1	ID1= 3 (0039):	39.93	0.689	5.60	40.23
	+ ID2= 2 (0034):	16.98	0.659	5.58	34.47
	ID = 1 (0039):	56.91	1.346	5.60	38.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0036)	ID= 1 DT= 5.0 min	Area (ha)= 3.51	Curve Number (CN)= 81.0
		Ia (mm)= 6.00	# of Linear Res.(N)= 3.00
		U.H. Tp(hrs)= 0.09	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.39	6.250	9.50	9.33	0.73
0.167	0.00	3.250	4.39	6.333	5.12	9.42	0.73
0.250	0.00	3.333	12.43	6.417	5.12	9.50	0.73

0.333	0.73	3.417	12.43	6.500	5.12	9.58	0.73
0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73
0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73
1.000	0.73	4.083	12.43	7.167	5.12	10.25	0.73
1.083	0.73	4.167	12.43	7.250	5.12	10.33	0.73
1.167	0.73	4.250	12.43	7.333	2.92	10.42	0.73
1.250	0.73	4.333	33.63	7.417	2.92	10.50	0.73
1.333	0.73	4.417	33.63	7.500	2.92	10.58	0.73
1.417	0.73	4.500	33.63	7.583	2.92	10.67	0.73
1.500	0.73	4.583	33.63	7.667	2.92	10.75	0.73
1.583	0.73	4.667	33.63	7.750	2.92	10.83	0.73
1.667	0.73	4.750	33.63	7.833	2.92	10.92	0.73
1.750	0.73	4.833	33.63	7.917	2.92	11.00	0.73
1.833	0.73	4.917	33.63	8.000	2.92	11.08	0.73
1.917	0.73	5.000	33.63	8.083	2.92	11.17	0.73
2.000	0.73	5.083	33.63	8.167	2.92	11.25	0.73
2.083	0.73	5.167	33.63	8.250	2.92	11.33	0.73
2.167	0.73	5.250	33.63	8.333	1.46	11.42	0.73
2.250	0.73	5.333	9.50	8.417	1.46	11.50	0.73
2.333	4.39	5.417	9.50	8.500	1.46	11.58	0.73
2.417	4.39	5.500	9.50	8.583	1.46	11.67	0.73
2.500	4.39	5.583	9.50	8.667	1.46	11.75	0.73
2.583	4.39	5.667	9.50	8.750	1.46	11.83	0.73
2.667	4.39	5.750	9.50	8.833	1.46	11.92	0.73
2.750	4.39	5.833	9.50	8.917	1.46	12.00	0.73
2.833	4.39	5.917	9.50	9.000	1.46	12.08	0.73
2.917	4.39	6.000	9.50	9.083	1.46	12.17	0.73
3.000	4.39	6.083	9.50	9.167	1.46	12.25	0.73
3.083	4.39	6.167	9.50	9.250	1.46		

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.208 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 34.200
TOTAL RAINFALL (mm)= 73.100
RUNOFF COEFFICIENT = 0.468

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

CALIB	
STANDHYD (1200)	Area (ha)= 6.76
ID= 1 DT= 2.0 min	Total Imp(%)= 87.00 Dir. Conn.(%)= 87.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.88	0.88
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	212.29	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	1.09
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.133	0.00	3.200	4.39	6.267	7.31	9.33	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.200	0.00	3.267	8.41	6.333	5.12	9.40	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.267	0.37	3.333	12.43	6.400	5.12	9.47	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73

0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.133	0.73	4.200	12.43	7.267	4.02	10.33	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.200	0.73	4.267	23.03	7.333	2.92	10.40	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.133	0.73	5.200	33.63	8.267	2.19	11.33	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.200	0.73	5.267	21.57	8.333	1.46	11.40	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.267	2.56	5.333	9.50	8.400	1.46	11.47	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.067	4.39	6.133	9.50	9.200	1.46	12.27	0.36

Max.Eff.Inten.(mm/hr)=	33.63	22.40	
over (min)	6.00	12.00	
Storage Coeff. (min)=	6.21 (ii)	11.31 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.18	0.10	
			TOTALS
PEAK FLOW (cms)=	0.55	0.05	0.599 (iii)
TIME TO PEAK (hrs)=	5.23	5.27	5.23
RUNOFF VOLUME (mm)=	72.10	36.32	67.45
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.50	0.92

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0122)	Area (ha)= 5.56
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	1.09
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.133	0.00	3.200	4.39	6.267	7.31	9.33	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.200	0.00	3.267	8.41	6.333	5.12	9.40	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.267	0.37	3.333	12.43	6.400	5.12	9.47	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.133	0.73	4.200	12.43	7.267	4.02	10.33	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.200	0.73	4.267	23.03	7.333	2.92	10.40	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73

1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.133	0.73	5.200	33.63	8.267	2.19	11.33	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.200	0.73	5.267	21.57	8.333	1.46	11.40	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.267	2.56	5.333	9.50	8.400	1.46	11.47	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.067	4.39	6.133	9.50	9.200	1.46	12.27	0.36

			TOTALS
Max.Eff.Inten.(mm/hr)=	33.63	33.54	
over (min)	6.00	8.00	
Storage Coeff. (min)=	5.85 (ii)	6.54 (ii)	
Unit Hyd. Tpeak (min)=	6.00	8.00	
Unit Hyd. peak (cms)=	0.19	0.16	
PEAK FLOW (cms)=	0.52	0.00	0.519 (iii)
TIME TO PEAK (hrs)=	5.23	5.23	5.23
RUNOFF VOLUME (mm)=	72.10	69.62	72.10
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.95	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0002)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0840	0.1513

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0122)	5.560	0.519	5.23	72.10
OUTFLOW: ID= 1 (0002)	5.560	0.134	6.30	72.01

PEAK FLOW REDUCTION [Qout/Qin](%)= 25.81
TIME SHIFT OF PEAK FLOW (min)= 64.00
MAXIMUM STORAGE USED (ha.m.)= 0.2414

ADD HYD (0024)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1200):		6.76	0.599	5.23	67.45
+ ID2= 2 (0002):		5.56	0.134	6.30	72.01
ID = 3 (0024):		12.32	0.719	5.23	69.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0012)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 2.0 min |

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2030	0.4395
0.0150	0.3342	0.2360	0.4580
0.0290	0.4309	0.2670	0.4832
0.1610	0.4312	1.1520	0.6099

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0024)	12.320	0.719	5.23	69.51
OUTFLOW: ID= 1 (0012)	12.320	0.215	7.30	53.50

PEAK FLOW REDUCTION [Qout/Qin](%)= 29.90
TIME SHIFT OF PEAK FLOW (min)=124.00
MAXIMUM STORAGE USED (ha.m.)= 0.4462

| CALIB |
| STANDHYD (1300)| Area (ha)= 3.57
|ID= 1 DT= 2.0 min | Total Imp(%)= 87.30 Dir. Conn.(%)= 87.30

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.12	0.45
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	154.27	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	1.09
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.133	0.00	3.200	4.39	6.267	7.31	9.33	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.200	0.00	3.267	8.41	6.333	5.12	9.40	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.267	0.37	3.333	12.43	6.400	5.12	9.47	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.133	0.73	4.200	12.43	7.267	4.02	10.33	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.200	0.73	4.267	23.03	7.333	2.92	10.40	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73

1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.133	0.73	5.200	33.63	8.267	2.19	11.33	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.200	0.73	5.267	21.57	8.333	1.46	11.40	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.267	2.56	5.333	9.50	8.400	1.46	11.47	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.067	4.39	6.133	9.50	9.200	1.46	12.27	0.36

Max.Eff.Inten.(mm/hr)=	33.63	22.40		
over (min)	6.00	12.00		
Storage Coeff. (min)=	5.12 (ii)	10.17 (ii)		
Unit Hyd. Tpeak (min)=	6.00	12.00		
Unit Hyd. peak (cms)=	0.21	0.10		
			TOTALS	
PEAK FLOW (cms)=	0.29	0.03	0.317 (iii)	
TIME TO PEAK (hrs)=	5.23	5.27	5.23	
RUNOFF VOLUME (mm)=	72.10	36.32	67.55	
TOTAL RAINFALL (mm)=	73.10	73.10	73.10	
RUNOFF COEFFICIENT =	0.99	0.50	0.92	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0133)	Area (ha)= 2.76
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	1.09
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.133	0.00	3.200	4.39	6.267	7.31	9.33	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.200	0.00	3.267	8.41	6.333	5.12	9.40	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.267	0.37	3.333	12.43	6.400	5.12	9.47	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.133	0.73	4.200	12.43	7.267	4.02	10.33	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.200	0.73	4.267	23.03	7.333	2.92	10.40	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.133	0.73	5.200	33.63	8.267	2.19	11.33	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.200	0.73	5.267	21.57	8.333	1.46	11.40	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.267	2.56	5.333	9.50	8.400	1.46	11.47	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73

```
                2.767    4.39 | 5.833    9.50 | 8.900    1.46 | 11.97    0.73
                2.800    4.39 | 5.867    9.50 | 8.933    1.46 | 12.00    0.73
                2.833    4.39 | 5.900    9.50 | 8.967    1.46 | 12.03    0.73
                2.867    4.39 | 5.933    9.50 | 9.000    1.46 | 12.07    0.73
                2.900    4.39 | 5.967    9.50 | 9.033    1.46 | 12.10    0.73
                2.933    4.39 | 6.000    9.50 | 9.067    1.46 | 12.13    0.73
                2.967    4.39 | 6.033    9.50 | 9.100    1.46 | 12.17    0.73
                3.000    4.39 | 6.067    9.50 | 9.133    1.46 | 12.20    0.73
                3.033    4.39 | 6.100    9.50 | 9.167    1.46 | 12.23    0.73
                3.067    4.39 | 6.133    9.50 | 9.200    1.46 | 12.27    0.36

     Max.Eff.Inten.(mm/hr)=      33.63          9.07
               over (min)         5.00          6.00
     Storage Coeff.  (min)=       4.74 (ii)     5.43 (ii)
     Unit Hyd. Tpeak (min)=       4.00          6.00
     Unit Hyd. peak  (cms)=       0.25          0.20
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.26          0.00          0.258 (iii)
     TIME TO PEAK    (hrs)=       5.23          6.23           5.23
     RUNOFF VOLUME    (mm)=      72.10         19.80          72.05
     TOTAL RAINFALL   (mm)=      73.10         73.10          73.10
     RUNOFF COEFFICIENT   =       0.99          0.27           0.99


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  99.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0001)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0420      0.0751

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0133)      2.760      0.258      5.23       72.05
   OUTFLOW: ID= 1 (  0001)      2.760      0.067      6.27       71.88

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 25.94
                  TIME SHIFT OF PEAK FLOW         (min)= 62.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1195

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--------------------
| ADD HYD  (  0027)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     2.76   0.067     6.27    71.88
      + ID2= 2 (  1300):     3.57   0.317     5.23    67.55
        ================================================
        ID = 3 (  0027):     6.33   0.378     5.23    69.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0013)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1040      0.2272
                          0.0080     0.1711   |   0.1210      0.2380
                          0.0150     0.2214   |   0.1370      0.2516
                          0.0830     0.2217   |   0.5920      0.3236

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0027)      6.330      0.378      5.23       69.44
   OUTFLOW: ID= 1 (  0013)      6.330      0.110      7.27       53.97

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 29.08
                  TIME SHIFT OF PEAK FLOW         (min)=122.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2310

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--------------------
| ADD HYD  (  0035)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
```

```
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0012):    12.32   0.215     7.30    53.50
      + ID2= 2 (  0013):     6.33   0.110     7.27    53.97
        ================================================
        ID = 3 (  0035):    18.65   0.325     7.27    53.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (  0035)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0035):    18.65   0.325     7.27    53.66
      + ID2= 2 (  0036):     3.51   0.208     5.25    34.20
        ================================================
        ID = 1 (  0035):    22.16   0.362     6.30    50.58

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0035):    22.16   0.362     6.30    50.58
      + ID2= 2 (  0039):    56.91   1.346     5.60    38.51
        ================================================
        ID = 3 (  0040):    79.07   1.480     6.23    41.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\2763624e
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\2763624e


DATE: 03-01-2024                          TIME: 01:17:38

USER:


COMMENTS: _____________________________________________________________


--------------------------------------------------------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : Run 05 50YR12HR               **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              8a0d0ce7-501d-4e6c-b5b0-013bae96712b\114dc132
| Ptotal= 80.82 mm |    Comments: 50yr/12hr
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  3.25   13.74 |  6.50    5.66 |  9.75    0.81
                0.25    0.81 |  3.50   13.74 |  6.75    5.66 | 10.00    0.81
                0.50    0.81 |  3.75   13.74 |  7.00    5.66 | 10.25    0.81
                0.75    0.81 |  4.00   13.74 |  7.25    3.23 | 10.50    0.81
```

1.00	0.81	4.25	37.17	7.50	3.23	10.75	0.81
1.25	0.81	4.50	37.17	7.75	3.23	11.00	0.81
1.50	0.81	4.75	37.17	8.00	3.23	11.25	0.81
1.75	0.81	5.00	37.17	8.25	1.62	11.50	0.81
2.00	0.81	5.25	10.50	8.50	1.62	11.75	0.81
2.25	4.85	5.50	10.50	8.75	1.62	12.00	0.81
2.50	4.85	5.75	10.50	9.00	1.62		
2.75	4.85	6.00	10.50	9.25	0.81		
3.00	4.85	6.25	5.66	9.50	0.81		

CALIB			
NASHYD (0033)	Area (ha)= 4.56	Curve Number (CN)= 82.0	
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.22		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.85	6.250	10.50	9.33	0.81
0.167	0.00	3.250	4.85	6.333	5.66	9.42	0.81
0.250	0.00	3.333	13.74	6.417	5.66	9.50	0.81
0.333	0.81	3.417	13.74	6.500	5.66	9.58	0.81
0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81
1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81
1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81
1.833	0.81	4.917	37.17	8.000	3.23	11.08	0.81
1.917	0.81	5.000	37.17	8.083	3.23	11.17	0.81
2.000	0.81	5.083	37.17	8.167	3.23	11.25	0.81
2.083	0.81	5.167	37.17	8.250	3.23	11.33	0.81
2.167	0.81	5.250	37.17	8.333	1.62	11.42	0.81
2.250	0.81	5.333	10.50	8.417	1.62	11.50	0.81
2.333	4.85	5.417	10.50	8.500	1.62	11.58	0.81
2.417	4.85	5.500	10.50	8.583	1.62	11.67	0.81
2.500	4.85	5.583	10.50	8.667	1.62	11.75	0.81
2.583	4.85	5.667	10.50	8.750	1.62	11.83	0.81
2.667	4.85	5.750	10.50	8.833	1.62	11.92	0.81
2.750	4.85	5.833	10.50	8.917	1.62	12.00	0.81
2.833	4.85	5.917	10.50	9.000	1.62	12.08	0.81
2.917	4.85	6.000	10.50	9.083	1.62	12.17	0.81
3.000	4.85	6.083	10.50	9.167	1.62	12.25	0.81
3.083	4.85	6.167	10.50	9.250	1.62		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.313 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 43.633
TOTAL RAINFALL (mm)= 80.820
RUNOFF COEFFICIENT = 0.540

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

CALIB			
STANDHYD (1100)	Area (ha)= 24.52		
ID= 1 DT= 2.0 min	Total Imp(%)= 84.00	Dir. Conn.(%)= 84.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	1.21
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.133	0.00	3.200	4.85	6.267	8.08	9.33	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.200	0.00	3.267	9.29	6.333	5.66	9.40	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.267	0.41	3.333	13.74	6.400	5.66	9.47	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.133	0.81	4.200	13.74	7.267	4.45	10.33	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.200	0.81	4.267	25.45	7.333	3.23	10.40	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.133	0.81	5.200	37.17	8.267	2.43	11.33	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.200	0.81	5.267	23.84	8.333	1.62	11.40	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.267	2.83	5.333	10.50	8.400	1.62	11.47	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81

2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.067	4.85	6.133	10.50	9.200	1.62	12.27	0.40

Max.Eff.Inten.(mm/hr)=	37.17	25.90	
over (min)	8.00	16.00	
Storage Coeff. (min)=	8.78 (ii)	14.18 (ii)	
Unit Hyd. Tpeak (min)=	8.00	16.00	
Unit Hyd. peak (cms)=	0.13	0.08	
			TOTALS
PEAK FLOW (cms)=	2.12	0.25	2.372 (iii)
TIME TO PEAK (hrs)=	5.23	5.30	5.23
RUNOFF VOLUME (mm)=	79.82	42.46	73.84
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.53	0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0111)	Area (ha)= 6.10
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	1.21
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.133	0.00	3.200	4.85	6.267	8.08	9.33	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.200	0.00	3.267	9.29	6.333	5.66	9.40	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.267	0.41	3.333	13.74	6.400	5.66	9.47	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81

1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.133	0.81	4.200	13.74	7.267	4.45	10.33	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.200	0.81	4.267	25.45	7.333	3.23	10.40	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.133	0.81	5.200	37.17	8.267	2.43	11.33	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.200	0.81	5.267	23.84	8.333	1.62	11.40	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.267	2.83	5.333	10.50	8.400	1.62	11.47	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.067	4.85	6.133	10.50	9.200	1.62	12.27	0.40

Max.Eff.Inten.(mm/hr)=	37.17	37.09	
over (min)	6.00	8.00	
Storage Coeff. (min)=	5.78 (ii)	6.44 (ii)	
Unit Hyd. Tpeak (min)=	6.00	8.00	
Unit Hyd. peak (cms)=	0.19	0.16	
			TOTALS
PEAK FLOW (cms)=	0.63	0.00	0.630 (iii)
TIME TO PEAK (hrs)=	5.23	5.23	5.23
RUNOFF VOLUME (mm)=	79.82	77.33	79.82
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.96	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


```
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0920      0.1659
     **** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0111)      6.100      0.630      5.23      79.82
   OUTFLOW: ID= 1 (  0003)      6.100      0.163      6.30      79.74

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 25.81
                  TIME SHIFT OF PEAK FLOW         (min)= 64.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2931

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0050)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  1100):    24.52   2.372     5.23    73.84
      + ID2= 2 (  0003):     6.10   0.163     6.30    79.74
        ================================================
        ID = 3 (  0050):    30.62   2.517     5.23    75.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0011)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.4686      1.2877
                          0.0158     0.8925   |   0.5484      1.3960
                          0.0439     1.1554   |   0.6220      1.5142
                          0.3705     1.1796   |   2.8520      2.3383

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0050)     30.620      2.517      5.23      75.02
   OUTFLOW: ID= 1 (  0011)     30.620      0.554      6.73      49.35

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 22.02
                  TIME SHIFT OF PEAK FLOW         (min)= 90.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.4056

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--------------------
| CALIB            |
| STANDHYD (  0030)|   Area    (ha)=   0.23
|ID= 1 DT= 2.0 min |   Total Imp(%)=  99.99   Dir. Conn.(%)=  99.99
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23          0.00
     Dep. Storage     (mm)=       1.00          5.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      39.16         40.00
     Mannings n           =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
      TIME     RAIN |   TIME     RAIN |'  TIME     RAIN |   TIME     RAIN
       hrs   mm/hr |    hrs   mm/hr |'   hrs   mm/hr |    hrs   mm/hr
     0.033    0.00 | 3.100    4.85 | 6.167   10.50 |  9.23    1.62
     0.067    0.00 | 3.133    4.85 | 6.200   10.50 |  9.27    1.21
     0.100    0.00 | 3.167    4.85 | 6.233   10.50 |  9.30    0.81
     0.133    0.00 | 3.200    4.85 | 6.267    8.08 |  9.33    0.81
     0.167    0.00 | 3.233    4.85 | 6.300    5.66 |  9.37    0.81
     0.200    0.00 | 3.267    9.29 | 6.333    5.66 |  9.40    0.81
     0.233    0.00 | 3.300   13.74 | 6.367    5.66 |  9.43    0.81
     0.267    0.41 | 3.333   13.74 | 6.400    5.66 |  9.47    0.81
     0.300    0.81 | 3.367   13.74 | 6.433    5.66 |  9.50    0.81
     0.333    0.81 | 3.400   13.74 | 6.467    5.66 |  9.53    0.81
     0.367    0.81 | 3.433   13.74 | 6.500    5.66 |  9.57    0.81
     0.400    0.81 | 3.467   13.74 | 6.533    5.66 |  9.60    0.81
     0.433    0.81 | 3.500   13.74 | 6.567    5.66 |  9.63    0.81
     0.467    0.81 | 3.533   13.74 | 6.600    5.66 |  9.67    0.81
     0.500    0.81 | 3.567   13.74 | 6.633    5.66 |  9.70    0.81
     0.533    0.81 | 3.600   13.74 | 6.667    5.66 |  9.73    0.81
     0.567    0.81 | 3.633   13.74 | 6.700    5.66 |  9.77    0.81
```

0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.133	0.81	4.200	13.74	7.267	4.45	10.33	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.200	0.81	4.267	25.45	7.333	3.23	10.40	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.133	0.81	5.200	37.17	8.267	2.43	11.33	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.200	0.81	5.267	23.84	8.333	1.62	11.40	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.267	2.83	5.333	10.50	8.400	1.62	11.47	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.067	4.85	6.133	10.50	9.200	1.62	12.27	0.40

Max.Eff.Inten.(mm/hr)=	37.17	25.90	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.16 (ii)	2.43 (ii)	
Unit Hyd. Tpeak (min)=	4.00	4.00	
Unit Hyd. peak (cms)=	0.39	0.38	
			TOTALS
PEAK FLOW (cms)=	0.02	0.00	0.024 (iii)
TIME TO PEAK (hrs)=	4.73	5.23	5.23

```
     RUNOFF VOLUME    (mm)=      79.82        42.46          79.81
     TOTAL RAINFALL   (mm)=      80.82        80.82          80.82
     RUNOFF COEFFICIENT   =       0.99         0.53           0.99


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------


--------------------
| ADD HYD  (  0029)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0011):    30.62   0.554     6.73    49.35
      + ID2= 2 (  0030):     0.23   0.024     5.23    79.81
        ====================================================
        ID = 3 (  0029):    30.85   0.558     6.73    49.58

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------


--------------------
| ADD HYD  (  0029)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0029):    30.85   0.558     6.73    49.58
      + ID2= 2 (  0033):     4.56   0.313     5.25    43.63
        ====================================================
        ID = 1 (  0029):    35.41   0.678     5.40    48.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0034)|   Area    (ha)=  16.98   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.60

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


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
 0.083     0.00 | 3.167     4.85 | 6.250   10.50 |  9.33     0.81
 0.167     0.00 | 3.250     4.85 | 6.333    5.66 |  9.42     0.81
 0.250     0.00 | 3.333    13.74 | 6.417    5.66 |  9.50     0.81
 0.333     0.81 | 3.417    13.74 | 6.500    5.66 |  9.58     0.81
 0.417     0.81 | 3.500    13.74 | 6.583    5.66 |  9.67     0.81
 0.500     0.81 | 3.583    13.74 | 6.667    5.66 |  9.75     0.81
 0.583     0.81 | 3.667    13.74 | 6.750    5.66 |  9.83     0.81
 0.667     0.81 | 3.750    13.74 | 6.833    5.66 |  9.92     0.81
 0.750     0.81 | 3.833    13.74 | 6.917    5.66 | 10.00     0.81
 0.833     0.81 | 3.917    13.74 | 7.000    5.66 | 10.08     0.81
 0.917     0.81 | 4.000    13.74 | 7.083    5.66 | 10.17     0.81
 1.000     0.81 | 4.083    13.74 | 7.167    5.66 | 10.25     0.81
 1.083     0.81 | 4.167    13.74 | 7.250    5.66 | 10.33     0.81
 1.167     0.81 | 4.250    13.74 | 7.333    3.23 | 10.42     0.81
 1.250     0.81 | 4.333    37.17 | 7.417    3.23 | 10.50     0.81
 1.333     0.81 | 4.417    37.17 | 7.500    3.23 | 10.58     0.81
 1.417     0.81 | 4.500    37.17 | 7.583    3.23 | 10.67     0.81
 1.500     0.81 | 4.583    37.17 | 7.667    3.23 | 10.75     0.81
 1.583     0.81 | 4.667    37.17 | 7.750    3.23 | 10.83     0.81
 1.667     0.81 | 4.750    37.17 | 7.833    3.23 | 10.92     0.81
 1.750     0.81 | 4.833    37.17 | 7.917    3.23 | 11.00     0.81
 1.833     0.81 | 4.917    37.17 | 8.000    3.23 | 11.08     0.81
 1.917     0.81 | 5.000    37.17 | 8.083    3.23 | 11.17     0.81
 2.000     0.81 | 5.083    37.17 | 8.167    3.23 | 11.25     0.81
 2.083     0.81 | 5.167    37.17 | 8.250    3.23 | 11.33     0.81
 2.167     0.81 | 5.250    37.17 | 8.333    1.62 | 11.42     0.81
 2.250     0.81 | 5.333    10.50 | 8.417    1.62 | 11.50     0.81
 2.333     4.85 | 5.417    10.50 | 8.500    1.62 | 11.58     0.81
 2.417     4.85 | 5.500    10.50 | 8.583    1.62 | 11.67     0.81
 2.500     4.85 | 5.583    10.50 | 8.667    1.62 | 11.75     0.81
 2.583     4.85 | 5.667    10.50 | 8.750    1.62 | 11.83     0.81
 2.667     4.85 | 5.750    10.50 | 8.833    1.62 | 11.92     0.81
 2.750     4.85 | 5.833    10.50 | 8.917    1.62 | 12.00     0.81
 2.833     4.85 | 5.917    10.50 | 9.000    1.62 | 12.08     0.81
 2.917     4.85 | 6.000    10.50 | 9.083    1.62 | 12.17     0.81
 3.000     4.85 | 6.083    10.50 | 9.167    1.62 | 12.25     0.81
```

3.083	4.85	6.167	10.50	9.250	1.62	

Unit Hyd Qpeak (cms)= 1.081

PEAK FLOW (cms)= 0.776 (i)
TIME TO PEAK (hrs)= 5.583
RUNOFF VOLUME (mm)= 40.470
TOTAL RAINFALL (mm)= 80.820
RUNOFF COEFFICIENT = 0.501

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

CALIB			
NASHYD (0031)	Area (ha)=	4.52	Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.41	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.85	6.250	10.50	9.33	0.81
0.167	0.00	3.250	4.85	6.333	5.66	9.42	0.81
0.250	0.00	3.333	13.74	6.417	5.66	9.50	0.81
0.333	0.81	3.417	13.74	6.500	5.66	9.58	0.81
0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81
1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81
1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81
1.833	0.81	4.917	37.17	8.000	3.23	11.08	0.81
1.917	0.81	5.000	37.17	8.083	3.23	11.17	0.81
2.000	0.81	5.083	37.17	8.167	3.23	11.25	0.81
2.083	0.81	5.167	37.17	8.250	3.23	11.33	0.81
2.167	0.81	5.250	37.17	8.333	1.62	11.42	0.81
2.250	0.81	5.333	10.50	8.417	1.62	11.50	0.81
2.333	4.85	5.417	10.50	8.500	1.62	11.58	0.81
2.417	4.85	5.500	10.50	8.583	1.62	11.67	0.81
2.500	4.85	5.583	10.50	8.667	1.62	11.75	0.81
2.583	4.85	5.667	10.50	8.750	1.62	11.83	0.81
2.667	4.85	5.750	10.50	8.833	1.62	11.92	0.81
2.750	4.85	5.833	10.50	8.917	1.62	12.00	0.81
2.833	4.85	5.917	10.50	9.000	1.62	12.08	0.81
2.917	4.85	6.000	10.50	9.083	1.62	12.17	0.81
3.000	4.85	6.083	10.50	9.167	1.62	12.25	0.81
3.083	4.85	6.167	10.50	9.250	1.62		

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.216 (i)
TIME TO PEAK (hrs)= 5.417
RUNOFF VOLUME (mm)= 35.659
TOTAL RAINFALL (mm)= 80.820
RUNOFF COEFFICIENT = 0.441

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

ADD HYD (0039)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0029):	35.41	0.678	5.40	48.81
+ ID2= 2 (0031):	4.52	0.216	5.42	35.66
ID = 3 (0039):	39.93	0.894	5.40	47.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0039)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
	ID1= 3 (0039):	39.93	0.894	5.40	47.32
	+ ID2= 2 (0034):	16.98	0.776	5.58	40.47
	ID = 1 (0039):	56.91	1.652	5.43	45.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0036)				
ID= 1 DT= 5.0 min	Area (ha)=	3.51	Curve Number (CN)=	81.0
	Ia (mm)=	6.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.09		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.85	6.250	10.50	9.33	0.81
0.167	0.00	3.250	4.85	6.333	5.66	9.42	0.81
0.250	0.00	3.333	13.74	6.417	5.66	9.50	0.81
0.333	0.81	3.417	13.74	6.500	5.66	9.58	0.81
0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81
1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81
1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81
1.833	0.81	4.917	37.17	8.000	3.23	11.08	0.81
1.917	0.81	5.000	37.17	8.083	3.23	11.17	0.81
2.000	0.81	5.083	37.17	8.167	3.23	11.25	0.81
2.083	0.81	5.167	37.17	8.250	3.23	11.33	0.81
2.167	0.81	5.250	37.17	8.333	1.62	11.42	0.81
2.250	0.81	5.333	10.50	8.417	1.62	11.50	0.81
2.333	4.85	5.417	10.50	8.500	1.62	11.58	0.81
2.417	4.85	5.500	10.50	8.583	1.62	11.67	0.81
2.500	4.85	5.583	10.50	8.667	1.62	11.75	0.81
2.583	4.85	5.667	10.50	8.750	1.62	11.83	0.81
2.667	4.85	5.750	10.50	8.833	1.62	11.92	0.81
2.750	4.85	5.833	10.50	8.917	1.62	12.00	0.81
2.833	4.85	5.917	10.50	9.000	1.62	12.08	0.81
2.917	4.85	6.000	10.50	9.083	1.62	12.17	0.81
3.000	4.85	6.083	10.50	9.167	1.62	12.25	0.81
3.083	4.85	6.167	10.50	9.250	1.62		

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.241 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 40.079
TOTAL RAINFALL (mm)= 80.820
RUNOFF COEFFICIENT = 0.496

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

CALIB STANDHYD (1200)				
ID= 1 DT= 2.0 min	Area (ha)=	6.76		
	Total Imp(%)=	87.00	Dir. Conn.(%)=	87.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.88	0.88
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00

Length	(m)=	212.29	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	1.21
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.133	0.00	3.200	4.85	6.267	8.08	9.33	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.200	0.00	3.267	9.29	6.333	5.66	9.40	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.267	0.41	3.333	13.74	6.400	5.66	9.47	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.133	0.81	4.200	13.74	7.267	4.45	10.33	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.200	0.81	4.267	25.45	7.333	3.23	10.40	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.133	0.81	5.200	37.17	8.267	2.43	11.33	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.200	0.81	5.267	23.84	8.333	1.62	11.40	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.267	2.83	5.333	10.50	8.400	1.62	11.47	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81

2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.067	4.85	6.133	10.50	9.200	1.62	12.27	0.40

Max.Eff.Inten.(mm/hr)=	37.17	25.90	
over (min)	6.00	12.00	
Storage Coeff. (min)=	5.96 (ii)	10.86 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.19	0.10	
			TOTALS
PEAK FLOW (cms)=	0.61	0.06	0.666 (iii)
TIME TO PEAK (hrs)=	5.23	5.27	5.23
RUNOFF VOLUME (mm)=	79.82	42.46	74.96
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.53	0.93

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0122)	Area (ha)=	5.56	
ID= 1 DT= 2.0 min	Total Imp(%)=	99.90	Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	1.21
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.133	0.00	3.200	4.85	6.267	8.08	9.33	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.200	0.00	3.267	9.29	6.333	5.66	9.40	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.267	0.41	3.333	13.74	6.400	5.66	9.47	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81

0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.133	0.81	4.200	13.74	7.267	4.45	10.33	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.200	0.81	4.267	25.45	7.333	3.23	10.40	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.133	0.81	5.200	37.17	8.267	2.43	11.33	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.200	0.81	5.267	23.84	8.333	1.62	11.40	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.267	2.83	5.333	10.50	8.400	1.62	11.47	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.067	4.85	6.133	10.50	9.200	1.62	12.27	0.40

Max.Eff.Inten.(mm/hr)=	37.17	37.09	
over (min)	6.00	8.00	
Storage Coeff. (min)=	5.62 (ii)	6.28 (ii)	
Unit Hyd. Tpeak (min)=	6.00	8.00	
Unit Hyd. peak (cms)=	0.20	0.16	
			TOTALS
PEAK FLOW (cms)=	0.57	0.00	0.574 (iii)
TIME TO PEAK (hrs)=	5.23	5.23	5.23
RUNOFF VOLUME (mm)=	79.82	77.33	79.82
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.96	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0002)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0840      0.1513

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0122)      5.560      0.574      5.23       79.82
   OUTFLOW: ID= 1 (  0002)      5.560      0.148      6.30       79.74

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 25.83
                  TIME SHIFT OF PEAK FLOW         (min)= 64.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2671

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--------------------
| ADD HYD  (  0024)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  1200):     6.76   0.666     5.23    74.96
      + ID2= 2 (  0002):     5.56   0.148     6.30    79.74
        ==========================================================
        ID = 3 (  0024):    12.32   0.798     5.23    77.12

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| RESERVOIR(  0012)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2030      0.4395
                          0.0150     0.3342   |   0.2360      0.4580
                          0.0290     0.4309   |   0.2670      0.4832
                          0.1610     0.4312   |   1.1520      0.6099

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0024)     12.320      0.798      5.23       77.12
   OUTFLOW: ID= 1 (  0012)     12.320      0.243      7.13       60.97

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 30.49
                  TIME SHIFT OF PEAK FLOW         (min)=114.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.4640

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--------------------
| CALIB            |
| STANDHYD (  1300)|   Area    (ha)=   3.57
|ID= 1 DT= 2.0 min |   Total Imp(%)=  87.30   Dir. Conn.(%)=  87.30
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.12         0.45
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     154.27        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.033     0.00 | 3.100     4.85 | 6.167    10.50 |  9.23     1.62
               0.067     0.00 | 3.133     4.85 | 6.200    10.50 |  9.27     1.21
               0.100     0.00 | 3.167     4.85 | 6.233    10.50 |  9.30     0.81
               0.133     0.00 | 3.200     4.85 | 6.267     8.08 |  9.33     0.81
               0.167     0.00 | 3.233     4.85 | 6.300     5.66 |  9.37     0.81
               0.200     0.00 | 3.267     9.29 | 6.333     5.66 |  9.40     0.81
               0.233     0.00 | 3.300    13.74 | 6.367     5.66 |  9.43     0.81
               0.267     0.41 | 3.333    13.74 | 6.400     5.66 |  9.47     0.81
               0.300     0.81 | 3.367    13.74 | 6.433     5.66 |  9.50     0.81
               0.333     0.81 | 3.400    13.74 | 6.467     5.66 |  9.53     0.81
               0.367     0.81 | 3.433    13.74 | 6.500     5.66 |  9.57     0.81
               0.400     0.81 | 3.467    13.74 | 6.533     5.66 |  9.60     0.81
               0.433     0.81 | 3.500    13.74 | 6.567     5.66 |  9.63     0.81
               0.467     0.81 | 3.533    13.74 | 6.600     5.66 |  9.67     0.81
               0.500     0.81 | 3.567    13.74 | 6.633     5.66 |  9.70     0.81
               0.533     0.81 | 3.600    13.74 | 6.667     5.66 |  9.73     0.81
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0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.133	0.81	4.200	13.74	7.267	4.45	10.33	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.200	0.81	4.267	25.45	7.333	3.23	10.40	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.133	0.81	5.200	37.17	8.267	2.43	11.33	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.200	0.81	5.267	23.84	8.333	1.62	11.40	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.267	2.83	5.333	10.50	8.400	1.62	11.47	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.067	4.85	6.133	10.50	9.200	1.62	12.27	0.40

Max.Eff.Inten.(mm/hr)=	37.17	25.90	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.92 (ii)	9.77 (ii)	
Unit Hyd. Tpeak (min)=	4.00	10.00	
Unit Hyd. peak (cms)=	0.24	0.11	
			TOTALS
PEAK FLOW (cms)=	0.32	0.03	0.353 (iii)

TIME TO PEAK (hrs)=	5.23	5.27	5.23
RUNOFF VOLUME (mm)=	79.82	42.46	75.07
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.53	0.93

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0133)	Area (ha)= 2.76
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	1.21
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.133	0.00	3.200	4.85	6.267	8.08	9.33	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.200	0.00	3.267	9.29	6.333	5.66	9.40	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.267	0.41	3.333	13.74	6.400	5.66	9.47	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.133	0.81	4.200	13.74	7.267	4.45	10.33	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.200	0.81	4.267	25.45	7.333	3.23	10.40	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81

1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.133	0.81	5.200	37.17	8.267	2.43	11.33	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.200	0.81	5.267	23.84	8.333	1.62	11.40	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.267	2.83	5.333	10.50	8.400	1.62	11.47	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.067	4.85	6.133	10.50	9.200	1.62	12.27	0.40

Max.Eff.Inten.(mm/hr)=	37.17	27.11		
over (min)	5.00	6.00		
Storage Coeff. (min)=	4.56 (ii)	5.22 (ii)		
Unit Hyd. Tpeak (min)=	4.00	6.00		
Unit Hyd. peak (cms)=	0.26	0.21		
			TOTALS	
PEAK FLOW (cms)=	0.28	0.00	0.285 (iii)	
TIME TO PEAK (hrs)=	5.23	5.30	5.23	
RUNOFF VOLUME (mm)=	79.82	27.46	79.77	
TOTAL RAINFALL (mm)=	80.82	80.82	80.82	
RUNOFF COEFFICIENT =	0.99	0.34	0.99	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0001)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0420	0.0751

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0133)	2.760	0.285	5.23	79.77
OUTFLOW: ID= 1 (0001)	2.760	0.074	6.27	79.60

PEAK FLOW REDUCTION [Qout/Qin](%)= 25.96
TIME SHIFT OF PEAK FLOW (min)= 62.00
MAXIMUM STORAGE USED (ha.m.)= 0.1323

ADD HYD (0027)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0001):		2.76	0.074	6.27	79.60
+ ID2= 2 (1300):		3.57	0.353	5.23	75.07

```
       ================================================
       ID = 3 (  0027):     6.33   0.420     5.23    77.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0013)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1040      0.2272
                          0.0080     0.1711   |   0.1210      0.2380
                          0.0150     0.2214   |   0.1370      0.2516
                          0.0830     0.2217   |   0.5920      0.3236

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0027)      6.330      0.420      5.23      77.05
   OUTFLOW: ID= 1 (  0013)      6.330      0.124      7.10      61.45

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 29.57
                  TIME SHIFT OF PEAK FLOW         (min)=112.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2408

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0012):    12.32   0.243     7.13    60.97
     + ID2= 2 (  0013):     6.33   0.124     7.10    61.45
       ================================================
       ID = 3 (  0035):    18.65   0.368     7.13    61.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0035):    18.65   0.368     7.13    61.13
     + ID2= 2 (  0036):     3.51   0.241     5.25    40.08
       ================================================
       ID = 1 (  0035):    22.16   0.428     6.23    57.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0035):    22.16   0.428     6.23    57.80
     + ID2= 2 (  0039):    56.91   1.652     5.43    45.28
       ================================================
       ID = 3 (  0040):    79.07   1.890     5.73    48.79

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\85f05711
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\85f05711
```

DATE: 03-01-2024 TIME: 01:17:38

USER:

COMMENTS: _____

****
** SIMULATION : Run 06 100YR12HR **
****

| READ STORM | Filename: C:\Users\CAPP078249\AppData\Local\Temp\8a0d0ce7-501d-4e6c-b5b0-013bae96712b\ffd0dba4
| Ptotal= 88.54 mm | Comments: 100yr/12hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	15.05	6.50	6.20	9.75	0.89
0.25	0.89	3.50	15.05	6.75	6.20	10.00	0.89
0.50	0.89	3.75	15.05	7.00	6.20	10.25	0.89
0.75	0.89	4.00	15.05	7.25	3.54	10.50	0.89
1.00	0.89	4.25	40.71	7.50	3.54	10.75	0.89
1.25	0.89	4.50	40.71	7.75	3.54	11.00	0.89
1.50	0.89	4.75	40.71	8.00	3.54	11.25	0.89
1.75	0.89	5.00	40.71	8.25	1.77	11.50	0.89
2.00	0.89	5.25	11.51	8.50	1.77	11.75	0.89
2.25	5.31	5.50	11.51	8.75	1.77	12.00	0.89
2.50	5.31	5.75	11.51	9.00	1.77		
2.75	5.31	6.00	11.51	9.25	0.89		
3.00	5.31	6.25	6.20	9.50	0.89		

CALIB NASHYD (0033)	ID= 1 DT= 5.0 min

Area (ha)= 4.56 Curve Number (CN)= 82.0
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.22

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89

2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.357 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 50.036
TOTAL RAINFALL (mm)= 88.540
RUNOFF COEFFICIENT = 0.565

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

CALIB	
STANDHYD (1100)	Area (ha)= 24.52
ID= 1 DT= 2.0 min	Total Imp(%)= 84.00 Dir. Conn.(%)= 84.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	1.33
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.133	0.00	3.200	5.31	6.267	8.86	9.33	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.200	0.00	3.267	10.18	6.333	6.20	9.40	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.267	0.45	3.333	15.05	6.400	6.20	9.47	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.133	0.89	4.200	15.05	7.267	4.87	10.33	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.200	0.89	4.267	27.88	7.333	3.54	10.40	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89

1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.133	0.89	5.200	40.71	8.267	2.66	11.33	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.200	0.89	5.267	26.11	8.333	1.77	11.40	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.267	3.10	5.333	11.51	8.400	1.77	11.47	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.067	5.31	6.133	11.51	9.200	1.77	12.27	0.44

Max.Eff.Inten.(mm/hr)=	40.71	29.45		
over (min)	8.00	14.00		
Storage Coeff. (min)=	8.46 (ii)	13.67 (ii)		
Unit Hyd. Tpeak (min)=	8.00	14.00		
Unit Hyd. peak (cms)=	0.14	0.08		
			TOTALS	
PEAK FLOW (cms)=	2.33	0.29	2.616 (iii)	
TIME TO PEAK (hrs)=	5.23	5.27	5.23	
RUNOFF VOLUME (mm)=	87.54	48.76	81.34	
TOTAL RAINFALL (mm)=	88.54	88.54	88.54	
RUNOFF COEFFICIENT =	0.99	0.55	0.92	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0111)	Area (ha)=	6.10	
ID= 1 DT= 2.0 min	Total Imp(%)=	99.90	Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77

0.067	0.00	3.133	5.31	6.200	11.51	9.27	1.33
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.133	0.00	3.200	5.31	6.267	8.86	9.33	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.200	0.00	3.267	10.18	6.333	6.20	9.40	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.267	0.45	3.333	15.05	6.400	6.20	9.47	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.133	0.89	4.200	15.05	7.267	4.87	10.33	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.200	0.89	4.267	27.88	7.333	3.54	10.40	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.133	0.89	5.200	40.71	8.267	2.66	11.33	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.200	0.89	5.267	26.11	8.333	1.77	11.40	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.267	3.10	5.333	11.51	8.400	1.77	11.47	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89

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               2.867    5.31 | 5.933   11.51 | 9.000    1.77 | 12.07    0.89
               2.900    5.31 | 5.967   11.51 | 9.033    1.77 | 12.10    0.89
               2.933    5.31 | 6.000   11.51 | 9.067    1.77 | 12.13    0.89
               2.967    5.31 | 6.033   11.51 | 9.100    1.77 | 12.17    0.89
               3.000    5.31 | 6.067   11.51 | 9.133    1.77 | 12.20    0.89
               3.033    5.31 | 6.100   11.51 | 9.167    1.77 | 12.23    0.89
               3.067    5.31 | 6.133   11.51 | 9.200    1.77 | 12.27    0.44

     Max.Eff.Inten.(mm/hr)=      40.71        40.64
               over (min)         6.00         8.00
     Storage Coeff.  (min)=       5.57 (ii)    6.21 (ii)
     Unit Hyd. Tpeak (min)=       6.00         8.00
     Unit Hyd. peak  (cms)=       0.20         0.17
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.69         0.00          0.690 (iii)
     TIME TO PEAK    (hrs)=       5.23         5.23           5.23
     RUNOFF VOLUME    (mm)=      87.54        85.05          87.54
     TOTAL RAINFALL   (mm)=      88.54        88.54          88.54
     RUNOFF COEFFICIENT   =       0.99         0.96           0.99


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  99.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0920      0.1659
     **** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0111)      6.100      0.690      5.23      87.54
   OUTFLOW: ID= 1 (  0003)      6.100      0.178      6.30      87.46

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 25.83
                  TIME SHIFT OF PEAK FLOW         (min)= 64.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.3213

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| ADD HYD  (  0050)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  1100):    24.52   2.616     5.23    81.34
      + ID2= 2 (  0003):     6.10   0.178     6.30    87.46
        ==========================================
        ID = 3 (  0050):    30.62   2.775     5.23    82.56

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| RESERVOIR(  0011)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.4686      1.2877
                         0.0158     0.8925   |   0.5484      1.3960
                         0.0439     1.1554   |   0.6220      1.5142
                         0.3705     1.1796   |   2.8520      2.3383

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0050)     30.620      2.775      5.23      82.56
   OUTFLOW: ID= 1 (  0011)     30.620      0.633      6.63      56.81

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 22.80
                  TIME SHIFT OF PEAK FLOW         (min)= 84.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.5182

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| CALIB            |
| STANDHYD (  0030)|   Area    (ha)=   0.23
|ID= 1 DT= 2.0 min |   Total Imp(%)=  99.99   Dir. Conn.(%)=  99.99
--------------------
                           IMPERVIOUS    PERVIOUS (i)
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Surface Area	(ha)=	0.23	0.00
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	39.16	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	1.33
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.133	0.00	3.200	5.31	6.267	8.86	9.33	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.200	0.00	3.267	10.18	6.333	6.20	9.40	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.267	0.45	3.333	15.05	6.400	6.20	9.47	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.133	0.89	4.200	15.05	7.267	4.87	10.33	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.200	0.89	4.267	27.88	7.333	3.54	10.40	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.133	0.89	5.200	40.71	8.267	2.66	11.33	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.200	0.89	5.267	26.11	8.333	1.77	11.40	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.267	3.10	5.333	11.51	8.400	1.77	11.47	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89

2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.067	5.31	6.133	11.51	9.200	1.77	12.27	0.44

			TOTALS
Max.Eff.Inten.(mm/hr)=	40.71	29.45	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.09 (ii)	2.34 (ii)	
Unit Hyd. Tpeak (min)=	4.00	4.00	
Unit Hyd. peak (cms)=	0.40	0.39	
PEAK FLOW (cms)=	0.03	0.00	0.026 (iii)
TIME TO PEAK (hrs)=	4.73	5.23	5.23
RUNOFF VOLUME (mm)=	87.54	48.76	87.53
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.55	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0011):		30.62	0.633	6.63	56.81
+ ID2= 2 (0030):		0.23	0.026	5.23	87.53
ID = 3 (0029):		30.85	0.637	6.63	57.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0029):		30.85	0.637	6.63	57.04
+ ID2= 2 (0033):		4.56	0.357	5.25	50.04
ID = 1 (0029):		35.41	0.817	5.33	56.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0034)				
ID= 1 DT= 5.0 min	Area (ha)=	16.98	Curve Number (CN)=	80.0
	Ia (mm)=	6.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.60		

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89

0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

Unit Hyd Qpeak (cms)= 1.081

PEAK FLOW (cms)= 0.897 (i)
TIME TO PEAK (hrs)= 5.500
RUNOFF VOLUME (mm)= 46.649
TOTAL RAINFALL (mm)= 88.540
RUNOFF COEFFICIENT = 0.527

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

CALIB NASHYD (0031) ID= 1 DT= 5.0 min	Area (ha)= 4.52	Curve Number (CN)= 77.0
	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.41	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89

2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.252 (i)
TIME TO PEAK (hrs)= 5.417
RUNOFF VOLUME (mm)= 41.467
TOTAL RAINFALL (mm)= 88.540
RUNOFF COEFFICIENT = 0.468

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

ADD HYD (0039)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0029):	35.41	0.817	5.33	56.14
+ ID2= 2 (0031):	4.52	0.252	5.42	41.47
ID = 3 (0039):	39.93	1.069	5.33	54.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0039)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0039):	39.93	1.069	5.33	54.48
+ ID2= 2 (0034):	16.98	0.897	5.50	46.65
ID = 1 (0039):	56.91	1.934	5.43	52.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0036)
ID= 1 DT= 5.0 min

Area (ha)= 3.51 Curve Number (CN)= 81.0
Ia (mm)= 6.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.09

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89

2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.274 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 46.127
TOTAL RAINFALL (mm)= 88.540
RUNOFF COEFFICIENT = 0.521

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

CALIB STANDHYD (1200) ID= 1 DT= 2.0 min	Area (ha)= 6.76 Total Imp(%)= 87.00 Dir. Conn.(%)= 87.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.88	0.88
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	212.29	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	1.33
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.133	0.00	3.200	5.31	6.267	8.86	9.33	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.200	0.00	3.267	10.18	6.333	6.20	9.40	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.267	0.45	3.333	15.05	6.400	6.20	9.47	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.133	0.89	4.200	15.05	7.267	4.87	10.33	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.200	0.89	4.267	27.88	7.333	3.54	10.40	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89

1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.133	0.89	5.200	40.71	8.267	2.66	11.33	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.200	0.89	5.267	26.11	8.333	1.77	11.40	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.267	3.10	5.333	11.51	8.400	1.77	11.47	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.067	5.31	6.133	11.51	9.200	1.77	12.27	0.44

Max.Eff.Inten.(mm/hr)=	40.71	29.45	
over (min)	6.00	12.00	
Storage Coeff. (min)=	5.75 (ii)	10.48 (ii)	
Unit Hyd. Tpeak (min)=	6.00	12.00	
Unit Hyd. peak (cms)=	0.19	0.10	
			TOTALS
PEAK FLOW (cms)=	0.67	0.07	0.732 (iii)
TIME TO PEAK (hrs)=	5.23	5.27	5.23
RUNOFF VOLUME (mm)=	87.54	48.76	82.50
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.55	0.93

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0122)	Area (ha)= 5.56
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	1.33
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.133	0.00	3.200	5.31	6.267	8.86	9.33	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.200	0.00	3.267	10.18	6.333	6.20	9.40	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.267	0.45	3.333	15.05	6.400	6.20	9.47	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.133	0.89	4.200	15.05	7.267	4.87	10.33	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.200	0.89	4.267	27.88	7.333	3.54	10.40	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.133	0.89	5.200	40.71	8.267	2.66	11.33	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.200	0.89	5.267	26.11	8.333	1.77	11.40	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.267	3.10	5.333	11.51	8.400	1.77	11.47	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89

2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.067	5.31	6.133	11.51	9.200	1.77	12.27	0.44

			TOTALS
Max.Eff.Inten.(mm/hr)=	40.71	40.64	
over (min)	6.00	8.00	
Storage Coeff. (min)=	5.42 (ii)	6.06 (ii)	
Unit Hyd. Tpeak (min)=	6.00	8.00	
Unit Hyd. peak (cms)=	0.20	0.17	
PEAK FLOW (cms)=	0.63	0.00	0.629 (iii)
TIME TO PEAK (hrs)=	5.23	5.23	5.23
RUNOFF VOLUME (mm)=	87.54	85.05	87.54
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.96	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0002)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0840	0.1513

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0122)	5.560	0.629	5.23	87.54
OUTFLOW: ID= 1 (0002)	5.560	0.163	6.30	87.45

PEAK FLOW REDUCTION [Qout/Qin](%)= 25.86
TIME SHIFT OF PEAK FLOW (min)= 64.00
MAXIMUM STORAGE USED (ha.m.)= 0.2928

ADD HYD (0024)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1200):	6.76	0.732	5.23	82.50
+ ID2= 2 (0002):	5.56	0.163	6.30	87.45
ID = 3 (0024):	12.32	0.878	5.23	84.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0012)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 2.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.2030	0.4395
	0.0150	0.3342	0.2360	0.4580
	0.0290	0.4309	0.2670	0.4832
	0.1610	0.4312	1.1520	0.6099

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0024)	12.320	0.878	5.23	84.74
OUTFLOW: ID= 1 (0012)	12.320	0.282	6.57	68.47

PEAK FLOW REDUCTION [Qout/Qin](%)= 32.10
TIME SHIFT OF PEAK FLOW (min)= 80.00
MAXIMUM STORAGE USED (ha.m.)= 0.4853

CALIB		
STANDHYD (1300)	Area (ha)= 3.57	
ID= 1 DT= 2.0 min	Total Imp(%)= 87.30	Dir. Conn.(%)= 87.30

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.12	0.45
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	154.27	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	1.33
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.133	0.00	3.200	5.31	6.267	8.86	9.33	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.200	0.00	3.267	10.18	6.333	6.20	9.40	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.267	0.45	3.333	15.05	6.400	6.20	9.47	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.133	0.89	4.200	15.05	7.267	4.87	10.33	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.200	0.89	4.267	27.88	7.333	3.54	10.40	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.133	0.89	5.200	40.71	8.267	2.66	11.33	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.200	0.89	5.267	26.11	8.333	1.77	11.40	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.267	3.10	5.333	11.51	8.400	1.77	11.47	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89

2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.067	5.31	6.133	11.51	9.200	1.77	12.27	0.44

Max.Eff.Inten.(mm/hr)=	40.71	29.45		
over (min)	5.00	10.00		
Storage Coeff. (min)=	4.75 (ii)	9.42 (ii)		
Unit Hyd. Tpeak (min)=	4.00	10.00		
Unit Hyd. peak (cms)=	0.25	0.12		
			TOTALS	
PEAK FLOW (cms)=	0.35	0.04	0.388 (iii)	
TIME TO PEAK (hrs)=	5.23	5.27	5.23	
RUNOFF VOLUME (mm)=	87.54	48.76	82.61	
TOTAL RAINFALL (mm)=	88.54	88.54	88.54	
RUNOFF COEFFICIENT =	0.99	0.55	0.93	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0133)	Area (ha)= 2.76
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	1.33
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.133	0.00	3.200	5.31	6.267	8.86	9.33	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.200	0.00	3.267	10.18	6.333	6.20	9.40	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.267	0.45	3.333	15.05	6.400	6.20	9.47	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89

0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.133	0.89	4.200	15.05	7.267	4.87	10.33	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.200	0.89	4.267	27.88	7.333	3.54	10.40	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.133	0.89	5.200	40.71	8.267	2.66	11.33	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.200	0.89	5.267	26.11	8.333	1.77	11.40	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.267	3.10	5.333	11.51	8.400	1.77	11.47	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.067	5.31	6.133	11.51	9.200	1.77	12.27	0.44

Max.Eff.Inten.(mm/hr)=	40.71	37.90	
over (min)	5.00	6.00	
Storage Coeff. (min)=	4.39 (ii)	5.03 (ii)	
Unit Hyd. Tpeak (min)=	4.00	6.00	
Unit Hyd. peak (cms)=	0.26	0.21	
			TOTALS
PEAK FLOW (cms)=	0.31	0.00	0.312 (iii)
TIME TO PEAK (hrs)=	5.23	5.27	5.23
RUNOFF VOLUME (mm)=	87.54	35.14	87.49
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.40	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)

```
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0001)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0420      0.0751

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0133)      2.760      0.312      5.23      87.49
   OUTFLOW: ID= 1 (  0001)      2.760      0.081      6.27      87.32

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 25.98
                  TIME SHIFT OF PEAK FLOW         (min)= 62.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1450

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0027)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0001):     2.76   0.081     6.27    87.32
     + ID2= 2 (  1300):     3.57   0.388     5.23    82.61
       ================================================
       ID = 3 (  0027):     6.33   0.462     5.23    84.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0013)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1040      0.2272
                          0.0080     0.1711   |   0.1210      0.2380
                          0.0150     0.2214   |   0.1370      0.2516
                          0.0830     0.2217   |   0.5920      0.3236

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0027)      6.330      0.462      5.23      84.67
   OUTFLOW: ID= 1 (  0013)      6.330      0.144      6.50      68.95

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 31.22
                  TIME SHIFT OF PEAK FLOW         (min)= 76.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2527

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0012):    12.32   0.282     6.57    68.47
     + ID2= 2 (  0013):     6.33   0.144     6.50    68.95
       ================================================
       ID = 3 (  0035):    18.65   0.426     6.53    68.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0035):    18.65   0.426     6.53    68.63
     + ID2= 2 (  0036):     3.51   0.274     5.25    46.13
       ================================================
       ID = 1 (  0035):    22.16   0.483     6.23    65.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0035):    22.16   0.483     6.23    65.07
```

```
      + ID2= 2 (  0039):    56.91   1.934     5.43    52.14
        ================================================
        ID = 3 (  0040):    79.07   2.338     5.47    55.77

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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 FINISH
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       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\298080bf
  Summary filename: C:\Users\CAPP078249\AppData\Local\Civica\VH5\99f5a664-5479-41e3-a06e-5100674363bc\298080bf


DATE: 03-01-2024                          TIME: 01:17:35

USER:


COMMENTS: _____________________________________________________________


--------------------------------------------------------------------------------------------------------------------
  ********************************************
  ** SIMULATION : Run 07 hurrhaz.stm          **
  ********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\CAPP078249\AppD
|                  |              ata\Local\Temp\
|                  |              8a0d0ce7-501d-4e6c-b5b0-013bae96712b\629303c6
| Ptotal=212.00 mm |    Comments: HURRICANE HAZEL DESIGN STORM:
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    6.00 |  3.00   13.00 |  6.00   23.00 |  9.00   53.00
                0.25    6.00 |  3.25   13.00 |  6.25   23.00 |  9.25   53.00
                0.50    6.00 |  3.50   13.00 |  6.50   23.00 |  9.50   53.00
                0.75    6.00 |  3.75   13.00 |  6.75   23.00 |  9.75   53.00
                1.00    4.00 |  4.00   17.00 |  7.00   13.00 | 10.00   38.00
                1.25    4.00 |  4.25   17.00 |  7.25   13.00 | 10.25   38.00
                1.50    4.00 |  4.50   17.00 |  7.50   13.00 | 10.50   38.00
                1.75    4.00 |  4.75   17.00 |  7.75   13.00 | 10.75   38.00
                2.00    6.00 |  5.00   13.00 |  8.00   13.00 | 11.00   13.00
                2.25    6.00 |  5.25   13.00 |  8.25   13.00 | 11.25   13.00
                2.50    6.00 |  5.50   13.00 |  8.50   13.00 | 11.50   13.00
                2.75    6.00 |  5.75   13.00 |  8.75   13.00 | 11.75   13.00

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--------------------
| CALIB            |
| NASHYD   (  0033)|   Area    (ha)=   4.56   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

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


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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 0.792

PEAK FLOW (cms)= 0.614 (i)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 162.861
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.768

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

CALIB STANDHYD (1100) ID= 1 DT= 2.0 min	Area (ha)= 24.52 Total Imp(%)= 84.00 Dir. Conn.(%)= 84.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.60	3.92
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	404.31	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00

0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	48.78	
over (min)	8.00	14.00	
Storage Coeff. (min)=	7.61 (ii)	12.30 (ii)	
Unit Hyd. Tpeak (min)=	8.00	14.00	
Unit Hyd. peak (cms)=	0.15	0.09	
			TOTALS
PEAK FLOW (cms)=	3.03	0.52	3.551 (iii)
TIME TO PEAK (hrs)=	10.00	10.00	10.00
RUNOFF VOLUME (mm)=	211.00	160.73	202.96
TOTAL RAINFALL (mm)=	212.00	212.00	212.00

RUNOFF COEFFICIENT = 1.00 0.76 0.96

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0111)	Area (ha)= 6.10
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.09	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	201.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00

1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	52.99		
over (min)	6.00	6.00		
Storage Coeff. (min)=	5.02 (ii)	5.59 (ii)		
Unit Hyd. Tpeak (min)=	6.00	6.00		
Unit Hyd. peak (cms)=	0.21	0.20		
			TOTALS	
PEAK FLOW (cms)=	0.90	0.00	0.898 (iii)	
TIME TO PEAK (hrs)=	9.97	9.97	9.97	
RUNOFF VOLUME (mm)=	210.99	208.46	211.00	
TOTAL RAINFALL (mm)=	212.00	212.00	212.00	
RUNOFF COEFFICIENT =	1.00	0.98	1.00	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0003)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0920	0.1659

**** WARNING : STORAGE-DISCHARGE TABLE WAS EXCEEDED.

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0111)	6.100	0.898	9.97	211.00
OUTFLOW: ID= 1 (0003)	6.100	0.375	11.13	210.92

PEAK FLOW REDUCTION [Qout/Qin](%)= 41.80
TIME SHIFT OF PEAK FLOW (min)= 70.00
MAXIMUM STORAGE USED (ha.m.)= 0.6771

ADD HYD (0050)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.52	3.551	10.00	202.96
+ ID2= 2 (0003):	6.10	0.375	11.13	210.92
ID = 3 (0050):	30.62	3.856	10.00	204.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0011)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 2.0 min |

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.4686	1.2877
0.0158	0.8925	0.5484	1.3960
0.0439	1.1554	0.6220	1.5142
0.3705	1.1796	2.8520	2.3383

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0050)	30.620	3.856	10.00	204.54
OUTFLOW: ID= 1 (0011)	30.620	2.852	11.03	177.56

PEAK FLOW REDUCTION [Qout/Qin](%)= 73.96
TIME SHIFT OF PEAK FLOW (min)= 62.00
MAXIMUM STORAGE USED (ha.m.)= 2.3383

| CALIB |
| STANDHYD (0030)| Area (ha)= 0.23
|ID= 1 DT= 2.0 min | Total Imp(%)= 99.99 Dir. Conn.(%)= 99.99

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.23	0.00
Dep. Storage (mm)=	1.00	5.00
Average Slope (%)=	1.00	2.00
Length (m)=	39.16	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00

1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	48.78	
over (min)	5.00	4.00	
Storage Coeff. (min)=	1.88 (ii)	2.11 (ii)	
Unit Hyd. Tpeak (min)=	4.00	4.00	
Unit Hyd. peak (cms)=	0.42	0.40	
			TOTALS
PEAK FLOW (cms)=	0.03	0.00	0.034 (iii)
TIME TO PEAK (hrs)=	9.53	10.00	9.80
RUNOFF VOLUME (mm)=	211.00	160.73	210.99
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	1.00	0.76	1.00

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0011):		30.62	2.852	11.03	177.56
+ ID2= 2 (0030):		0.23	0.034	9.80	210.99
ID = 3 (0029):		30.85	2.874	11.00	177.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0029)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)

```
        ID1= 3 (  0029):    30.85   2.874    11.00   177.81
      + ID2= 2 (  0033):     4.56   0.614    10.00   162.86
        ================================================
        ID = 1 (  0029):    35.41   3.329    11.00   175.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

CALIB NASHYD (0034) ID= 1 DT= 5.0 min	Area (ha)= 16.98	Curve Number (CN)= 80.0	Ia (mm)= 6.00	# of Linear Res.(N)= 3.00	U.H. Tp(hrs)= 0.60

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

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     Unit Hyd Qpeak  (cms)=   1.081

     PEAK FLOW       (cms)=   1.884 (i)
     TIME TO PEAK    (hrs)=  10.417
     RUNOFF VOLUME    (mm)= 157.458
     TOTAL RAINFALL   (mm)= 212.000
     RUNOFF COEFFICIENT   =   0.743

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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CALIB NASHYD (0031) ID= 1 DT= 5.0 min	Area (ha)= 4.52	Curve Number (CN)= 77.0	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	U.H. Tp(hrs)= 0.41

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00

0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 0.421

PEAK FLOW (cms)= 0.534 (i)
TIME TO PEAK (hrs)= 10.167
RUNOFF VOLUME (mm)= 148.681
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.701

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

ADD HYD (0039)		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
1 + 2 = 3	ID1= 1 (0029):	35.41	3.329	11.00	175.88
	+ ID2= 2 (0031):	4.52	0.534	10.17	148.68
	ID = 3 (0039):	39.93	3.825	10.23	172.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0039)		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
3 + 2 = 1	ID1= 3 (0039):	39.93	3.825	10.23	172.80
	+ ID2= 2 (0034):	16.98	1.884	10.42	157.46
	ID = 1 (0039):	56.91	5.688	10.33	168.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (0036)	ID= 1 DT= 5.0 min

Area (ha)= 3.51 Curve Number (CN)= 81.0
Ia (mm)= 6.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.09

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00

0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 1.490

PEAK FLOW (cms)= 0.457 (i)
TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 153.754
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.725

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

CALIB	
STANDHYD (1200)	Area (ha)= 6.76
ID= 1 DT= 2.0 min	Total Imp(%)= 87.00 Dir. Conn.(%)= 87.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.88	0.88
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	212.29	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00

0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	48.78	
over (min)	6.00	10.00	
Storage Coeff. (min)=	5.17 (ii)	9.43 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.21	0.12	
			TOTALS
PEAK FLOW (cms)=	0.87	0.12	0.984 (iii)
TIME TO PEAK (hrs)=	9.97	10.00	10.00
RUNOFF VOLUME (mm)=	211.00	160.73	204.46
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	1.00	0.76	0.96

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0122)	Area (ha)= 5.56
ID= 1 DT= 2.0 min	Total Imp(%)= 99.90 Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.55	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	192.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00

2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	52.99	
over (min)	5.00	6.00	
Storage Coeff. (min)=	4.88 (ii)	5.45 (ii)	
Unit Hyd. Tpeak (min)=	4.00	6.00	
Unit Hyd. peak (cms)=	0.24	0.20	
			TOTALS
PEAK FLOW (cms)=	0.82	0.00	0.819 (iii)
TIME TO PEAK (hrs)=	9.97	9.97	9.97
RUNOFF VOLUME (mm)=	211.00	208.46	211.00
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	1.00	0.98	1.00

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 99.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0002)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 4.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0840	0.1513

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0122)	5.560	0.819	9.97	211.00
OUTFLOW: ID= 1 (0002)	5.560	0.343	11.10	210.91

PEAK FLOW REDUCTION [Qout/Qin](%)= 41.85
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.6170

ADD HYD (0024)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1200):	6.76	0.984	10.00	204.46
+ ID2= 2 (0002):	5.56	0.343	11.10	210.91
ID = 3 (0024):	12.32	1.264	10.00	207.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0012)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 2.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.2030	0.4395

0.0150	0.3342	0.2360	0.4580
0.0290	0.4309	0.2670	0.4832
0.1610	0.4312	1.1520	0.6099

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0024)	12.320	1.264	10.00	207.37
OUTFLOW: ID= 1 (0012)	12.320	1.152	10.10	189.05

PEAK FLOW REDUCTION [Qout/Qin](%)= 91.13
TIME SHIFT OF PEAK FLOW (min)= 6.00
MAXIMUM STORAGE USED (ha.m.)= 0.6099

CALIB STANDHYD (1300) ID= 1 DT= 2.0 min	Area (ha)= 3.57 Total Imp(%)= 87.30 Dir. Conn.(%)= 87.30

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.12	0.45
Dep. Storage (mm)=	1.00	5.00
Average Slope (%)=	1.00	2.00
Length (m)=	154.27	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00
0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00

1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Max.Eff.Inten.(mm/hr)=	53.00	48.78		
over (min)	5.00	10.00		
Storage Coeff. (min)=	4.27 (ii)	8.48 (ii)		
Unit Hyd. Tpeak (min)=	4.00	10.00		
Unit Hyd. peak (cms)=	0.27	0.13		
			TOTALS	
PEAK FLOW (cms)=	0.46	0.06	0.520 (iii)	
TIME TO PEAK (hrs)=	9.97	10.00	10.00	
RUNOFF VOLUME (mm)=	211.00	160.73	204.61	
TOTAL RAINFALL (mm)=	212.00	212.00	212.00	
RUNOFF COEFFICIENT =	1.00	0.76	0.97	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0133)	Area (ha)=	2.76	
ID= 1 DT= 2.0 min	Total Imp(%)=	99.90	Dir. Conn.(%)= 99.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.76	0.00
Dep. Storage	(mm)=	1.00	51.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.65	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	6.00	3.033	13.00	6.033	23.00	9.03	53.00
0.067	6.00	3.067	13.00	6.067	23.00	9.07	53.00
0.100	6.00	3.100	13.00	6.100	23.00	9.10	53.00
0.133	6.00	3.133	13.00	6.133	23.00	9.13	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.200	6.00	3.200	13.00	6.200	23.00	9.20	53.00
0.233	6.00	3.233	13.00	6.233	23.00	9.23	53.00

0.267	6.00	3.267	13.00	6.267	23.00	9.27	53.00
0.300	6.00	3.300	13.00	6.300	23.00	9.30	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.367	6.00	3.367	13.00	6.367	23.00	9.37	53.00
0.400	6.00	3.400	13.00	6.400	23.00	9.40	53.00
0.433	6.00	3.433	13.00	6.433	23.00	9.43	53.00
0.467	6.00	3.467	13.00	6.467	23.00	9.47	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.533	6.00	3.533	13.00	6.533	23.00	9.53	53.00
0.567	6.00	3.567	13.00	6.567	23.00	9.57	53.00
0.600	6.00	3.600	13.00	6.600	23.00	9.60	53.00
0.633	6.00	3.633	13.00	6.633	23.00	9.63	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.700	6.00	3.700	13.00	6.700	23.00	9.70	53.00
0.733	6.00	3.733	13.00	6.733	23.00	9.73	53.00
0.767	6.00	3.767	13.00	6.767	23.00	9.77	53.00
0.800	6.00	3.800	13.00	6.800	23.00	9.80	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.867	6.00	3.867	13.00	6.867	23.00	9.87	53.00
0.900	6.00	3.900	13.00	6.900	23.00	9.90	53.00
0.933	6.00	3.933	13.00	6.933	23.00	9.93	53.00
0.967	6.00	3.967	13.00	6.967	23.00	9.97	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	52.99
1.033	4.00	4.033	17.00	7.033	13.00	10.03	38.00
1.067	4.00	4.067	17.00	7.067	13.00	10.07	38.00
1.100	4.00	4.100	17.00	7.100	13.00	10.10	38.00
1.133	4.00	4.133	17.00	7.133	13.00	10.13	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.200	4.00	4.200	17.00	7.200	13.00	10.20	38.00
1.233	4.00	4.233	17.00	7.233	13.00	10.23	38.00
1.267	4.00	4.267	17.00	7.267	13.00	10.27	38.00
1.300	4.00	4.300	17.00	7.300	13.00	10.30	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.367	4.00	4.367	17.00	7.367	13.00	10.37	38.00
1.400	4.00	4.400	17.00	7.400	13.00	10.40	38.00
1.433	4.00	4.433	17.00	7.433	13.00	10.43	38.00
1.467	4.00	4.467	17.00	7.467	13.00	10.47	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.533	4.00	4.533	17.00	7.533	13.00	10.53	38.00
1.567	4.00	4.567	17.00	7.567	13.00	10.57	38.00
1.600	4.00	4.600	17.00	7.600	13.00	10.60	38.00
1.633	4.00	4.633	17.00	7.633	13.00	10.63	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.700	4.00	4.700	17.00	7.700	13.00	10.70	38.00
1.733	4.00	4.733	17.00	7.733	13.00	10.73	38.00
1.767	4.00	4.767	17.00	7.767	13.00	10.77	38.00
1.800	4.00	4.800	17.00	7.800	13.00	10.80	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.867	4.00	4.867	17.00	7.867	13.00	10.87	38.00
1.900	4.00	4.900	17.00	7.900	13.00	10.90	38.00
1.933	4.00	4.933	17.00	7.933	13.00	10.93	38.00
1.967	4.00	4.967	17.00	7.967	13.00	10.97	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

```
     Max.Eff.Inten.(mm/hr)=      53.00        52.97
               over (min)         5.00         6.00
     Storage Coeff.  (min)=       3.95 (ii)    4.53 (ii)
     Unit Hyd. Tpeak (min)=       4.00         6.00
     Unit Hyd. peak  (cms)=       0.28         0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.41         0.00          0.406 (iii)
     TIME TO PEAK    (hrs)=       9.93        10.00           9.97
     RUNOFF VOLUME    (mm)=     211.00       158.47         210.95
     TOTAL RAINFALL   (mm)=     212.00       212.00         212.00
     RUNOFF COEFFICIENT   =       1.00         0.75           1.00


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  99.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0001)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  4.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0420      0.0751

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0133)      2.760      0.406      9.97     210.95
   OUTFLOW: ID= 1 (  0001)      2.760      0.171     11.10     210.78

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 42.05
                  TIME SHIFT OF PEAK FLOW         (min)= 68.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.3057

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--------------------
| ADD HYD  (  0027)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0001):     2.76   0.171    11.10   210.78
     + ID2= 2 (  1300):     3.57   0.520    10.00   204.61
       ================================================
       ID = 3 (  0027):     6.33   0.660    10.00   207.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0013)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1040      0.2272
                          0.0080     0.1711   |   0.1210      0.2380
                          0.0150     0.2214   |   0.1370      0.2516
                          0.0830     0.2217   |   0.5920      0.3236

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0027)      6.330      0.660     10.00     207.30
   OUTFLOW: ID= 1 (  0013)      6.330      0.592     10.07     189.50

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 89.62
                  TIME SHIFT OF PEAK FLOW         (min)=  4.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.3236

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0012):    12.32   1.152    10.10   189.05
     + ID2= 2 (  0013):     6.33   0.592    10.07   189.50
       ================================================
       ID = 3 (  0035):    18.65   1.744    10.10   189.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0035)|
```

```
|   3 +  2 =  1    |          AREA     QPEAK     TPEAK      R.V.
--------------------          (ha)     (cms)     (hrs)      (mm)
        ID1= 3 (  0035):     18.65    1.744     10.10    189.20
      + ID2= 2 (  0036):      3.51    0.457     10.00    153.75
        ==================================================
        ID = 1 (  0035):     22.16    2.175     10.00    183.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------


--------------------
| ADD HYD  (  0040)|
|   1 +  2 =  3    |          AREA     QPEAK     TPEAK      R.V.
--------------------          (ha)     (cms)     (hrs)      (mm)
        ID1= 1 (  0035):     22.16    2.175     10.00    183.59
      + ID2= 2 (  0039):     56.91    5.688     10.33    168.22
        ==================================================
        ID = 3 (  0040):     79.07    7.716     10.23    172.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
```

APPENDIX

C

Infiltration Gallery Supporting Documents

StormTech® MC-4500 Chamber

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

Nominal Chamber Specifications
(not to scale)

Size (L x W x H)
52” x 100” x 60”
1321 mm x 2540 mm x 1524 mm

Chamber Storage
106.5 ft³ (3.01 m³)

Min. Installed Storage*
162.6 ft³ (4.60 m³)

Weight
125 lbs (56.7 kg)

Shipping
7 chambers/pallet
5 end caps/pallet
11 pallets/truck

*Assumes a minimum of 12” (300 mm) of stone above, 9” (230 mm) of stone below chambers, 9” (230 mm) of stone between chambers/ end caps and 40% stone porosity.

Nominal End Cap Specifications
(not to scale)

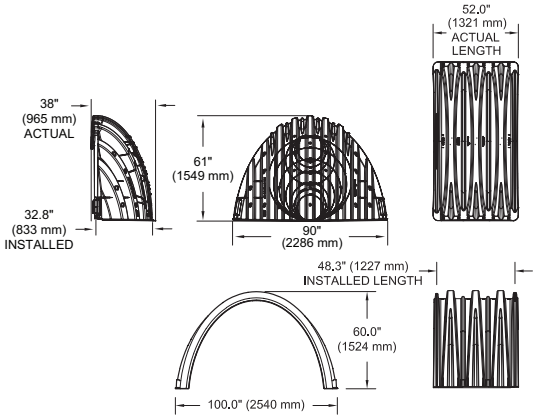
Size (L x W x H)
38” x 90” x 61”
965 mm x 2286 mm x 1549 mm

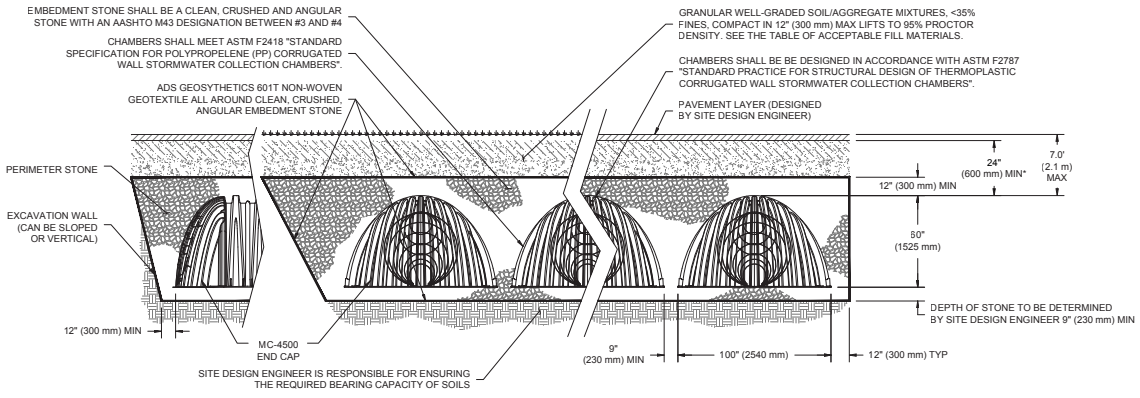
End Cap Storage
39.5 ft³ (1.12 m³)

Min. Installed Storage*
115.3 ft³ (3.26 m³)

Weight
90.0 lbs (40.8 kg)

*Assumes a minimum of 12” (300 mm) of stone above, 9” (230 mm) of stone below, 12” (300 mm) of stone perimeter, 9” (230 mm) of stone between chambers/ end caps and 40% stone porosity.





*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm).

ADS StormTech™

StormTech MC-4500 Specifications

Storage Volume Per Chamber

	Bare Chamber Storage ft³ (m³)	Chamber and Stone Foundation Depth in. (mm)			
		9 in (230 mm)	12 in (300 mm)	15 in (375 mm)	18 in (450 mm)
Chamber	106.5 (3.01)	162.6 (4.60)	166.3 (4.71)	169.9 (4.81)	173.6 (4.91)
End Cap	39.5 (1.12)	115.3 (3.26)	118.6 (3.36)	121.9 (3.45)	125.2 (3.54)

Note: Assumes 9" (230 mm) row spacing, 40% stone porosity, 12" (300 mm) stone above and includes the bare chamber/end cap volume. End cap volume assumes 12" (300 mm) stone perimeter in front of end cap.

Amount of Stone Per Chamber

English Tons (yds³)	Stone Foundation Depth			
	9 in	12 in	15 in	18 in
Chamber	7.4 (5.2)	7.8 (5.5)	8.3 (5.9)	8.8 (6.2)
End Cap	9.8 (7.0)	10.2 (7.3)	10.6 (7.6)	11.1 (7.9)
Metric Kilograms (m³)	**230 mm**	**300 mm**	**375 mm**	**450 mm**
Chamber	6713 (4.0)	7076 (4.2)	7529 (4.5)	7983 (4.7)
End Cap	8890 (5.3)	9253 (5.5)	9616 (5.8)	10069 (6.0)

Note: 12" (300 mm) of stone above and 9" (230 mm) row spacing and 12" (300 mm) of perimeter stone in front of end caps.

Volume Excavation Per Chamber yd³ (m³)

	Stone Foundation Depth			
	9 in (230 mm)	12 in (300 mm)	15 in (375mm)	18 in (450 mm)
Chamber	10.5 (8.0)	10.8 (8.3)	11.2 (8.5)	11.5 (8.8)
End Cap	9.7 (7.4)	10.0 (7.6)	10.3 (7.9)	10.6 (8.1)

Note: Assumes 9" (230 mm) of separation between chamber rows, 12" (300 mm) of perimeter in front of the end caps, and 24" (600 mm) of cover. The volume of excavation will vary as depth of cover increases.

ADS StormTech products, manufactured in accordance with ASTM F2418 or ASTMF2922, comply with all requirements in the Build America, Buy America (BABA) Act.

Working on a project?
Visit us at www.stormtech.com and utilize the Design Tool

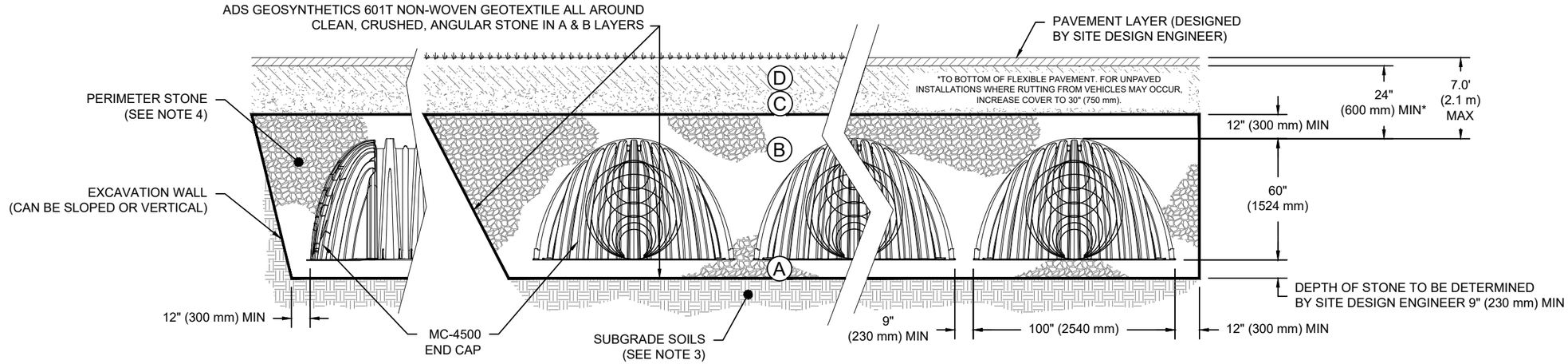
ADS StormTech™

adspipe.com
800-821-6710

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



*FOR COVER DEPTHS GREATER THAN 7.0' (2.1 m) PLEASE CONTACT STORMTECH

NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101
2. MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

MC-4500
STANDARD CROSS SECTION
DATE: 9/13/22 | DRAWN: KLJ | PROJECT #: | CHECKED: KLJ

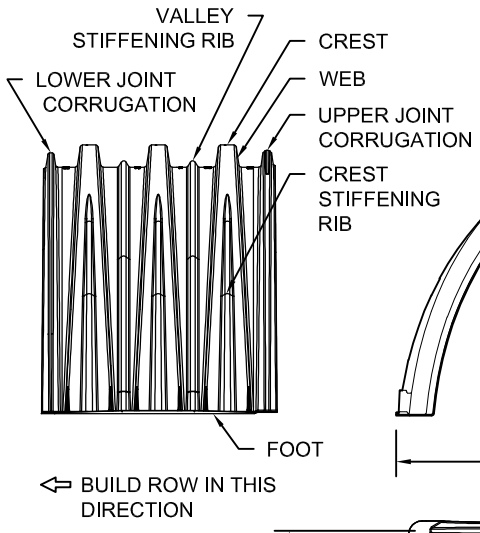
DATE	DRWN	CHKD	DESCRIPTION

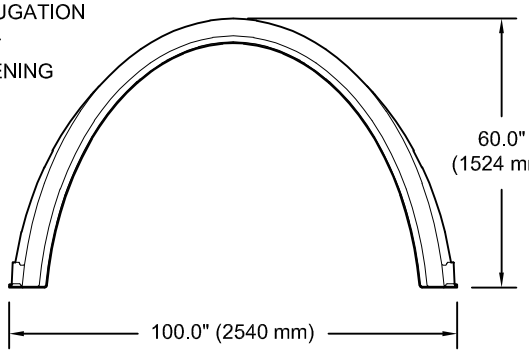
StormTech®
Chamber System
888-892-2694 | WWW.STORMTECH.COM

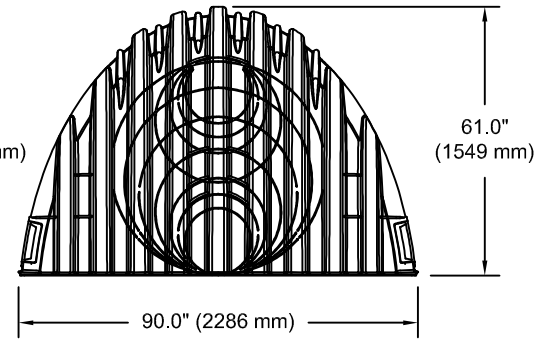
4640 TRUEMAN BLVD
HILLIARD, OH 43026

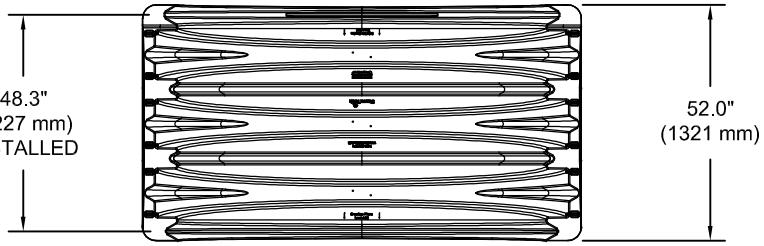
MC-4500 TECHNICAL SPECIFICATION

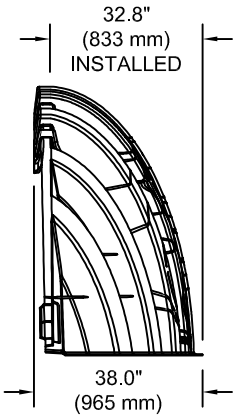
NTS











NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	100.0" X 60.0" X 48.3"	(2540 mm X 1524 mm X 1227 mm)
CHAMBER STORAGE	106.5 CUBIC FEET	(3.01 m³)
MINIMUM INSTALLED STORAGE*	162.6 CUBIC FEET	(4.60 m³)
WEIGHT (NOMINAL)	125.0 lbs.	(56.7 kg)

NOMINAL END CAP SPECIFICATIONS

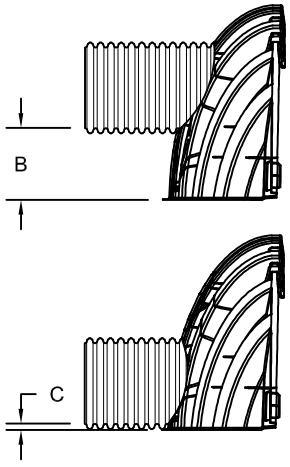
SIZE (W X H X INSTALLED LENGTH)	90.0" X 61.0" X 32.8"	(2286 mm X 1549 mm X 833 mm)
END CAP STORAGE	39.5 CUBIC FEET	(1.12 m³)
MINIMUM INSTALLED STORAGE*	115.3 CUBIC FEET	(3.26 m³)
WEIGHT (NOMINAL)	90 lbs.	(40.8 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

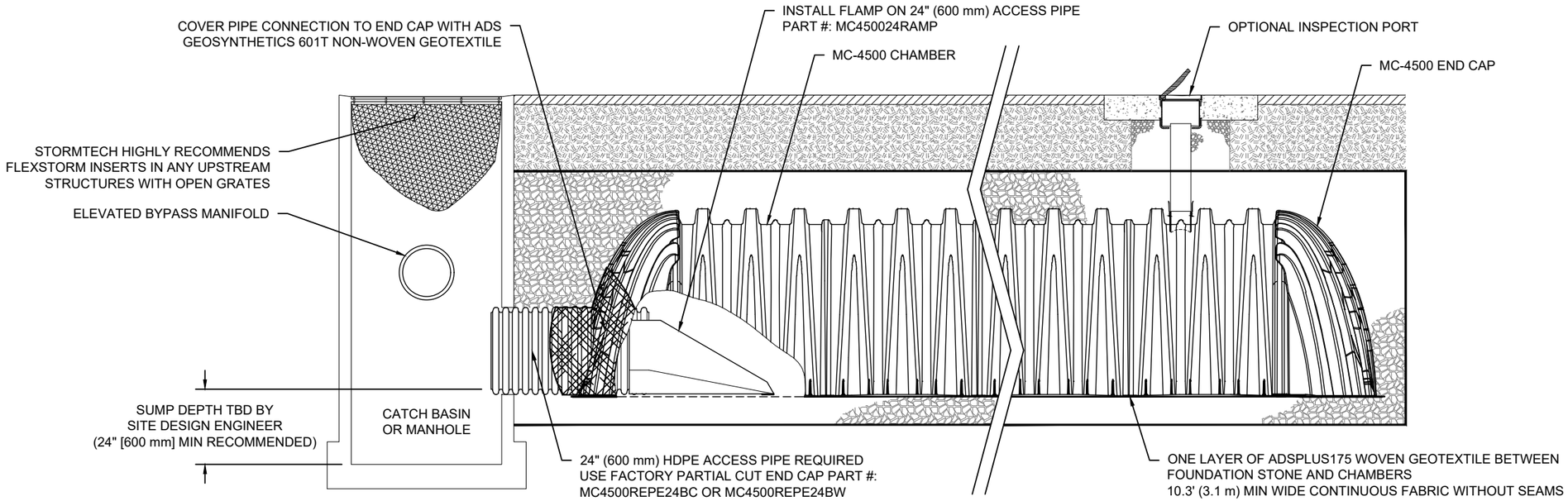
PARTIAL CUT HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PARTIAL CUT HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC4500IEPP06T	6" (150 mm)	42.54" (1081 mm)	---
MC4500IEPP06B		---	0.86" (22 mm)
MC4500IEPP08T	8" (200 mm)	40.50" (1029 mm)	---
MC4500IEPP08B		---	1.01" (26 mm)
MC4500IEPP10T	10" (250 mm)	38.37" (975 mm)	---
MC4500IEPP10B		---	1.33" (34 mm)
MC4500IEPP12T	12" (300 mm)	35.69" (907 mm)	---
MC4500IEPP12B		---	1.55" (39 mm)
MC4500IEPP15T	15" (375 mm)	32.72" (831 mm)	---
MC4500IEPP15B		---	1.70" (43 mm)
MC4500IEPP18T	18" (450 mm)	29.36" (746 mm)	---
MC4500IEPP18TW			
MC4500IEPP18B		---	1.97" (50 mm)
MC4500IEPP18BW			
MC4500IEPP24T	24" (600 mm)	23.05" (585 mm)	---
MC4500IEPP24TW			
MC4500IEPP24B		---	2.26" (57 mm)
MC4500IEPP24BW			
MC4500IEPP30BW	30" (750 mm)	---	2.95" (75 mm)
MC4500IEPP36BW	36" (900 mm)	---	3.25" (83 mm)
MC4500IEPP42BW	42" (1050 mm)	---	3.55" (90 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PREFABRICATED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.



MC-4500 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

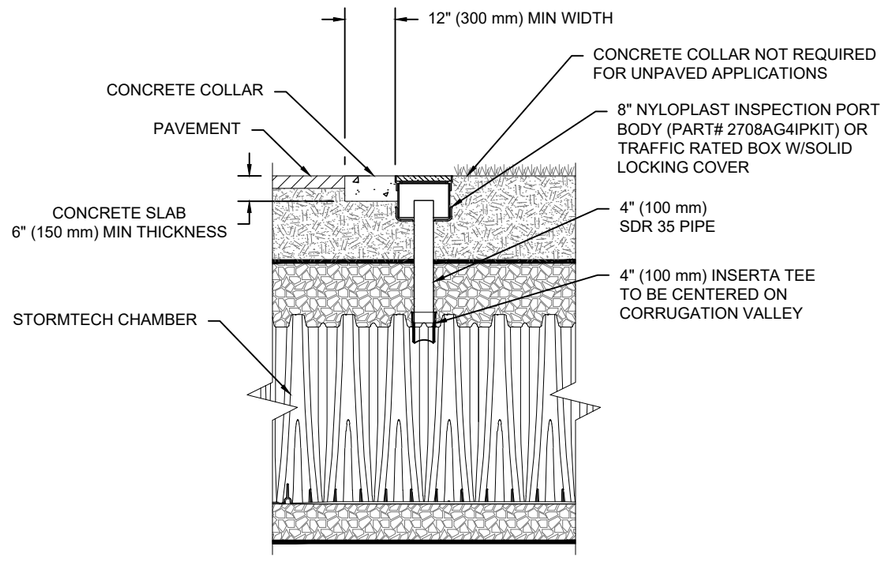
STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.

4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)
NTS

MC-4500
ISOLATOR ROW PLUS DETAILS
DATE: 9/13/22 | DRAWN: KLJ | CHECKED: KLJ | PROJECT #:

DATE	DRWN	CHKD	DESCRIPTION

StormTech® Chamber System
888-892-2694 | WWW.STORMTECH.COM
4640 TRUEMAN BLVD
HILLIARD, OH 43026

Isolator® Row Plus
O&M Manual

ADS StormTech™

The Isolator® Row Plus

Introduction

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row Plus is a technique to inexpensively enhance Total Suspended Solids (TSS) and Total Phosphorus (TP) removal with easy access for inspection and maintenance.

The Isolator Row Plus

The Isolator Row Plus is a row of StormTech chambers, either SC-160, SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-7200 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for sediment settling and filtration as stormwater rises in the Isolator Row Plus and passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC- 310-3 and SC-740 models) allow stormwater to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row Plus protecting the adjacent stone and chambers storage areas from sediment accumulation.

ADS geotextile fabric is placed between the stone and the Isolator Row Plus chambers. The woven geotextile provides a media for stormwater filtration, a durable surface for maintenance, prevents scour of the underlying stone and remains intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the chamber's sidewall. The non-woven fabric is not required over the SC-160, DC-780, MC-3500 or MC-7200 models as these chambers do not have perforated side walls.

The Isolator Row Plus is designed to capture the "first flush" runoff and offers the versatility to be sized on a volume basis or a flow-rate basis. An upstream manhole provides access to the Isolator Row Plus and includes a high/low concept such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row Plus bypass through a manifold to the other chambers. This is achieved with an elevated bypass manifold or a high-flow weir. This creates a differential between the Isolator Row Plus row of chambers and the manifold to the rest of the system, thus allowing for settlement time in the Isolator Row Plus. After Stormwater flows through the Isolator Row Plus and into the rest of the chamber system it is either exfiltrated into the soils below or passed at a controlled rate through an outlet manifold and outlet control structure.

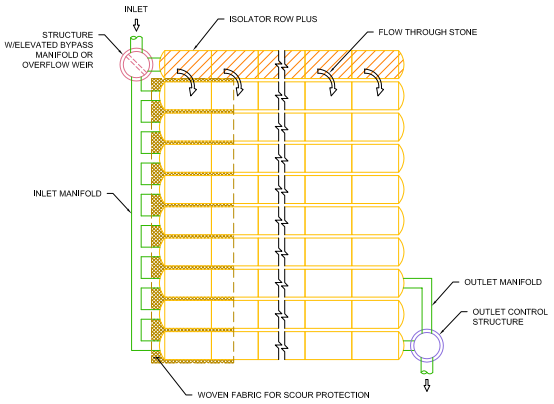
The Isolator Row FLAMP™ (patent pending) is a flared end ramp apparatus attached to the inlet pipe on the inside of the chamber end cap. The FLAMP provides a smooth transition from pipe invert to fabric bottom. It is configured to improve chamber function performance by enhancing outflow of solid debris that would otherwise collect at the chamber's end. It also serves to improve the fluid and solid flow into the access pipe during maintenance and cleaning and to guide cleaning and inspection equipment back into the inlet pipe when complete.

The Isolator Row Plus may be part of a treatment train system. The treatment train design and pretreatment device selection by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, StormTech recommend using the Isolator Row Plus to minimize maintenance requirements and maintenance costs.

Note: *See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row Plus.*

Looking down the Isolator Row PLUS from the manhole opening, ADS PLUS Fabric is shown between the chamber and stone base.

StormTech Isolator Row PLUS with Overflow Spillway (not to scale)



Isolator Row Plus Inspection/Maintenance

Inspection

The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row Plus should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

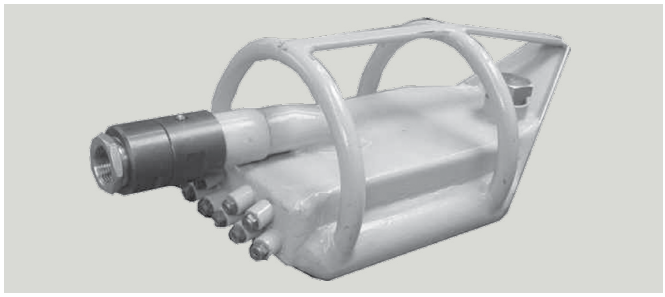
The Isolator Row Plus incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row Plus, clean-out should be performed.

Maintenance

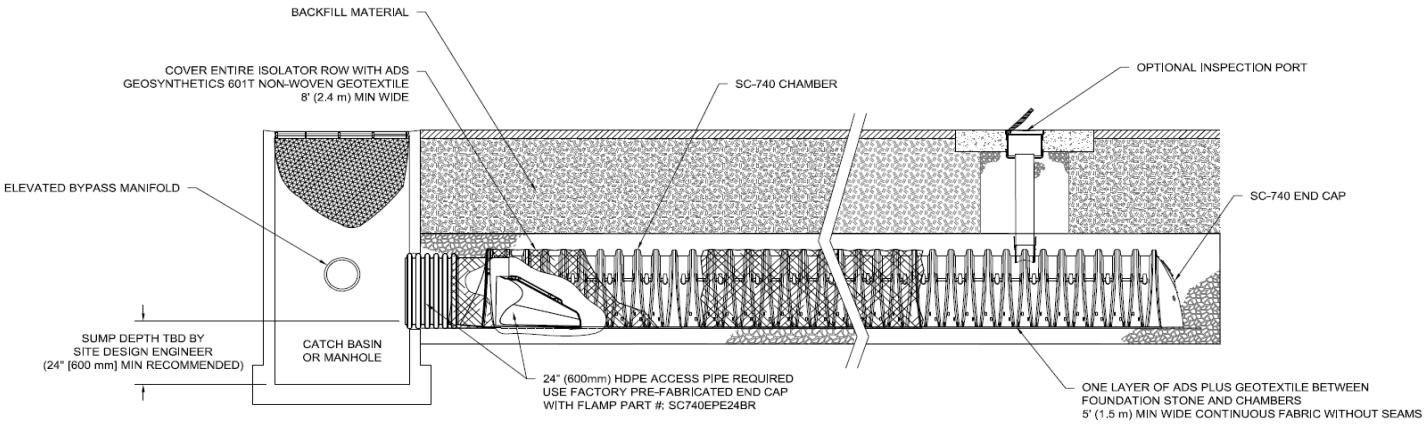
The Isolator Row Plus was designed to reduce the cost of periodic maintenance. By "isolating" sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row Plus while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45" are best. StormTech recommends a maximum nozzle pressure of 2000 psi be utilized during cleaning. JetVac reels can vary in length. For ease of maintenance, ADS recommends Isolator Row Plus lengths up to 200' (61 m). **The JetVac process shall only be performed on StormTech Isolator Row Plus that have ADS Plus Fabric (as specified by StormTech) over their angular base stone.**



StormTech Isolator Row PLUS (*not to scale*)

Note: *Non-woven fabric is only required over the inlet pipe connection into the end cap for SC-160LP, DC-780, MC-3500 and MC-7200 chamber models and is not required over the entire Isolator Row PLUS.*



Isolator Row Plus Step By Step Maintenance Procedures

Step 1

Inspect Isolator Row Plus for sediment.

A) Inspection ports (if present)
- i. Remove lid from floor box frame
- ii. Remove cap from inspection riser
- iii. Using a flashlight and stadia rod,measure depth of sediment and record results on maintenance log.
- iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.

B) All Isolator Row Plus
- i. Remove cover from manhole at upstream end of Isolator Row Plus
- ii. Using a flashlight, inspect down Isolator Row Plus through outlet pipe
  1. Mirrors on poles or cameras may be used to avoid a confined space entry
  2. Follow OSHA regulations for confined space entry if entering manhole
- iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2.
  If not, proceed to Step 3.

Step 2

Clean out Isolator Row Plus using the JetVac process.

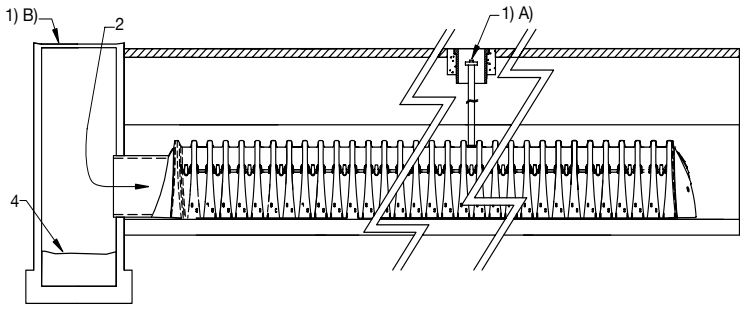
A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
B) Apply multiple passes of JetVac until backflush water is clean
C) Vacuum manhole sump as required

Step 3

Replace all caps, lids and covers, record observations and actions.

Step 4

Inspect & clean catch basins and manholes upstream of the StormTech system.



Sample Maintenance Log

Date	Stadia Rod Readings		Sedi-ment Depth (1)–(2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/11	6.3 ft	none		New installation. Fixed point is CI frame at grade	DJM
9/24/11		6.2	0.1 ft	Some grit felt	SM
6/20/13		5.8	0.5 ft	Mucky feel, debris visible in manhole and in Isolator Row PLUS, maintenance due	NV
7/7/13	6.3 ft		0	System jetted and vacuumed	DJM

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StormTech® Installation Guide
MC-3500 & MC-4500 Chamber

StormTech
Installation Video

Required Materials and Equipment List

- Acceptable fill materials per Table 1
- ADS Plus and non-woven geotextile fabrics
- StormTech solid end caps, pre-cored and pre-fabricated end caps
- StormTech chambers, manifolds and fittings

Note: MC-3500 chamber pallets are 77" x 90" (2.0 m x 2.3 m) and weigh about 2010 lbs. (912 kg) and MC-4500 pallets are 100" x 52" (2.5 m x 1.3 m) and weigh about 840 lbs. (381 kg). Unloading chambers requires 72" (1.8 m) (min.) forks and/or tie downs (straps, chains, etc).

Important Notes:

A. This installation guide provides the minimum requirements for proper installation of chambers. Nonadherence to this guide may result in damage to chambers during installation. Replacement of damaged chambers during or after backfilling is costly and very time consuming. It is recommended that all installers are familiar with this guide, and that the contractor inspects the chambers for distortion, damage and joint integrity as work progresses.

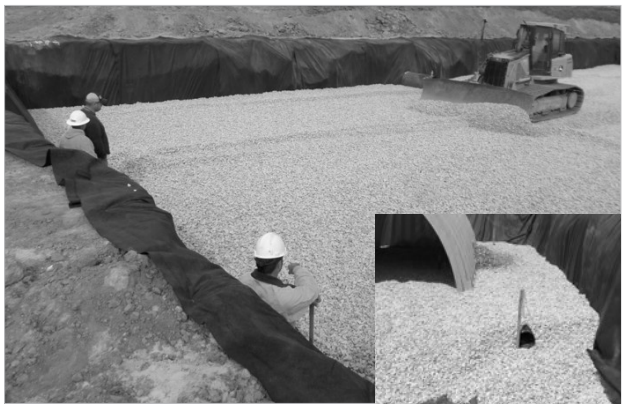
B. Use of a dozer to push embedment stone between the rows of chambers may cause damage to chambers and is not an acceptable backfill method. Any chambers damaged by using the "dump and push" method are not covered under the StormTech standard warranty.

C. Care should be taken in the handling of chambers and end caps. End caps must be stored standing upright. Avoid dropping, prying or excessive force on chambers during removal from pallet and initial placement.

Requirements for System Installation

Excavate bed and prepare subgrade per engineer's plans. Plans and specifications should include Best Management Practices (BMPs) to deter contamination of open pits during construction.

Place non-woven geotextile over prepared soils and up excavation walls.



Place clean, crushed, angular stone foundation 9" (230 mm) min. Install underdrains if required. Compact to achieve a flat surface.

Manifold, Scour Fabric and Chamber Assembly

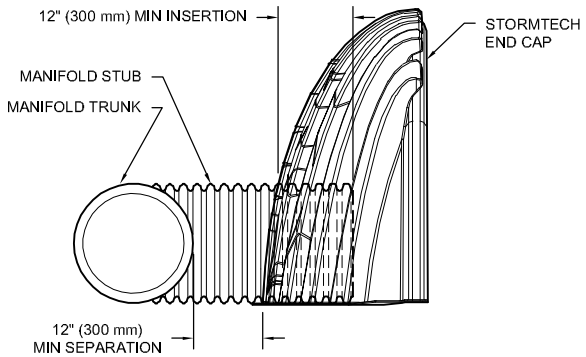
Install manifolds and lay out ADS PLUS fabric at inlet rows [min. 17.5 ft (5.33 m)] at each inlet end cap. Place a continuous piece (no seams) along entire length of Isolator® PLUS Row(s).

Align the first chamber and end cap of each row with inlet pipes. Contractor may choose to postpone stone placement around end chambers and leave ends of rows open for easy inspection of chambers during the backfill process.

Continue installing chambers by overlapping chamber end corrugations. Chamber joints are labeled “Lower Joint – Overlap Here” and “Build this direction – Upper Joint” Be sure that the chamber placement does not exceed the reach of the construction equipment used to place the stone. Maintain minimum 6” (150 mm) spacing between MC-3500 rows and 9” (230 mm) spacing between MC-4500 rows.

Place a continuous layer of ADS PLUS fabric between the foundation stone and the Isolator Row PLUS chambers, making sure the fabric lays flat and extends the entire width of the chamber feet.
When used on an Isolator Row PLUS, a 24” FLAMP (flared end ramp) is attached to the inside of the inlet pipe with a provided threaded rod and bolt. The FLAMP then lays on top of the ADS PLUS fabric.

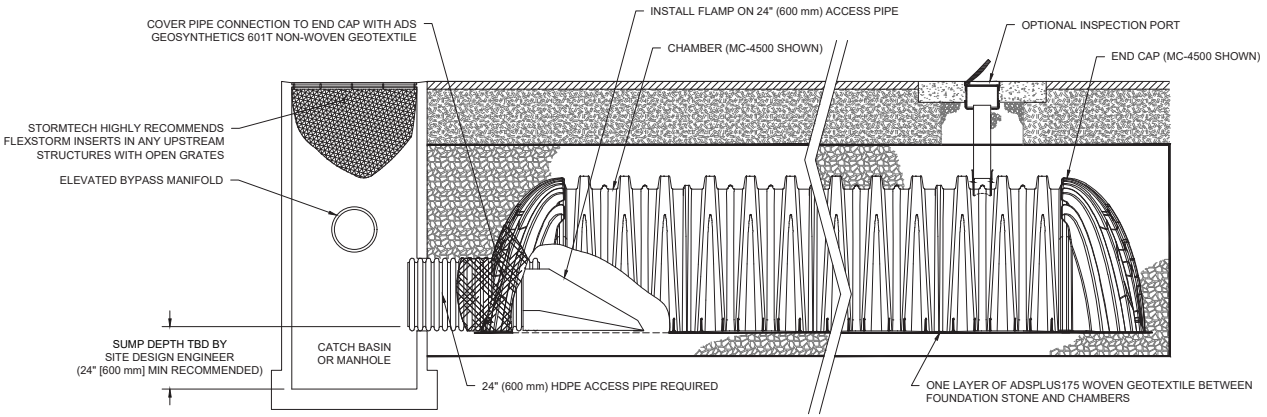
Manifold Insertion



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

Insert inlet and outlet manifolds a minimum 12” (300 mm) into chamber end caps. Manifold header should be a minimum 12” (300 mm) from base of end cap.

StormTech Isolator Row Plus Detail

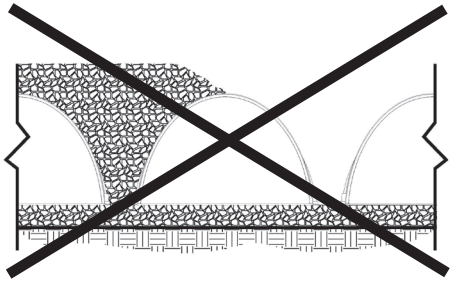


Initial Anchoring of Chambers – Embedment Stone

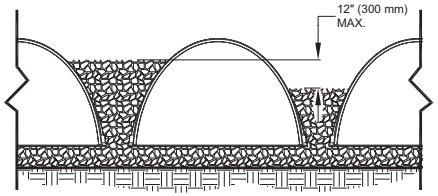
Initial embedment shall be spotted along the centerline of the chamber evenly anchoring the lower portion of the chamber. This is best accomplished with a stone conveyor or excavator reaching along the row.

No equipment shall be operated on the bed at this stage of the installation. Excavators must be located off the bed. Dump trucks shall not dump stone directly on to the bed. Dozers or loaders are not allowed on the bed at this time.

Backfill of Chambers – Embedment Stone

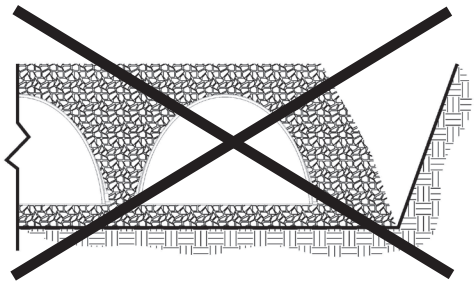


Uneven Backfill

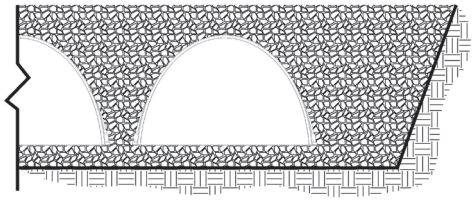


Even Backfill

Backfill chambers evenly. Stone column height should never differ by more than 12” (300 mm) between adjacent chamber rows or between chamber rows and perimeter.



Perimeter Not Backfilled

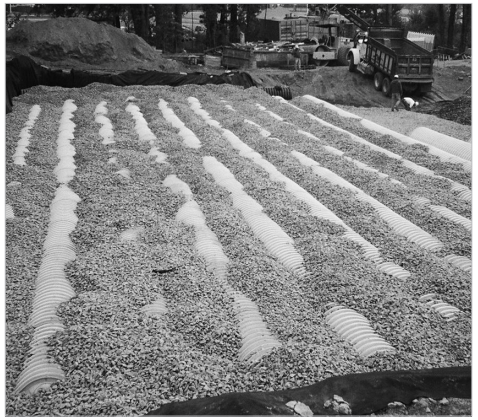


Perimeter Fully Backfilled

Perimeter stone must be brought up evenly with chamber rows. Perimeter must be fully backfilled, with stone extended horizontally to the excavation wall.

Backfill of Chambers – Embedment Stone and Cover Stone

Continue evenly backfilling between rows and around perimeter until embedment stone reaches tops of chambers and a minimum 12” (300 mm) of cover stone is in place. Perimeter stone must extend horizontally to the excavation wall for both straight or sloped sidewalls. The recommended backfill methods are with a stone conveyor outside of the bed or build as you go with an excavator inside the bed reaching along the rows. Backfilling while assembling chambers rows as shown in the picture will help to ensure that equipment reach is not exceeded.

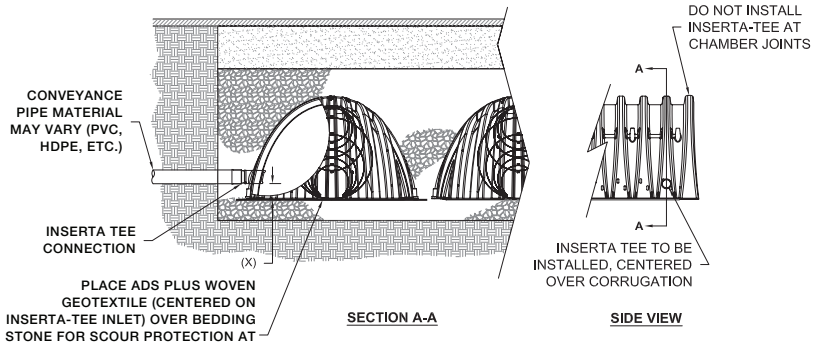


Only after chambers have been backfilled to top of chamber and with a minimum 12” (300 mm) of cover stone on top of chambers can skid loaders and small LGP dozers be used to final grade cover stone and backfill material in accordance with ground pressure limits in Table 2. Equipment must push material parallel to rows only. Never push perpendicular to rows. StormTech recommends the contractor inspect chamber rows before placing final backfill. Any chambers damaged by construction equipment shall be removed and replaced.

Final Backfill of Chambers – Fill Material

Install non-woven geotextile over stone. Geotextile must overlap 24” (600 mm) where edges meet. Compact at 24” (600 mm) of fill. Roller travel parallel with rows.

Inserta Tee Detail



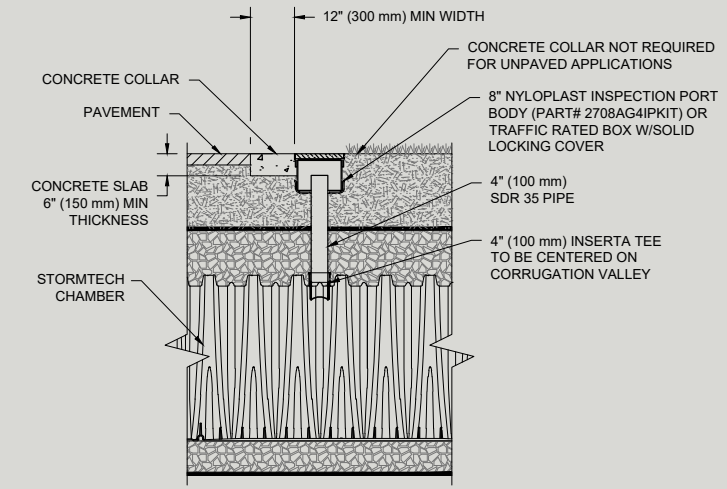
CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
MC-3500	12” (250 mm)	6” (150 mm)
MC-4500	12” (250 mm)	8” (200 mm)
INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON		

NOTE:
PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.

Table 1- Acceptable Fill Materials

Material Location	Description	AASHTO M43 Designation[1]	Compaction/Density Requirement
(D) **Final Fill:** Fill Material for layer 'D' starts from the top of the 'C' layer to the bottom of flexible pavement or unpaved finished grade above. Note that the pavement subbase may be part of the 'D' layer.	Any soil/rock materials, native soils or per engineer's plans. Check plans for pavement subgrade requirements.	N/A	Prepare per site design engineer's plans. Paved installations may have stringent material and preparation requirements.
(C) **Initial Fill:** Fill Material for layer 'C' starts from the top of the embedment stone ('B' layer) to 24" (600 mm) above the top of the chamber. Note that pavement subbase may be part of the 'C' layer.	Granular well-graded soil/aggregate mixtures, <35% fines or processed aggregate. Most pavement subbase materials can be used in lieu of this layer.	AASHTO M145[1] A-1, A-2-4, A-3 or AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	Begin compaction after min. 24" (600 mm) of material over the chambers is reached. Compact additional layers in 12" (300 mm) max. lifts to a min. 95% Proctor density for well-graded material and 95% relative density for processed aggregate materials.
(B) **Embedment Stone:** Fill the surrounding chambers from the foundation stone ('A' layer) to the 'C' layer above.	Clean, crushed, angular stone	AASHTO M43[1] 3, 4	No compaction required.
(A) **Foundation Stone:** Fill below chambers from the subgrade up to the foot (bottom) of the chamber.	Clean, crushed, angular stone,	AASHTO M43[1] 3, 4	Place and compact in 9" (230 mm) max lifts using two full coverages with a vibratory compactor.[2, 3]

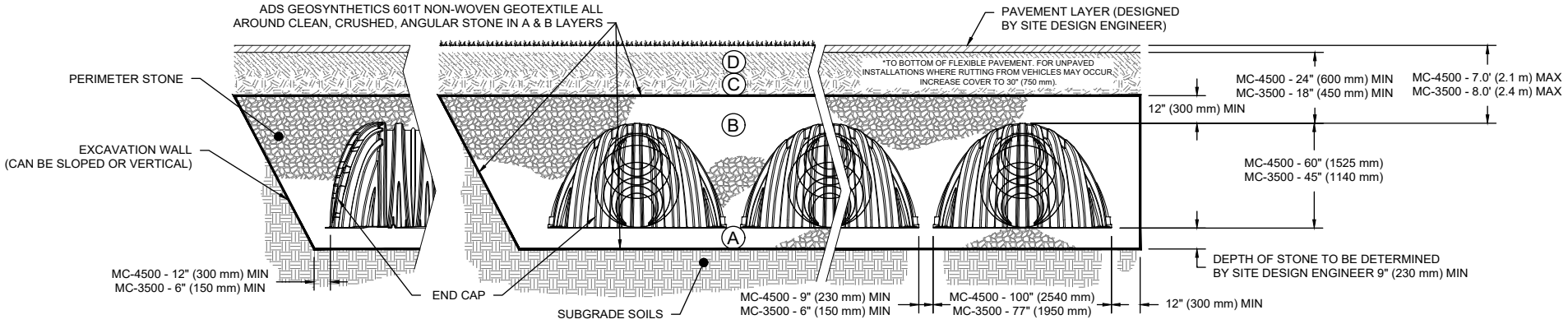
Figure 1- Inspection Port Detail



Please Note:

1. The listed AASHTO designations are for gradations only. The stone must also be clean, crushed, angular. For example, a specification for #4 stone would state: "clean, crushed, angular no. 4 (AASHTO M43) stone".
2. StormTech compaction requirements are met for 'A' location materials when placed and compacted in 9" (230 mm) (max) lifts using two full coverages with a vibratory compactor.
3. Where infiltration surfaces may be comprised by compaction, for standard installations and standard design load conditions, a flat surface may be achieved by raking or dragging without compaction equipment. For special load designs, contact StormTech for compaction requirements.

Figure 2 - Fill Material Locations



Notes:

1. 36" (900 mm) of stabilized cover materials over the chambers is recommended during the construction phase if general construction activities, such as full dump truck travel and dumping, are to occur over the bed.
2. During paving operations, dump truck axle loads on 18" (450mm) of cover for MC-3500s may be necessary. Precautions should be taken to avoid rutting of the road base layer, to ensure that compaction requirements have been met, and that a minimum of 18" (450mm) of cover for MC-3500s exists over the chambers. Contact StormTech for additional guidance on allowable axle loads during paving.
3. Ground pressure for track dozers is the vehicle operating weight divided by total ground contact area for both tracks. Excavators will exert higher ground pressures based on loaded bucket weight and boom extension.
4. Mini-excavators (<8,000lbs/3,628 kg) can be used with at least 12" (300 mm) of stone over the chambers and are limited by the maximum ground pressures in Table 2 based on a full bucket at maximum boom extension.
5. StormTech does not require compaction of initial fill at 18" (450 mm) of cover. However, requirements by others for 6" (150 mm) lifts may necessitate the use of small compactors at 18" (450 mm) of cover.
6. Storage of materials such as construction materials, equipment, spoils, etc. should not be located over the StormTech system. The use of equipment over the StormTech system not covered in Table 2 (ex. soil mixing equipment, cranes, etc) is limited. Please contact StormTech for more information.
7. Allowable track loads based on vehicle travel only. Excavators shall not operate on chamber beds until the total backfill reaches 3 feet (900 mm) over the entire bed.

Call StormTech at **888.892.2694** for technical and product information or visit www.stormtech.com

Table 2 - Maximum Allowable Construction Vehicle Loads[6]

Material Location	Fill Depth over Chambers in. (mm)	Maximum Allowable Wheel Loads		Maximum Allowable Track Loads[6]		Maximum Allowable Roller Loads
		Max Axle Load for Trucks lbs (kN)	Max Wheel Load for Loaders lbs (kN)	Track Width in. (mm)	Max Ground Pressure psf (kPa)	Max Drum Weight or Dynamic Force lbs (kN)
Ⓓ Final Fill Material	36" (900) Compacted	32,000 (142)	16,000 (71)	12" (305) 18" (457) 24" (610) 30" (762) 36" (914)	4050 (194) 2760 (132) 2130 (102) 1770 (84) 1530 (73)	38,000 (169)
Ⓒ Initial Fill Material	24" (600) Compacted	32,000 (142)	16,000 (71)	12" (305) 18" (457) 24" (610) 30" (762) 36" (914)	2750 (131) 1920 (92) 1520 (73) 1310 (63) 1180 (56)	20,000 (89)
	24" (600) Loose/Dumped	MC-3500		12" (305) 18" (457) 24" (610) 30" (762) 36" (914)	2430 (116) 1730 (82) 1390 (66) 1210 (58) 1100 (52)	16,000 (71)
		32,000 (142)	16,000 (71)			
		MC-4500				
		24,000 (107)	12,000 (53)			
	18" (450)	MC-3500		12" (305) 18" (457) 24" (610) 30" (762) 36" (914)	2140 (102) 1530 (73) 1260 (60) 1120 (53) 1030 (49)	5,000 (22) (static loads only)[5]
		32,000 (142)	16,000 (71)			
		MC-4500				
		24,000 (107)	12,000 (53)			
Ⓑ Embedment Stone	12" (300)	Not Allowed	Not Allowed	12" (305) 18" (457) 24" (610) 30" (762)	1100 (53) 710 (34) 660 (32) 580 (28)	Not Allowed
	6" (150)	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed

Table 3 - Placement Methods and Descriptions

Material Location	Placement Methods/ Restrictions	Wheel Load Restrictions	Track Load Restrictions	Roller Load Restrictions
		See Table 2 for Maximum Construction Loads		
Ⓓ Final Fill Material	A variety of placement methods may be used. All construction loads must not exceed the maximum limits in Table 2.	36" (900 mm) minimum cover required for dump trucks to dump over chambers.	Dozers to push parallel to rows.[4]	Roller travel parallel to rows only until 36" (900 mm) compacted cover is reached.
Ⓒ Initial Fill Material	Excavator positioned off bed recommended. Small excavator allowed over chambers. Small dozer allowed.	Asphalt can be dumped into paver when compacted pavement subbase reaches 24" (600 mm) above top of chambers.	Small LGP track dozers & skid loaders allowed to grade cover stone with at least 12" (300 mm) stone under tracks at all times. Equipment must push parallel to rows at all times.	Use dynamic force of roller only after compacted fill depth reaches 24" (600 mm) over chambers. Roller travel parallel to chamber rows only.
Ⓑ Embedment Stone	No equipment allowed on bare chambers. Use excavator or stone conveyor positioned off bed or on foundation stone to evenly fill around all chambers to at least the top of chambers.	No wheel loads allowed. Material must be placed outside the limits of the chamber bed.	No tracked equipment is allowed on chambers until a min. 12" (300 mm) cover stone is in place.	No rollers allowed.
Ⓐ Foundation Stone	No StormTech restrictions. Contractor responsible for any conditions or requirements by others relative to subgrade bearing capacity, dewatering or protection of subgrade.			

StormTech® Standard Limited Warranty

STANDARD LIMITED WARRANTY OF STORMTECH LLC ("STORMTECH"): PRODUCTS

(A) This Limited Warranty applies solely to the StormTech chambers and end plates manufactured by StormTech and sold to the original purchaser (the "Purchaser"). The chambers and end plates are collectively referred to as the "Products."

(B) The structural integrity of the Products, when installed strictly in accordance with StormTech's written installation instructions at the time of installation, are warranted to the Purchaser against defective materials and workmanship for one (1) year from the date of purchase. Should a defect appear in the Limited Warranty period, the Purchaser shall provide StormTech with written notice of the alleged defect at StormTech's corporate headquarters within ten (10) days of the discovery of the defect. The notice shall describe the alleged defect in reasonable detail. StormTech agrees to supply replacements for those Products determined by StormTech to be defective and covered by this Limited Warranty. The supply of replacement products is the sole remedy of the Purchaser for breaches of this Limited Warranty. StormTech's liability specifically excludes the cost of removal and/or installation of the Products.

(C) THIS LIMITED WARRANTY IS EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE PRODUCTS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

(D) This Limited Warranty only applies to the Products when the Products are installed in a single layer. UNDER NO CIRCUMSTANCES, SHALL THE PRODUCTS BE INSTALLED IN A MULTI-LAYER CONFIGURATION.

(E) No representative of StormTech has the authority to change this Limited Warranty in any manner or to extend this Limited Warranty. This Limited Warranty does not apply to any person other than to the Purchaser.

(F) Under no circumstances shall StormTech be liable to the Purchaser or to any third party for product liability claims; claims arising from the design, shipment, or installation of the Products, or the cost of other goods or services related to the purchase and installation of the Products. For this Limited Warranty to apply, the Products must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and StormTech's written installation instructions.

(G) THE LIMITED WARRANTY DOES NOT EXTEND TO INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES. STORMTECH SHALL NOT BE LIABLE FOR PENALTIES OR LIQUIDATED DAMAGES, INCLUDING LOSS OF PRODUCTION AND PROFITS; LABOR AND MATERIALS; OVERHEAD COSTS; OR OTHER LOSS OR EXPENSE INCURRED BY THE PURCHASER OR ANY THIRD PARTY. SPECIFICALLY EXCLUDED FROM LIMITED WARRANTY COVERAGE ARE DAMAGE TO THE PRODUCTS ARISING FROM ORDINARY WEAR AND TEAR; ALTERATION, ACCIDENT, MISUSE, ABUSE OR NEGLECT; THE PRODUCTS BEING SUBJECTED TO VEHICLE TRAFFIC OR OTHER CONDITIONS WHICH ARE NOT PERMITTED BY STORMTECH'S WRITTEN SPECIFICATIONS OR INSTALLATION INSTRUCTIONS; FAILURE TO MAINTAIN THE MINIMUM GROUND COVERS SET FORTH IN THE INSTALLATION INSTRUCTIONS; THE PLACEMENT OF IMPROPER MATERIALS INTO THE PRODUCTS; FAILURE OF THE PRODUCTS DUE TO IMPROPER SITING OR IMPROPER SIZING; OR ANY OTHER EVENT NOT CAUSED BY STORMTECH. A PRODUCT ALSO IS EXCLUDED FROM LIMITED WARRANTY COVERAGE IF SUCH PRODUCT IS USED IN A PROJECT OR SYSTEM IN WHICH ANY GEOTEXTILE PRODUCTS OTHER THAN THOSE PROVIDED BY ADVANCED DRAINAGE SYSTEMS ARE USED. THIS LIMITED WARRANTY REPRESENTS STORMTECH'S SOLE LIABILITY TO THE PURCHASER FOR CLAIMS RELATED TO THE PRODUCTS, WHETHER THE CLAIM IS BASED UPON CONTRACT, TORT, OR OTHER LEGAL THEORY.

ADS StormTech™

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ADS 0601T/O NONWOVEN GEOTEXTILE SPECIFICATION

Scope

This specification describes ADS 0601T/O nonwoven geotextile.

Filter Fabric Requirements

ADS 0601T/O is an orange nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. ADS 0601T/O is inert to biological degradation and resists naturally encountered chemicals, alkali and acids. ADS 0601T/O conforms to the physical property values listed below:

Filter Fabric Properties

Property	Test Method	Unit	Typical Value[1] MD	Typical Value[1] CD
Grab Tensile Strength	ASTM D4632	lbs (N)	175 (779)	175 (779)
Grab Tensile Elongation	ASTM D4632	%	75	75
Trapezoid Tear Strength	ASTM D4533	lbs (N)	85 (378)	85 (378)
CBR Puncture Strength	ASTM D6241	lbs (N)	480 (2136)	480 (2136)
Permittivity	ASTM D4491	sec^{-1}	1.5	1.5
Flow Rate	ASTM D4491	gal/min/ft^2 (l/min/m^2)	105 (4278)	105 (4278)
UV Resistance (at 500 hours)[1]	ASTM D4355	% strength retained	80	80

Physical Properties

Property	Test Method	Unit	Typical Value[2]
Weight	ASTM D5161	oz/yd^2 (g/m^2)	6.5 (220)
Thickness	ASTM D5199	mils (mm)	65 (1.7)
Roll Dimensions (W x L)	-	ft (m)	15 x 300 (4.5 x 91)
Roll Area	-	yd^2 (m^2)	500 (418)
Estimated Roll Weight	-	lb (kg)	220 (100)

1 Modified, Minimum Test Value
2 ASTM D4439 Standard Terminology for Geosynthetics: typical value, n-*for geosynthetics*, the mean value calculated from documented manufacturing quality control test results for a defined population obtained from one test method associated with on specific property.

Separation

ADS 315W WOVEN GEOTEXTILE SPECIFICATION

Scope

This specification describes ADS 315W woven geotextile.

Filter Fabric Requirements

ADS 315W is manufactured using high-tenacity polypropylene yarns that are woven to form a dimensionally stable network, which allows the yarns to maintain their relative position. ADS 315W resists ultraviolet deterioration, rotting and biological degradation and is inert to commonly encountered soil chemicals. ADS 315W conforms to the physical property values listed below:

Filter Fabric Properties

Property	Test Method	Unit	M.A.R.V. (Minimum Average Roll Value)[2]
Tensile Strength (Grab)	ASTM D4632	lbs (N)	315 (1400)
Elongation	ASTM D4632	%	15
CBR Puncture	ASTM D6241	lbs (N)	900 (4005)
Puncture	ASTM D4833	lbs (N)	150 (667)
Mullen Burst	ASTM D3786	psi (kPa)	600 (4134)
Trapezoidal Tear	ASTM D4533	lbs (N)	120 (533)
UV Resistance (at 500 hours)	ASTM D4355	%	70
Apparent Opening Size (AOS)*	ASTM D4751	U.S. Sieve (mm)	40 (.425)
Permittivity	ASTM D4491	sec^{-1}	.05
Water Flow Rate	ASTM D4491	gpm/ft^2 ($l/min/m^2$)	4 (163)

* Maximum average roll value.

Packaging

Roll Dimensions (W x L) - ft. (m)	12.5 x 360/ 15 x 300 / 17.5 x 258 (3.81 x 109.8/ 4.57 x 91.5 / 5.33 x 78.6)