

**Preliminary Stormwater Management
Report**

3491 Wallace Point Rd Development

Otonabee-South Monaghan, Ontario

D.M. Wills Project Number 21-85162



D.M. Wills Associates Limited
Partners in Engineering, Planning and
Environmental Services
Peterborough

April 2023

**Prepared for:
Rubal Kundra**

Submissions Summary

Submission No.	Submission Title	Date of Release	Submissions Summary
1	Preliminary Stormwater Management Report	April 2023	1 st Submission to Rubal Kundra

This report/proposal has been formatted considering the requirements of the Accessibility for Ontarians with Disabilities Act.

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1.0 Purpose

D.M. Wills Associates Limited (Wills) has been retained by Rubal Kundra (Client) to prepare a Preliminary Stormwater Management (SWM) Report in support of the Draft Plan of Subdivision and Zoning Bylaw Amendment applications for the proposed development, Wallace Point Subdivision, located at 3491 Wallace Point Road, Otonabee-South Monaghan, Ontario (Subject Property).

The purpose of this report is to evaluate the drainage characteristics of the proposed development and develop a preliminary plan for SWM that will permit the development to proceed with no adverse impacts to the receiving drainage and groundwater system. This report has been prepared to address the requirements of the Township of Otonabee-South Monaghan (Township) and the Otonabee Region Conservation Authority (ORCA).

2.0 Site Description

The location of the site is shown on **Figure 1** and is legally described as:

Lots 17 and 18
Concession 15
Township of Otonabee-South Monaghan
County of Peterborough

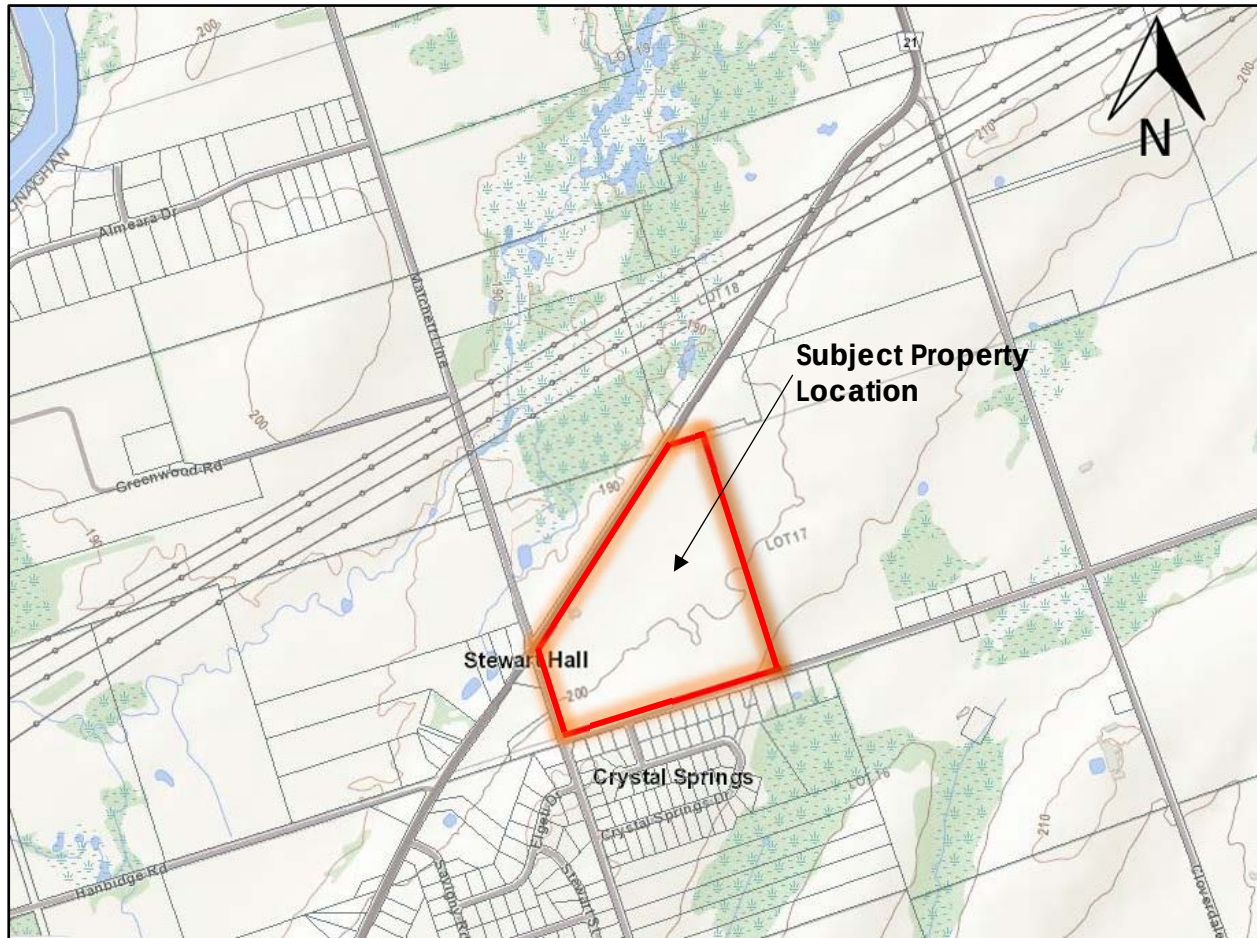
The existing Subject Property is mainly comprised of agricultural lands with a single-family dwelling, two farming structures, and three silos adjacent to Wallace Point Road. The high point of the property is located approximately 200 m east from the intersection of Matchett Line and Base Line at the southern boundary of the Subject Property. The entire Subject Property drains from south to north to a culvert located near the northwest Subject Property boundary. This culvert outlets to a Provincially Significant Wetland (PSW) located northwest of Wallace Point Road. The agricultural lands within the Subject Property drain towards the centreline culvert Wallace Point Road. The surrounding properties include agricultural land to the north, east and west, and a mix of agricultural and residential lands to the south.

The change in land use includes the removal of agricultural areas to allow for the construction of a proposed residential subdivision. This will also include removal of the existing single-family dwelling, two farming structures, and the three silos. The proposed development will alter the stormwater runoff rate leaving the Subject Property; however, the purpose of this report is to explore alternatives to mitigate the excess runoff. The proposed development will be serviced by municipal water services, however sanitary services are not located in proximity of the Subject Property, therefore wastewater will be managed by on-site septic systems.

The Plan of Survey for the Subject Property was completed by Elliott and Parr on October 6, 2022. This data was used to determine the elevations and locations of

existing Subject Property features, on-site drainage patterns and establish the proposed grades.

Figure 1 – Subject Property Location



3.0 Stormwater Management

The objectives of SWM design identified in the SWM Planning and Design Manual are to:

- Prevent any increase in flood risk potential.
- Protect water quality.
- Preserve groundwater and baseflow characteristics.
- Prevent undesirable and costly geomorphic change to a watercourse.
- Maintain an appropriate diversity of aquatic life and opportunities for human use.

The present hierarchy of watershed planning in Ontario can be described by the following descending order: Watershed Plans, Sub-watershed Plans and individual SWM

Plans. Since there is no Watershed or Sub-watershed Plan for this area, the proposed development was prepared as an individual Preliminary SWM Plan.

The following list summarizes the design strategy utilized for the development:

- Provide stormwater quantity control by maintaining post-development flows at or below pre-development levels.
- Provide water quality control to Enhanced (Level 1) protection.
- To promote the developmental inclusion of Low Impact Development (LID) features, based on the site constraints, to preserve the natural hydrologic cycle.
- Provide erosion and sediment controls to prevent undesirable changes to downstream watercourses.
- Appropriate development layout to preserve natural heritage and hydrological features of the site.

3.1 Drainage

Under pre-development and post-development conditions, the Subject Property has been broken down into different catchments based on site topography and land use.

For the existing condition, the Subject Property was classified into one catchment based on the natural topography. The Subject Property has one external area draining onto the Subject Property from the south. The entire Subject Property drains overland northward to a culvert that outlets into the PSW on the northwest side of Wallace Point Road. The existing condition is shown on **Figure 2** with additional information described below and further details provided in **Appendix A**:

- Catchment **EX-100** consists predominantly of agricultural lands, small wooded areas, and a single-family dwelling with two farming structures and three silos located on the west side of the Subject Property. This catchment area slopes south to north, discharging all surface runoff into the PSW through the Wallace Point Road centerline culvert (**OUT-1**).
- Catchment **EXT-101** consists of an external area that drains onto the Subject Property. This catchment consists of a section of Base Line and several residential properties, which drains onto the site based on the natural topography in this area.

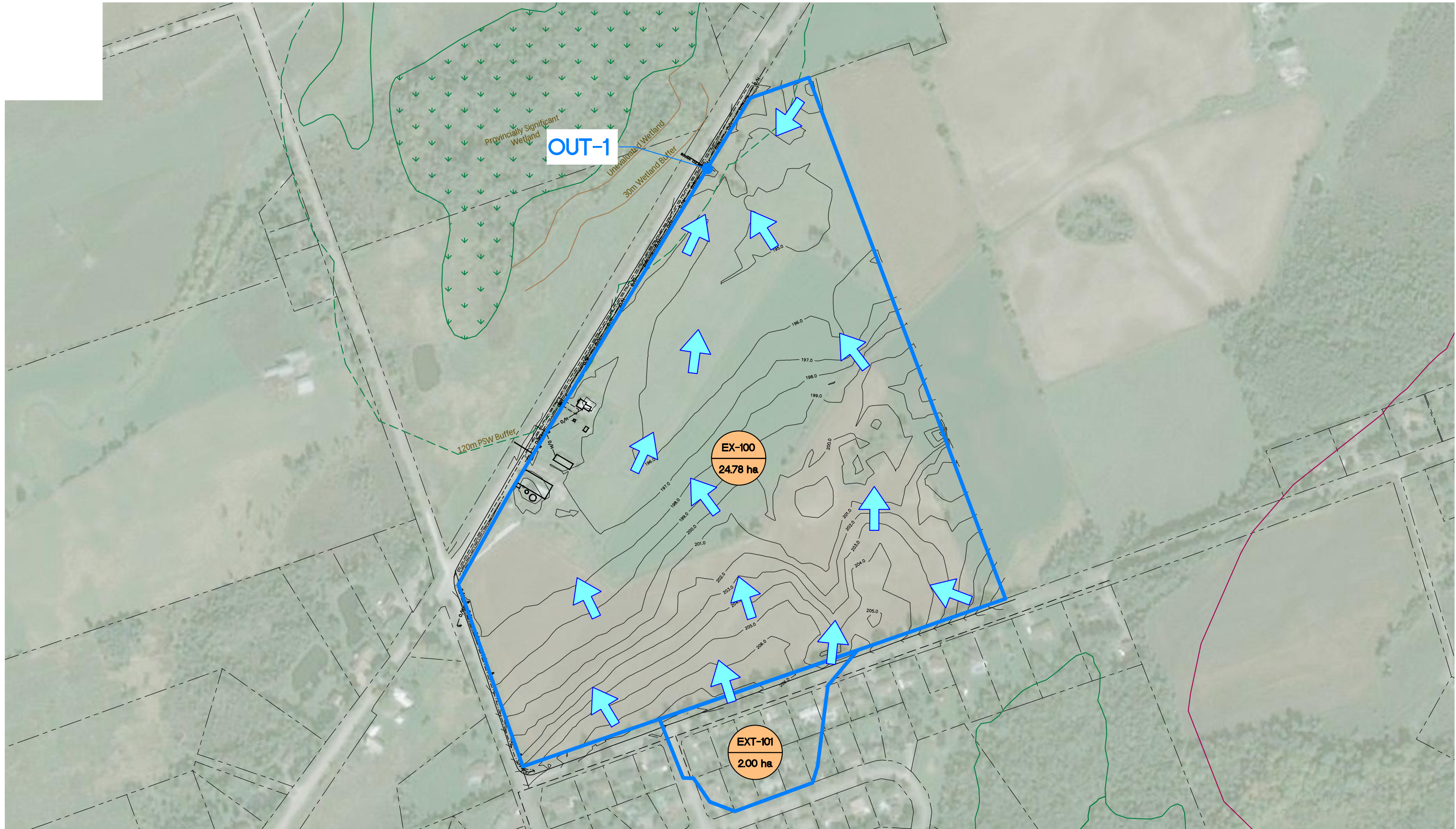
For the post-development condition, the site has been divided into eight drainage areas based on the proposed grading of the Subject Property. The external drainage area will be maintained as part of the proposed development. The proposed drainage areas are shown on **Figure 3**, described below and further details provided in **Appendix A**.

- Catchment **PR-101** is located in the southwest corner of the Subject Property. This catchment is proposed to contain four residential lots. All residential lots within

this catchment will contain lot level stormwater controls to infiltrate runoff generated by each individual lot.

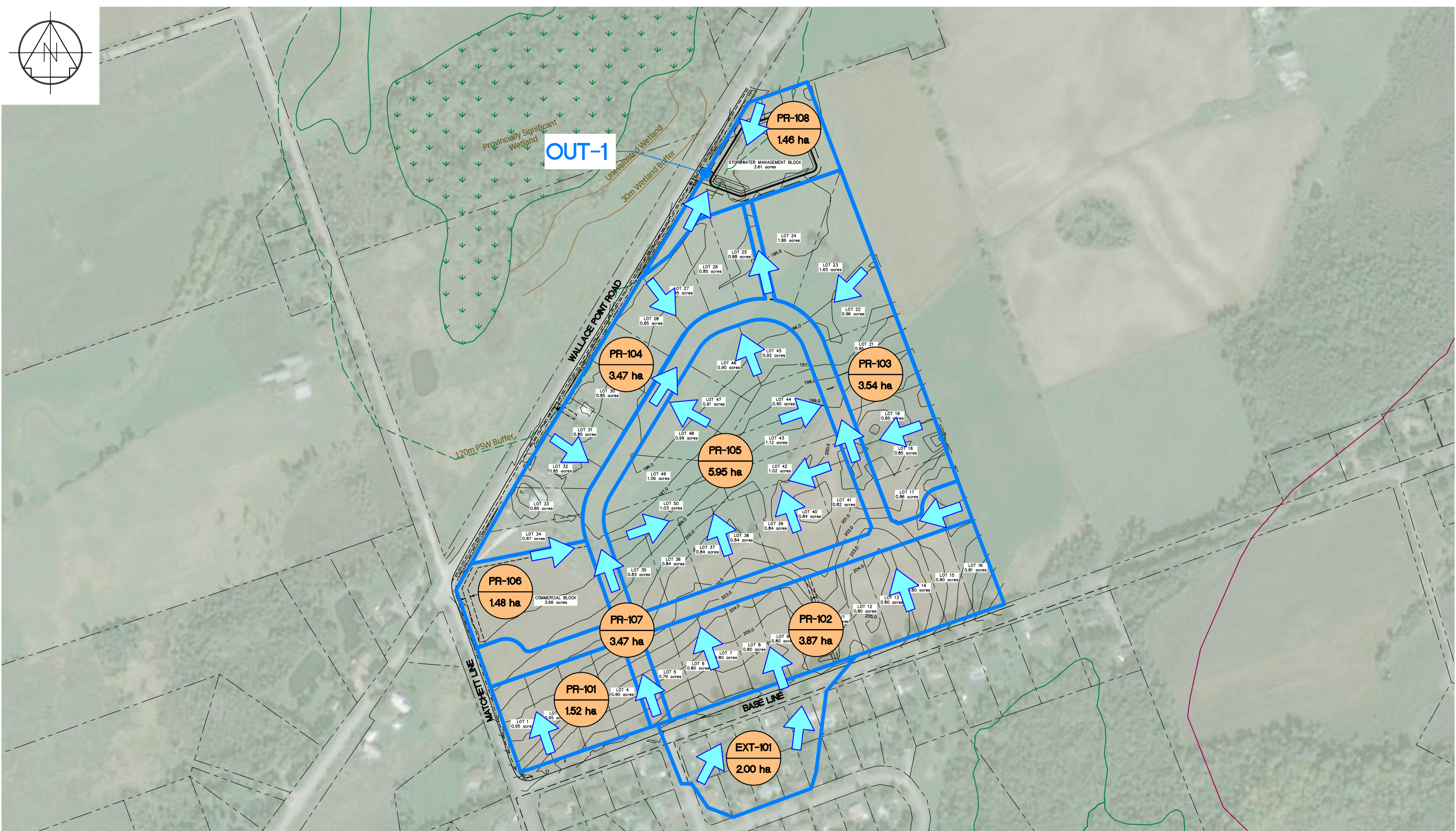
- Catchment **PR-102** consists of 12 residential lots adjacent to Base Line, along the south boundary of the Subject Property. All residential lots within this catchment will contain lot level stormwater controls to infiltrate runoff generated by each individual lot.
- Another residential catchment, **PR-103**, contains eight residential lots located along the east side of the Subject Property. All residential lots within this catchment will contain lot level stormwater controls to infiltrate runoff generated by each individual lot.
- Catchment **PR-104** contains 10 residential lots. All residential lots within this catchment will contain lot level stormwater controls to infiltrate runoff generated by each individual lot.
- The final residential catchment, **PR-105**, is located in the centre of the Subject Property and consists of 16 lots. All residential lots within this catchment will contain lot level stormwater controls to infiltrate runoff generated by each individual lot.
- Catchment **PR-106** consists of a commercial block, located on the west side of the Subject Property at the intersection of Matchett Line and Wallace Point Road. It is assumed that this catchment will contain a greater amount of impervious area than the residential lots, therefore a larger lot level SWM facility will be implemented.
- Catchment **PR-107** consists of the road throughout the proposed subdivision, the adjacent right-of-way, and the access lane to catchment **PR-108**. **PR-107** is proposed to contain roadside ditches that will convey runoff to the SWM block located in **PR-108**.
- The final catchment, **PR-108**, is the SWM block. This catchment encompasses the northern portion of the Subject Property. This catchment will contain a SWM facility, which will detain any runoff not captured by the lot level facilities and slowly discharge it at rates comparable to existing flow rates. The stormwater will be discharged to a culvert that conveys flows underneath Wallace Point Road into the PSW, (**OUT-1**). This outlet is the same outlet in the existing conditions and its location will not change for the proposed development.

The existing and proposed runoff characteristics were analyzed using individual sub-catchments. Hydrologic parameters, land use and runoff response were determined based on literature review and satellite images. Topographic mapping and AutoCAD Civil 3D 2019 software were used to establish sub-watershed areas, land use and slope. On-site soils were assessed using the Ministry of Agriculture Agricultural Information Atlas. The Subject Property was identified as containing Bondhead Loam with a Hydrologic Soil Group of B. The hydrologic parameters for each catchment are documented in **Appendix A**.



	Sketch No.			Drawn By	Scale
	FIGURE 2			NN	1: 4000
	3491 WALLACE POINT RD			Designed By	Plot Date
	PRE-DEVELOPMENT			MJH	APRIL 2023
DRAINAGE AREA PLAN		Checked By	Project No.		
		MJH	85162		
		Engineer	Drawing File No.		
		MJH	85162-SWMv2		

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EX-100

0.22 ha

CATCHMENT ID

CATCHMENT AREA

CATCHMENT BOUNDARY

OVERLAND FLOW DIRECTION

STORM SEWER FLOW DIRECTION

OUT

N-1

OUTLET LOCATION

FLOW NODE

Sketch No.

FIGURE 3

3491 WALLACE POINT RD

POST-DEVELOPMENT

DRAINAGE AREA PLAN

W

WILLS

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Scale

Plot Date

Project No.

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APRIL 2023

85162

85162-SWMv2

3.2 Stormwater Quantity Control

The alteration of the existing site area from agricultural lands into a combined commercial/ residential development will increase the imperviousness and the corresponding stormwater runoff leaving the Subject Property. To ensure that the development does not increase downstream flooding potential SWM facilities are required to maintain post-development flows to existing conditions.

Peak flow calculations were completed using Visual Otthymo, version 6.2 (VO6). Various storm distributions were selected and the storm which generated the most runoff was selected. Peak flows were calculated for each of the 2 to 100-year design storms. These calculations consider the 24-hour SCS, 12-Hour SCS, 12-hour AES and 6 hour SCS storm duration. The flow chart and the VO6 model are presented in **Appendix C**.

For the quantity analysis, the lot level controls were ignored to provide a worst-case scenario for the pond block.

OUT-1 – Wallace Point Road Centreline Culvert

For the post-development condition catchments, all catchments discharge directly into the SWM facility before discharging to Wallace Point Road.

The peak flows discharging to the centreline culvert under Wallace Point Road for the post-development uncontrolled and pre-development conditions are summarized in Table 1.

Table 1 – OUT-1 Uncontrolled Peak Flows

Design Storm (yr)	Peak Flows (m ³ /sec)								
	12 Hour SCS			6 Hour SCS			12 Hour AES		
	Pre	Post	Diff	Pre	Post	Diff	Pre	Post	Diff
2	0.389	1.767	1.378	0.337	1.809	1.472	0.205	0.369	0.164
5	0.677	2.412	1.735	0.624	2.514	1.890	0.333	0.504	0.171
10	0.886	2.854	1.968	0.846	2.999	2.153	0.427	0.598	0.171
25	1.176	3.415	2.239	1.145	3.611	2.466	0.551	0.726	0.175
50	1.404	3.840	2.436	1.385	4.081	2.696	0.656	0.823	0.167
100	1.642	4.259	2.617	1.633	4.559	2.926	0.768	0.941	0.173

- Notes:
1. Pre refers to the pre-development condition (AddHyd 61). Refer to VO6 Hydrograph in Appendix C.
 2. Post refers to the post-development condition (AddHyd 63). Refer to VO6 Hydrograph in Appendix C.
 3. Diff refers to the difference in peak flow between the pre-development condition and the post-development condition.

A review of Table 1 indicates the uncontrolled post-development condition exceeds the pre-development condition. For the development, the increase in imperviousness under proposed conditions will increase the peak flow rates and runoff volumes leaving the Subject Property. In order to ensure the downstream PSW is not adversely impacted, a SWM facility is proposed for this preliminary report.

A detention basin is proposed to provide an area for stormwater storage and slowly be discharged at controlled rates to maintain pre-development flow rates. The proposed detention basin will be located in catchment **PR-108**. A theoretical stage discharge relationship is presented to provide guidance during the detailed design phases of the project. The stage-storage-discharge values for the theoretical detention basin facility are summarized in Table 2.

Table 2 – Stage-Storage-Discharge – Detention Basin

Discharge (m ³ /s)	Storage Volume (m ³)	Remarks
0.000	0	Bottom of Pond
0.337	770	2-Year
0.624	1200	5-Year
0.846	1510	10-Year
1.145	1930	25-Year
1.385	2270	50-Year
1.633	2640	100-Year

Notes:

1. Design storms noted in the discharge column are for the 6-hour SCS Type II design storm.

The theoretical detention basin will provide 2,640 m³ in the active storage portion of the pond. The detention basin will provide additional storage in the 0.3 m zone of freeboard. A multi-stage outlet system will be designed to achieve the quantity targets required and will outlet directly into the Wallace Point Road right-of-way. A spillway will be provided at the outlet end of the pond to provide relief flow in the event that the outlet becomes obstructed. The spillway will be designed to convey the maximum inflow to the facility.

A review of the pond block indicates that the theoretical pond can be constructed within the pond block provided. According to our preliminary analysis, the minimum volume of the pond is 2,640 m³. After applying a 30% safety factor, at a depth of 0.6 m and the required pond surface area is 6,071 m². The overall volume necessary is 3,377 m³, exceeding the minimum storage requirement stated above.

Detailed design calculations of this configuration are provided in **Appendix B** and the effect of the detention basin on proposed flow rates is presented in **Table 3**.

Table 3 – OUT-1 Controlled Peak Flow Summary

Design Storm (yr)	Peak Flows (m ³ /sec)								
	12 Hour SCS			6 Hour SCS			12 Hour AES		
	Pre	Post	Diff	Pre	Post	Diff	Pre	Post	Diff
2	0.389	0.375	-0.014	0.337	0.333	-0.004	0.205	0.193	-0.012
5	0.677	0.662	-0.015	0.624	0.617	-0.007	0.333	0.307	-0.026
10	0.886	0.871	-0.015	0.846	0.841	-0.005	0.427	0.396	-0.031
25	1.176	1.160	-0.016	1.145	1.141	-0.004	0.551	0.508	-0.043
50	1.404	1.387	-0.017	1.385	1.379	-0.006	0.656	0.597	-0.059
100	1.642	1.621	-0.021	1.633	1.626	-0.007	0.768	0.702	-0.066

- Notes:
1. Pre refers to the existing condition peak flow rates at the outlet location (NHYP = 61).
 2. Post refers to the Controlled peak flows generated by the proposed development (NHYP = 1).
 3. Diff refers to the difference in peak flow between the pre-development condition and the post-development condition.

A review of **Table 3** indicates that the controlled post-development peak flow rates for **OUT-1**, up to the 100-year design storm will be maintained below the pre-development peak flows.

3.3 Stormwater Quality and Low Impact Development Control

The development of the Subject Property will result in increased stormwater runoff, which may cause additional pollutants to be conveyed off-site if not properly mitigated. This is particularly important as a Provincially Significant Wetland is located directly downstream. The selection and sizing of the water quality measures will be based on the procedures set out in the *Stormwater Management Planning and Design Manual* (MOE, March 2003) for Enhanced (Level 1) protection.

According to the *SWMP Planning and Design Manual*, the goal of SWM is to preserve the natural hydrologic cycle. The manual also states that SWM measures should be assessed in the following order:

- Stormwater lot level controls.
- Stormwater conveyance controls.
- End-of-pipe SWM facilities.

Stormwater lot level controls represent measures which are implemented at the individual lot level (soak-a-way pits, flatter grading, etc.). Stormwater conveyance controls represent the conveyance systems used to transport stormwater runoff from the

lots to the receiving waters (pervious pipes, grassed swales, etc.). End-of-pipe SWM facilities represent the common urban SWM measures used to service numerous lots or whole subdivisions (wet ponds, wetlands, infiltration basins, etc.).

3.3.1 Quality Control Summary

Based on the SWMP assessment, lot level controls, conveyance controls and end-of-pipe controls, acting in a treatment train approach, was determined to be the most appropriate strategy to address stormwater quality treatment for the proposed development. Low impact development will treat surface runoff on a lot level, conveyance controls will treat runoff for the municipal right-of-way, and an OGS will treat the remainder of the development.

3.3.2 Lot Level Controls

The runoff from catchments **PR-101**, **PR-102**, **PR-103**, **PR-104**, and **PR-105** is generated from roofs and grassed areas and is considered clean. The runoff from catchments **PR-106** will require their own quality control plan as part of the site plan approval stage.

As part of the Water Balance for the site, surface runoff from the lots will be captured and infiltrated. Under extreme conditions, excess runoff that cannot infiltrate will flow toward the ditch in the road right-of-way and ultimately flow into the SWM pond then into **OUT-1**.

Additional detail on the overall water balance of the site is provided in **Section 3.4**.

3.3.3 Conveyance Controls

Roadside ditches are proposed within the development to convey surface runoff to the SWM facility at the outlet of the Subject Property. These roadside ditches will provide passive quality treatment upstream of the OGS.

3.3.4 End of Pipe Controls – Oil-Grit Separators

Oil-Grit Separator devices have become a common method of achieving stormwater quality control requirements in the province of Ontario. However, recent studies have cast scrutiny on performance claims and sizing methodologies used for some of these technologies. In an effort to standardize the evaluation of different OGS units, the Canadian Environmental Technology Verification (ETV) Program has published a Procedure for Laboratory Testing of OGSs (ISO 14034). This protocol contains testing specifications for third-party laboratories, sediment removal efficiency, sediment scour, particle size distribution, oil/fuel retention and scaling of various model sizes. Technologies that have been verified are published by ETV Canada.

The following guidelines for the selection of OGS devices have been adopted by several municipalities and conservation authorities in Ontario:

1. OGS devices must have a current Canadian ETV or ISO 14034 verification.
2. OGS devices that were not tested for oil/fuel retention or do not report the results of this testing, shall not be approved for installation in sites that require oil or fuel capture.
3. OGS model sizes should be scaled according to the surface loading rate and depth as specified in the scaling provisions of ISO 14034.
4. The recommended target Total Suspended Solids (TSS) removal rate for OGS units is **60%** of the ETV particle size distribution.
5. For sites that require 80% TSS removal, additional or alternative stormwater best management practices are required.

Outlet-1 – Wallace Point Road Centreline Culvert

The OGS was sized using the Stormceptor sizing tool to treat 5.47 ha of land at 40% imperviousness from catchments **PR-107** & **EXT-101**. These catchments are the only areas where stormwater may become contaminated with pollutants and sediments that require removal prior to discharge. The proposed OGS will discharge directly into the detention basin prior to discharging into the Wallace Point Road centerline culvert (**OUT-1**).

For the ETV grain size distribution, PCSWMM for Stormceptor recommends parallel models as an individual OGS will not provide adequate quality control. A single EF12 OGS would provide 59% total suspended solids removal falling just short of the 60% minimum. Under the fine particle size distribution, the sizing program recommends the EF12 unit which captures more than 90% of the annual runoff volume, however it will achieve 85% removal of suspended solids. Detailed information relating to the OGS with both CA-ETV and Fine particle size distributions can be found in **Appendix D**.

3.4 Water Balance

An existing and proposed water balance for the Subject Property has been prepared in accordance with the Conservation Authority Guidelines for Hydrogeological Assessment, prepared by Conservation Ontario in June 2013.

As previously mentioned, municipal sanitary services are not located in close proximity to the Subject Property, therefore private septic systems will be required to manage wastewater. Because of this, nitrate concentration will be of particular concern.

According to the regulations stipulated in the D-5-4 Individual on-site Sewage Systems: Water Quality Impact Risk Assessment (Ministry of Environment and Energy, 1996), a nitrate-nitrogen groundwater loading rate of 10 mg/L is used as an indicator of groundwater impact potential. Various pollutants including nitrate can be introduced into soil and nearby groundwater from stormwater runoff. Therefore, it is important to appropriately size lot level controls for each residential lot to remain below the nitrate

loading threshold when lot level stormwater controls and septic systems are used in conjunction. Detailed description of the Nitrate Loadings can be found in the Hydrological Study Report prepared by Wills in April of 2023.

Each residential lot in catchments **PR-101**, **PR-102**, **PR-103**, **PR-104**, and **PR-105** will be required to have two infiltration systems.

The first infiltration system will capture any runoff generated from the roof of each dwelling in an underground system. Each underground system will have a minimum required volume of 6 m³. The second infiltration system will capture any runoff generated from the remainder of the lot in an above ground system. Each aboveground facility will have a minimum required volume of 20 m³.

An infiltration system will be required for the commercial block (Catchment **PR-106**). The commercial block will require an individual water balance plan as part of the site plan approval process. The water balance analysis assumed an aboveground facility volume of 105 m³.

Final configuration of the above and below ground features within the lots will be the responsibility of the developer and will be finalized at the detailed design stage.

Preliminary water balance calculations were completed using Visual Otthymo, version 6.2 (VO6).

The water balance modelling for the infiltration features has been completed assuming the annual volume of water captured by each feature and applying that to the total infiltration volume of the site. For the underground system, infiltration has been assumed to occur year-round as the base of these features will be below the frost depth. However, above ground systems are assumed to only provide infiltration during months with average temperatures about freezing. These adjustments are summarized in **Appendix E**.

Water balance calculations are provided in **Appendix E** and the results summarized in **Table 4**.

Table 4 – Water Balance

Catchment Parameters	Existing	Proposed	
		Without LID	With LID
Precipitation (mm/year)	852.8		
Precipitation (m ³ /year)	211,316		
Evapotranspiration (mm/year)	357.5	323.9	323.9
Evapotranspiration (m ³ /year)	88,579	80,256	80,256
Infiltration (mm/year)	220.7	204.4	307.1
Infiltration (m ³ /year)	54,699	50,659	76,108
Runoff (mm/year)	271.1	285.4	182.7
Runoff (m ³ /year)	67,177	70,723	45,274

A review of Table 4 indicates that the proposed development will achieve the existing annual infiltration volume using infiltration features. Based on the above, infiltration into the ground will increase 39%, with total runoff leaving the site decreasing by 33%.

4.0 Conclusion

The purpose of this report is to evaluate the drainage characteristics of the proposed development and to recommend preliminary SWM solutions that proceed with no adverse impacts to the receiving drainage system.

The proposed development will increase the on-site impervious area and the corresponding stormwater flows of the development. Therefore, stormwater quantity and quality control measures are required to ensure that the receiving drainage system will not be adversely affected.

Stormwater quantity control will be achieved by storing flows within a detention basin located in the northern most catchment of the Subject Property. This control measure will reduce the post-development peak flow rates to less than pre-development levels for the 2 to 100-year storm events.

Stormwater quality control will be achieved through a treatment train approach, with lot level LID controls, roadside ditch conveyance controls and an OGS within the road right-of-way of the proposed subdivision, near the stormwater block. Placement of the OGS in this location will allow for straightforward access and maintenance as required.

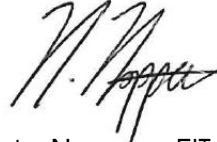
Lot level controls will be implemented in each residential lot under the post-development condition of the Subject Property. Underground chamber and above ground infiltration facilities (within the frost layer) are proposed to mitigate the runoff generated by the dwellings and other impervious features on each lot.

Greater detail will be provided for all stormwater features during the design phase of this project.

Respectfully submitted,



Mark J. Hoar, P.Eng.
Senior Water Resources Engineer



Nate Napper, EIT
Water Resources EIT

MJH/af

Statement of Limitations

This report has been prepared by D.M. Wills Associates Limited has been retained by the Rubal Kundra, (Client) to prepare a Preliminary Stormwater Management Report in support of the Draft Plan of Subdivision application and the Zoning By-law Amendment for the Wallace Point Subdivision located at 3491 Wallace Point Road, Township of Otonabee-South Monaghan, Ontario.

The purpose of this report is to evaluate the drainage characteristics of the proposed drainage characteristics and develop a preliminary plan for stormwater management that will permit the development to proceed with no adverse impacts to the receiving drainage system. This report has been prepared to address the requirements of the Municipality of Otonabee-South Monaghan and the Otonabee Region Conservation Authority (Conservation Authority).

The report is intended to demonstrate the means whereby stormwater runoff originating from the site will be managed with respect to both quantity and quality control. The report is applicable only to the project described in the text, constructed substantially in accordance with the plans and details accompanying this report.

Any use which a third party makes of this report other than a stormwater management report for the Wallace Point Subdivision is the responsibility of such third parties. D.M. Wills Associates Limited accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or action taken based on using this report for purposes other than a stormwater management report for the Wallace Point Subdivision.

Appendix A

Hydrology and Rainfall



Design Chart 1.05: SCS Type II Distribution

6 hour			12 hour			24 hour		
Time end' g, hour	F _{inc} (%)	F _{cum} (%)	Time end' g, hour	F _{inc} (%)	F _{cum} (%)	Time end' g, hour	F _{inc} (%)	F _{cum} (%)
0	0	0	0	0	0	0	0	0
0.5	2	2	2	5	5	2	2.2	2.2
1	3	5	3	3	8	4	2.6	4.8
1.5	3	8	3.5	2	10	6	3.2	8.0
2	5	13	4	2	12	7	-	-
2.5	6	19	4.5	3	15	8	4.0	12.0
2.75	15	34	5	4	19	8.5	-	-
3	39	73	5.5	6	25	9	2.7	14.7
3.5	11	84	5.75	12	37	9.5	1.6	16.3
4	5	89	6	33	70	9.75	-	-
4.5	4	93	6.5	9	79	10	1.8	18.1
5	3	96	7	4	83	10.5	2.3	20.4
6	4	100	7.5	3	86	11	3.1	23.5
			8	3	89	11.5	4.8	28.3
			10	7	96	11.75	10.4	38.7
			12	4	100	12	27.6	66.3
						12.5	7.2	73.5
						13	3.7	77.2
						13.5	0.7	77.9
						14	4.1	82.0
						16	6.0	88.0
						20	7.2	95.2
						24	4.8	100

Source: Ministry of Natural Resources - MNR (1986)

Table B.1: AES 12 Hour Distributions

Elapsed Time [Hours]	10%		30%		50%		70%		90%	
	Cumul. %	Incr. %	Cumul. %	Incr. %	Cumul. %	Incr. %	Cumul. %	Incr. %	Cumul. %	Incr. %
0	0	0	0	0	0	0	0	0	0	0
1	45	45	13	13	4	4	3	3	1	1
2	85	40	39	26	18	14	8	5	3	2
3	98	13	59	20	30	12	14	6	4	1
4	100	2	74	15	42	12	24	10	10	6
5	100	0	88	14	60	18	39	15	14	4
6	100	0	96	8	75	15	50	11	27	13
7	100	0	99	3	84	9	60	10	36	9
8	100	0	100	1	91	7	72	12	44	8
9	100	0	100	0	96	5	84	12	58	14
10	100	0	100	0	100	4	92	8	61	3
11	100	0	100	0	100	0	96	4	92	31
12	100	0	100	0	100	0	100	4	100	8

Hydrologic Parameters for EX-100

Sheet 1 of 1



Project No: 85162
Project Name: 3491 Wallace Point Road
Designed/Checked By: NN / MJH
Date: 22-Mar-23

Land Use			Rainfall Data		
EX-100 Agriculture 22.18 ha Range 1.55 ha Grass 0.53 ha Woods 0.00 ha Wetland 0.43 ha Gravel 0.00 ha Impervious 0.08 ha SUM 24.78			Gauging Station = Peterborough 12 hr, 100 Yr Rainfall = 90.4 mm		
Hydrologic Soil Group¹ B Soil Type Bondhead Loam C 0.25 CN (Nashyd) 72.8			Drainage Area 24.78 ha Impervious Area 0.08 ha Percent Impervious 0.3% Connected Impervious 0.3%		
			Pervious Length 800 m US Elev 208.00 m DS Elev 192.00 m Slope 2.0 % Flat		

Parameter	Soil Group	Land Use							Weighted Value	
		Agriculture	Range	Grass	Woods	Wetland	Gravel	Impervious	Incl. Imperv. NASHYD	Not Incl. Imperv. STANDHYD
Runoff Coefficient², C	B	0.26	0.14	0.08	0.08	0.05	0.76	0.90	0.25	n.a.
SCS Curve No.³, CN	B	74	65	61	58	50	85	98	72.8	72.7
Initial Abstraction⁵, mm		6.0	8.0	5.0	10.0	10.0	2.5	2.0	6.2	6.2

Time of Concentration ⁶		
Total Length	800	m
Average Slope	2.0	%
Airport	62.6	min.
Bransby - Williams	28.8	min.
Applicable Minimum⁷	10.0	min.
Time to Peak	41.9	min.
	0.70	hr.

Composite Parameters		
Drainage Area	24.78 ha	
Runoff Coefficient	0.25	
SCS Curve No.	72.8	72.7
Modified Curve No.⁴, CN*	75.7	75.5
Initial Abstraction.	6.2	6.2

Notes:

- Hydrologic Soil Group obtained from Design Chart H2-6A, M.T.O. Drainage Manual, 1980.
- Runoff coefficient obtained from M.T.O. Design Chart 1.07, M.T.O. Drainage Management Manual, 1997, Hydrologic Analysis and Design, McCuen 2004 and New Jersey Technical Manual for Stream Encroachment, 1984.
- SCS Curve No. obtained from M.T.O. Design Chart 1.09, M.T.O. Drainage Management Manual, 1997, and Table 2-2a, TR-55, page 2-5.
- The modified curve number is adjusted as per Paul Wisner & Associates (1982) and represents antecedent moisture conditions Type II
- Initial Abstraction values taken from the Environmental and Engineering Services Department, The Corporation of the City of London, Dec 2005
- Use Airport Equation to calculate time of concentration for C <= 0.4, and Bransby-Williams for C > 0.4.
- Minimum Time of Concentration for use in the Rational Method and Hydrologic Model has been set to 10 minutes
- All impervious areas have been assumed to be directly connected.

Hydrologic Parameters for EXT-101		Sheet 1 of 1
	Project No: 85162	
	Project Name: 3491 Wallace Point Road	
	Designed/Checked By: NN / MJH	
	Date: 5-Apr-23	

Land Use			Rainfall Data		
EXT-101 Agriculture 0.00 ha Range 0.00 ha Grass 1.60 ha Woods 0.00 ha Wetland 0.00 ha Gravel 0.00 ha Impervious 0.40 ha SUM 2.00			Gauging Station = Peterborough 12 hr, 100 Yr Rainfall = 90.4 mm		
Hydrologic Soil Group¹ B Soil Type Bondhead Loam C 0.24 CN (Nashyd) 68.4			Drainage Area 2.00 ha Impervious Area 0.40 ha Percent Impervious 20.0% Connected Impervious 20.0%		
			Pervious Length 300 m US Elev 208.50 m DS Elev 204.50 m Slope 1.3 % Flat		

Parameter	Soil Group	Land Use							Weighted Value	
		Agriculture	Range	Grass	Woods	Wetland	Gravel	Impervious	Incl. Imperv. NASHYD	Not Incl. Imperv. STANDHYD
Runoff Coefficient², C	B	0.26	0.14	0.08	0.08	0.05	0.76	0.90	0.24	n.a.
SCS Curve No.³, CN	B	74	65	61	58	50	85	98	68.4	61.0
Initial Abstraction⁵, mm		6.0	8.0	5.0	10.0	10.0	2.5	2.0	4.4	5.0

Time of Concentration ⁶		
Total Length	300	m
Average Slope	1.3	%
Airport	44.0	min.
Bransby - Williams	15.1	min.
Applicable Minimum⁷	10.0	min.
Time to Peak	29.5	min.
	0.49	hr.

Composite Parameters		
Drainage Area	2.00 ha	
Runoff Coefficient	0.24	
SCS Curve No.	68.4	61.0
Modified Curve No.⁴, CN*	69.4	60.5
Initial Abstraction.	4.4	5.0

Notes:

- Hydrologic Soil Group obtained from Design Chart H2-6A, M.T.O. Drainage Manual, 1980.
- Runoff coefficient obtained from M.T.O. Design Chart 1.07, M.T.O. Drainage Management Manual, 1997, Hydrologic Analysis and Design, McCuen 2004 and New Jersey Technical Manual for Stream Encroachment, 1984.
- SCS Curve No. obtained from M.T.O. Design Chart 1.09, M.T.O. Drainage Management Manual, 1997, and Table 2-2a, TR-55, page 2-5.
- The modified curve number is adjusted as per Paul Wisner & Associates (1982) and represents antecedent moisture conditions Type II
- Initial Abstraction values taken from the Environmental and Engineering Services Department, The Corporation of the City of London, Dec 2005
- Use Airport Equation to calculate time of concentration for C <= 0.4, and Bransby-Williams for C > 0.4.
- Minimum Time of Concentration for use in the Rational Method and Hydrologic Model has been set to 10 minutes
- All impervious areas have been assumed to be directly connected.

Hydrologic Parameters for PR-UNC		Sheet 1 of 1
	Project No: 85162	
	Project Name: 3491 Wallace Point Road	
	Designed/Checked By: NN / MJH	
	Date: 22-Mar-23	

Land Use			Rainfall Data		
PR-UNC Agriculture 0.00 ha Range 0.00 ha Grass 12.87 ha Woods 0.00 ha Wetland 0.86 ha Gravel 0.00 ha Impervious 11.05 ha SUM 24.78			Gauging Station = Peterborough 12 hr, 100 Yr Rainfall = 90.4 mm		
Hydrologic Soil Group¹ B Soil Type Bondhead Loam C 0.44 CN (Nashyd) 77.1			Drainage Area 24.78 ha Impervious Area 11.05 ha Percent Impervious 44.6% Connected Impervious 44.6%		
			Pervious Impervious Length 800 800 m US Elev 208.00 208.00 m DS Elev 192.00 192.00 m Slope 2.0 2.0 % Flat Flat		

Parameter	Soil Group	Land Use							Weighted Value	
		Agriculture	Range	Grass	Woods	Wetland	Gravel	Impervious	Incl. Imperv. NASHYD	Not Incl. Imperv. STANDHYD
Runoff Coefficient ² , C	B	0.26	0.14	0.08	0.08	0.05	0.76	0.90	0.44	n.a.
SCS Curve No. ³ , CN	B	74	65	61	58	50	85	98	77.1	60.3
Initial Abstraction ⁵ , mm		6.0	8.0	5.0	10.0	10.0	2.5	2.0	3.8	5.3

Time of Concentration ⁶		
Total Length	1600	m
Average Slope	2.0	%
Airport	68.0	min.
Bransby - Williams	57.6	min.
Applicable Minimum⁷	10.0	min.
Time to Peak	38.6	min.
	0.64	hr.

Composite Parameters		
Drainage Area	24.78 ha	
Runoff Coefficient	0.44	
SCS Curve No.	77.1	60.3
Modified Curve No.⁴, CN*	77.3	60.1
Initial Abstraction.	3.8	5.3

Notes:

- Hydrologic Soil Group obtained from Design Chart H2-6A, M.T.O. Drainage Manual, 1980.
- Runoff coefficient obtained from M.T.O. Design Chart 1.07, M.T.O. Drainage Management Manual, 1997, Hydrologic Analysis and Design, McCuen 2004 and New Jersey Technical Manual for Stream Encroachment, 1984.
- SCS Curve No. obtained from M.T.O. Design Chart 1.09, M.T.O. Drainage Management Manual, 1997, and Table 2-2a, TR-55, page 2-5.
- The modified curve number is adjusted as per Paul Wisner & Associates (1982) and represents antecedent moisture conditions Type II
- Initial Abstraction values taken from the Environmental and Engineering Services Department, The Corporation of the City of London, Dec 2005
- Use Airport Equation to calculate time of concentration for C <= 0.4, and Bransby-Williams for C > 0.4.
- Minimum Time of Concentration for use in the Rational Method and Hydrologic Model has been set to 10 minutes
- All impervious areas have been assumed to be directly connected.

Hydrologic Parameters for PR-101		Sheet 1 of 1
	Project No: 85162	
	Project Name: 3491 Wallace Point Road	
	Designed/Checked By: NN / MJH	
	Date: 22-Mar-23	

Land Use			Rainfall Data		
PR-101 Agriculture 0.00 ha Range 0.00 ha Grass 1.29 ha Woods 0.00 ha Wetland 0.00 ha Gravel 0.00 ha Impervious 0.23 ha SUM 1.52			Gauging Station = Peterborough 12 hr, 100 Yr Rainfall = 90.4 mm		
Hydrologic Soil Group¹ B Soil Type Bondhead Loam C 0.30 CN (Nashyd) 66.6			Drainage Area 1.52 ha Impervious Area 0.23 ha Percent Impervious 15.0% Connected Impervious 15.0%		
			Pervious Impervious Length 100 20 m US Elev 207.00 203.00 m DS Elev 200.50 200.50 m Slope 6.5 12.5 % Hilly Steep		

Parameter	Soil Group	Land Use							Weighted Value	
		Agriculture	Range	Grass	Woods	Wetland	Gravel	Impervious	Incl. Imperv. NASHYD	Not Incl. Imperv. STANDHYD
Runoff Coefficient ² , C	B	0.40	0.30	0.19	0.14	0.05	0.76	0.90	0.30	n.a.
SCS Curve No. ³ , CN	B	74	65	61	58	50	85	98	66.6	61.0
Initial Abstraction ⁵ , mm		6.0	8.0	5.0	10.0	10.0	2.5	2.0	4.6	5.0

Time of Concentration ⁶		
Total Length	120	m
Average Slope	7.5	%
Airport	14.7	min.
Bransby - Williams	4.4	min.
Applicable Minimum⁷	10.0	min.
Time to Peak	9.9	min.
	0.16	hr.

Composite Parameters		
Drainage Area	1.52 ha	
Runoff Coefficient	0.30	
SCS Curve No.	66.6	61.0
Modified Curve No.⁴, CN*	67.1	60.5
Initial Abstraction.	4.6	5.0

Notes:

- Hydrologic Soil Group obtained from Design Chart H2-6A, M.T.O. Drainage Manual, 1980.
- Runoff coefficient obtained from M.T.O. Design Chart 1.07, M.T.O. Drainage Management Manual, 1997, Hydrologic Analysis and Design, McCuen 2004 and New Jersey Technical Manual for Stream Encroachment, 1984.
- SCS Curve No. obtained from M.T.O. Design Chart 1.09, M.T.O. Drainage Management Manual, 1997, and Table 2-2a, TR-55, page 2-5.
- The modified curve number is adjusted as per Paul Wisner & Associates (1982) and represents antecedent moisture conditions Type II
- Initial Abstraction values taken from the Environmental and Engineering Services Department, The Corporation of the City of London, Dec 2005
- Use Airport Equation to calculate time of concentration for C <= 0.4, and Bransby-Williams for C > 0.4.
- Minimum Time of Concentration for use in the Rational Method and Hydrologic Model has been set to 10 minutes
- All impervious areas have been assumed to be directly connected.

Hydrologic Parameters for PR-102		Sheet 1 of 1
	Project No: 85162	
	Project Name: 3491 Wallace Point Road	
	Designed/Checked By: NN / MJH	
	Date: 22-Mar-23	

Land Use			Rainfall Data		
PR-102 Agriculture 0.00 ha Range 0.00 ha Grass 3.29 ha Woods 0.00 ha Wetland 0.00 ha Gravel 0.00 ha Impervious 0.58 ha SUM 3.87			Gauging Station = Peterborough 12 hr, 100 Yr Rainfall = 90.4 mm		
Hydrologic Soil Group¹ B Soil Type Bondhead Loam C 0.25 CN (Nashyd) 66.6			Drainage Area 3.87 ha Impervious Area 0.58 ha Percent Impervious 15.0% Connected Impervious 15.0%		
			Pervious Impervious Length 100 20 m US Elev 207.50 203.00 m DS Elev 202.00 202.00 m Slope 5.5 5.0 % Rolling Rolling		

Parameter	Soil Group	Land Use							Weighted Value	
		Agriculture	Range	Grass	Woods	Wetland	Gravel	Impervious	Incl. Imperv. NASHYD	Not Incl. Imperv. STANDHYD
Runoff Coefficient ² , C	B	0.32	0.22	0.13	0.11	0.05	0.76	0.90	0.25	n.a.
SCS Curve No. ³ , CN	B	74	65	61	58	50	85	98	66.6	61.0
Initial Abstraction ⁵ , mm		6.0	8.0	5.0	10.0	10.0	2.5	2.0	4.6	5.0

Time of Concentration ⁶		
Total Length	120	m
Average Slope	5.4	%
Airport	17.5	min.
Bransby - Williams	4.3	min.
Applicable Minimum ⁷	10.0	min.
Time to Peak	11.7	min.
	0.20	hr.

Composite Parameters		
Drainage Area	3.87 ha	
Runoff Coefficient	0.25	
SCS Curve No.	66.6	61.0
Modified Curve No. ⁴ , CN*	67.1	60.5
Initial Abstraction.	4.6	5.0

Notes:

- Hydrologic Soil Group obtained from Design Chart H2-6A, M.T.O. Drainage Manual, 1980.
- Runoff coefficient obtained from M.T.O. Design Chart 1.07, M.T.O. Drainage Management Manual, 1997, Hydrologic Analysis and Design, McCuen 2004 and New Jersey Technical Manual for Stream Encroachment, 1984.
- SCS Curve No. obtained from M.T.O. Design Chart 1.09, M.T.O. Drainage Management Manual, 1997, and Table 2-2a, TR-55, page 2-5.
- The modified curve number is adjusted as per Paul Wisner & Associates (1982) and represents antecedent moisture conditions Type II
- Initial Abstraction values taken from the Environmental and Engineering Services Department, The Corporation of the City of London, Dec 2005
- Use Airport Equation to calculate time of concentration for C <= 0.4, and Bransby-Williams for C > 0.4.
- Minimum Time of Concentration for use in the Rational Method and Hydrologic Model has been set to 10 minutes
- All impervious areas have been assumed to be directly connected.

Hydrologic Parameters for PR-103		Sheet 1 of 1
	Project No: 85162	
	Project Name: 3491 Wallace Point Road	
	Designed/Checked By: NN / MJH	
	Date: 22-Mar-23	

Land Use			Rainfall Data		
PR-103 Agriculture 0.00 ha Range 0.00 ha Grass 3.02 ha Woods 0.00 ha Wetland 0.00 ha Gravel 0.00 ha Impervious 0.53 ha SUM 3.55			Gauging Station = Peterborough 12 hr, 100 Yr Rainfall = 90.4 mm		
Hydrologic Soil Group ¹ B Soil Type Bondhead Loam C 0.25 CN (Nashyd) 66.6			Drainage Area 3.55 ha Impervious Area 0.53 ha Percent Impervious 15.0% Connected Impervious 15.0%		
			Pervious Impervious Length 94 20 m US Elev 201.50 200.50 m DS Elev 198.50 198.00 m Slope 3.2 12.5 % Rolling Steep		

Parameter	Soil Group	Land Use							Weighted Value	
		Agriculture	Range	Grass	Woods	Wetland	Gravel	Impervious	Incl. Imperv. NASHYD	Not Incl. Imperv. STANDHYD
Runoff Coefficient ² , C	B	0.32	0.22	0.13	0.11	0.05	0.76	0.90	0.25	n.a.
SCS Curve No. ³ , CN	B	74	65	61	58	50	85	98	66.6	61.0
Initial Abstraction ⁵ , mm		6.0	8.0	5.0	10.0	10.0	2.5	2.0	4.6	5.0

Time of Concentration ⁶		
Total Length	114	m
Average Slope	4.8	%
Airport	17.6	min.
Bransby - Williams	4.2	min.
Applicable Minimum ⁷	10.0	min.
Time to Peak	11.8	min.
	0.20	hr.

Composite Parameters		
Drainage Area	3.55 ha	
Runoff Coefficient	0.25	
SCS Curve No.	66.6	61.0
Modified Curve No. ⁴ , CN*	67.1	60.5
Initial Abstraction.	4.6	5.0

Notes:

- Hydrologic Soil Group obtained from Design Chart H2-6A, M.T.O. Drainage Manual, 1980.
- Runoff coefficient obtained from M.T.O. Design Chart 1.07, M.T.O. Drainage Management Manual, 1997, Hydrologic Analysis and Design, McCuen 2004 and New Jersey Technical Manual for Stream Encroachment, 1984.
- SCS Curve No. obtained from M.T.O. Design Chart 1.09, M.T.O. Drainage Management Manual, 1997, and Table 2-2a, TR-55, page 2-5.
- The modified curve number is adjusted as per Paul Wisner & Associates (1982) and represents antecedent moisture conditions Type II
- Initial Abstraction values taken from the Environmental and Engineering Services Department, The Corporation of the City of London, Dec 2005
- Use Airport Equation to calculate time of concentration for C <= 0.4, and Bransby-Williams for C > 0.4.
- Minimum Time of Concentration for use in the Rational Method and Hydrologic Model has been set to 10 minutes
- All impervious areas have been assumed to be directly connected.

Hydrologic Parameters for PR-104		Sheet 1 of 1
	Project No: 85162	
	Project Name: 3491 Wallace Point Road	
	Designed/Checked By: NN / MJH	
	Date: 22-Mar-23	

Land Use			Rainfall Data		
PR-104 Agriculture 0.00 ha Range 0.00 ha Grass 2.95 ha Woods 0.00 ha Wetland 0.00 ha Gravel 0.00 ha Impervious 0.52 ha SUM 3.47			Gauging Station = Peterborough 12 hr, 100 Yr Rainfall = 90.4 mm		
Hydrologic Soil Group¹ B Soil Type Bondhead Loam C 0.20 CN (Nashyd) 66.6			Drainage Area 3.47 ha Impervious Area 0.52 ha Percent Impervious 15.0% Connected Impervious 15.0%		
			Pervious Impervious Length 72 20 m US Elev 197.00 196.50 m DS Elev 196.00 196.00 m Slope 1.4 2.5 % Flat Rolling		

Parameter	Soil Group	Land Use							Weighted Value	
		Agriculture	Range	Grass	Woods	Wetland	Gravel	Impervious	Incl. Imperv. NASHYD	Not Incl. Imperv. STANDHYD
Runoff Coefficient ² , C	B	0.26	0.14	0.08	0.08	0.05	0.76	0.90	0.20	n.a.
SCS Curve No. ³ , CN	B	74	65	61	58	50	85	98	66.6	61.0
Initial Abstraction ⁵ , mm		6.0	8.0	5.0	10.0	10.0	2.5	2.0	4.6	5.0

Time of Concentration ⁶		
Total Length	92	m
Average Slope	1.6	%
Airport	23.9	min.
Bransby - Williams	4.2	min.
Applicable Minimum⁷	10.0	min.
Time to Peak	16.0	min.
	0.27	hr.

Composite Parameters		
Drainage Area	3.47 ha	
Runoff Coefficient	0.20	
SCS Curve No.	66.6	61.0
Modified Curve No.⁴, CN*	67.1	60.5
Initial Abstraction.	4.6	5.0

Notes:

- Hydrologic Soil Group obtained from Design Chart H2-6A, M.T.O. Drainage Manual, 1980.
- Runoff coefficient obtained from M.T.O. Design Chart 1.07, M.T.O. Drainage Management Manual, 1997, Hydrologic Analysis and Design, McCuen 2004 and New Jersey Technical Manual for Stream Encroachment, 1984.
- SCS Curve No. obtained from M.T.O. Design Chart 1.09, M.T.O. Drainage Management Manual, 1997, and Table 2-2a, TR-55, page 2-5.
- The modified curve number is adjusted as per Paul Wisner & Associates (1982) and represents antecedent moisture conditions Type II
- Initial Abstraction values taken from the Environmental and Engineering Services Department, The Corporation of the City of London, Dec 2005
- Use Airport Equation to calculate time of concentration for C <= 0.4, and Bransby-Williams for C > 0.4.
- Minimum Time of Concentration for use in the Rational Method and Hydrologic Model has been set to 10 minutes
- All impervious areas have been assumed to be directly connected.

Hydrologic Parameters for PR-105		Sheet 1 of 1
	Project No: 85162	
	Project Name: 3491 Wallace Point Road	
	Designed/Checked By: NN / MJH	
	Date: 22-Mar-23	

Land Use			Rainfall Data		
PR-105 Agriculture 0.00 ha Range 0.00 ha Grass 5.06 ha Woods 0.00 ha Wetland 0.00 ha Gravel 0.00 ha Impervious 0.89 ha SUM 5.95			Gauging Station = Peterborough 12 hr, 100 Yr Rainfall = 90.4 mm		
Hydrologic Soil Group¹ B Soil Type Bondhead Loam C 0.25 CN (Nashyd) 66.6			Drainage Area 5.95 ha Impervious Area 0.89 ha Percent Impervious 15.0% Connected Impervious 15.0%		
			Pervious Impervious Length 242 20 m US Elev 202.00 196.50 m DS Elev 196.00 196.00 m Slope 2.5 2.5 % Rolling Rolling		

Parameter	Soil Group	Land Use							Weighted Value	
		Agriculture	Range	Grass	Woods	Wetland	Gravel	Impervious	Incl. Imperv. NASHYD	Not Incl. Imperv. STANDHYD
Runoff Coefficient ² , C	B	0.32	0.22	0.13	0.11	0.05	0.76	0.90	0.25	n.a.
SCS Curve No. ³ , CN	B	74	65	61	58	50	85	98	66.6	61.0
Initial Abstraction ⁵ , mm		6.0	8.0	5.0	10.0	10.0	2.5	2.0	4.6	5.0

Time of Concentration ⁶		
Total Length	262	m
Average Slope	2.5	%
Airport	33.4	min.
Bransby - Williams	10.4	min.
Applicable Minimum⁷	10.0	min.
Time to Peak	22.4	min.
	0.37	hr.

Composite Parameters		
Drainage Area	5.95 ha	
Runoff Coefficient	0.25	
SCS Curve No.	66.6	61.0
Modified Curve No.⁴, CN*	67.1	60.5
Initial Abstraction.	4.6	5.0

Notes:

- Hydrologic Soil Group obtained from Design Chart H2-6A, M.T.O. Drainage Manual, 1980.
- Runoff coefficient obtained from M.T.O. Design Chart 1.07, M.T.O. Drainage Management Manual, 1997, Hydrologic Analysis and Design, McCuen 2004 and New Jersey Technical Manual for Stream Encroachment, 1984.
- SCS Curve No. obtained from M.T.O. Design Chart 1.09, M.T.O. Drainage Management Manual, 1997, and Table 2-2a, TR-55, page 2-5.
- The modified curve number is adjusted as per Paul Wisner & Associates (1982) and represents antecedent moisture conditions Type II
- Initial Abstraction values taken from the Environmental and Engineering Services Department, The Corporation of the City of London, Dec 2005
- Use Airport Equation to calculate time of concentration for C <= 0.4, and Bransby-Williams for C > 0.4.
- Minimum Time of Concentration for use in the Rational Method and Hydrologic Model has been set to 10 minutes
- All impervious areas have been assumed to be directly connected.

Hydrologic Parameters for PR-106		Sheet 1 of 1
	Project No: 85162	
	Project Name: 3491 Wallace Point Road	
	Designed/Checked By: NN / MJH	
	Date: 22-Mar-23	

Land Use			Rainfall Data		
PR-106 Agriculture 0.00 ha Range 0.00 ha Grass 0.75 ha Woods 0.00 ha Wetland 0.00 ha Gravel 0.00 ha Impervious 0.75 ha SUM 1.50			Gauging Station = Peterborough 12 hr, 100 Yr Rainfall = 90.4 mm		
Hydrologic Soil Group¹ B Soil Type Bondhead Loam C 0.49 CN (Nashyd) 79.5			Drainage Area 1.50 ha Impervious Area 0.75 ha Percent Impervious 50.0% Connected Impervious 50.0%		
			Pervious Impervious Length 167 167 m US Elev 199.50 199.50 m DS Elev 197.50 197.50 m Slope 1.2 1.2 % Flat Flat		

Parameter	Soil Group	Land Use							Weighted Value	
		Agriculture	Range	Grass	Woods	Wetland	Gravel	Impervious	Incl. Imperv. NASHYD	Not Incl. Imperv. STANDHYD
Runoff Coefficient ² , C	B	0.26	0.14	0.08	0.08	0.05	0.76	0.90	0.49	n.a.
SCS Curve No. ³ , CN	B	74	65	61	58	50	85	98	79.5	61.0
Initial Abstraction ⁵ , mm		6.0	8.0	5.0	10.0	10.0	2.5	2.0	3.5	5.0

Time of Concentration ⁶		
Total Length	333	m
Average Slope	1.2	%
Airport	34.2	min.
Bransby - Williams	17.6	min.
Flat: 0-2% Slopes Rolling: 2-6% Slopes Hilly: >6% Slopes		
Applicable Minimum⁷	10.0	min.
Time to Peak	11.8	min.
	0.20	hr.

Composite Parameters		
Drainage Area	1.50 ha	
Runoff Coefficient	0.49	
SCS Curve No.	79.5	61.0
Modified Curve No.⁴, CN*	79.8	60.5
Initial Abstraction.	3.5	5.0

Notes:

- Hydrologic Soil Group obtained from Design Chart H2-6A, M.T.O. Drainage Manual, 1980.
- Runoff coefficient obtained from M.T.O. Design Chart 1.07, M.T.O. Drainage Management Manual, 1997, Hydrologic Analysis and Design, McCuen 2004 and New Jersey Technical Manual for Stream Encroachment, 1984.
- SCS Curve No. obtained from M.T.O. Design Chart 1.09, M.T.O. Drainage Management Manual, 1997, and Table 2-2a, TR-55, page 2-5.
- The modified curve number is adjusted as per Paul Wisner & Associates (1982) and represents antecedent moisture conditions Type II
- Initial Abstraction values taken from the Environmental and Engineering Services Department, The Corporation of the City of London, Dec 2005
- Use Airport Equation to calculate time of concentration for C <= 0.4, and Bransby-Williams for C > 0.4.
- Minimum Time of Concentration for use in the Rational Method and Hydrologic Model has been set to 10 minutes
- All impervious areas have been assumed to be directly connected.

Hydrologic Parameters for PR-107		Sheet 1 of 1
	Project No: 85162	
	Project Name: 3491 Wallace Point Road	
	Designed/Checked By: NN / MJH	
	Date: 22-Mar-23	

Land Use			Rainfall Data		
PR-107 Agriculture 0.00 ha Range 0.00 ha Grass 1.74 ha Woods 0.00 ha Wetland 0.00 ha Gravel 0.00 ha Impervious 1.74 ha SUM 3.47			Gauging Station = Peterborough 12 hr, 100 Yr Rainfall = 90.4 mm		
Hydrologic Soil Group ¹ B Soil Type Bondhead Loam C 0.49 CN (Nashyd) 79.5			Drainage Area 3.47 ha Impervious Area 1.74 ha Percent Impervious 50.0% Connected Impervious 50.0%		
			Pervious Impervious Length 685 685 m US Elev 207.50 207.50 m DS Elev 195.00 195.00 m Slope 1.8 1.8 % Flat Flat		

Parameter	Soil Group	Land Use							Weighted Value	
		Agriculture	Range	Grass	Woods	Wetland	Gravel	Impervious	Incl. Imperv. NASHYD	Not Incl. Imperv. STANDHYD
Runoff Coefficient ² , C	B	0.26	0.14	0.08	0.08	0.05	0.76	0.90	0.49	n.a.
SCS Curve No. ³ , CN	B	74	65	61	58	50	85	98	79.5	61.0
Initial Abstraction ⁵ , mm		6.0	8.0	5.0	10.0	10.0	2.5	2.0	3.5	5.0

Time of Concentration ⁶		
Total Length	1370	m
Average Slope	1.8	%
Airport	60.4	min.
Bransby - Williams	61.1	min.
Applicable Minimum ⁷	10.0	min.
Time to Peak	41.0	min.
	0.68	hr.

Composite Parameters		
Drainage Area	3.47 ha	
Runoff Coefficient	0.49	
SCS Curve No.	79.5	61.0
Modified Curve No. ⁴ , CN*	79.8	60.5
Initial Abstraction.	3.5	5.0

Notes:

- Hydrologic Soil Group obtained from Design Chart H2-6A, M.T.O. Drainage Manual, 1980.
- Runoff coefficient obtained from M.T.O. Design Chart 1.07, M.T.O. Drainage Management Manual, 1997, Hydrologic Analysis and Design, McCuen 2004 and New Jersey Technical Manual for Stream Encroachment, 1984.
- SCS Curve No. obtained from M.T.O. Design Chart 1.09, M.T.O. Drainage Management Manual, 1997, and Table 2-2a, TR-55, page 2-5.
- The modified curve number is adjusted as per Paul Wisner & Associates (1982) and represents antecedent moisture conditions Type II
- Initial Abstraction values taken from the Environmental and Engineering Services Department, The Corporation of the City of London, Dec 2005
- Use Airport Equation to calculate time of concentration for C <= 0.4, and Bransby-Williams for C > 0.4.
- Minimum Time of Concentration for use in the Rational Method and Hydrologic Model has been set to 10 minutes
- All impervious areas have been assumed to be directly connected.

Hydrologic Parameters for PR-108		Sheet 1 of 1
	Project No: 85162	
	Project Name: 3491 Wallace Point Road	
	Designed/Checked By: NN / MJH	
	Date: 22-Mar-23	

Land Use			Rainfall Data		
PR-108 Agriculture 0.00 ha Range 0.00 ha Grass 1.46 ha Woods 0.00 ha Wetland 0.00 ha Gravel 0.00 ha Impervious 0.00 ha SUM 1.46			Gauging Station = Peterborough 12 hr, 100 Yr Rainfall = 90.4 mm		
Hydrologic Soil Group¹ B Soil Type Bondhead Loam C 0.08 CN (Nashyd) 61.0			Drainage Area 1.46 ha Impervious Area 0.00 ha Percent Impervious 0.0% Connected Impervious 0.0%		
			Pervious Impervious Length 194 194 m US Elev 195.50 195.50 m DS Elev 193.00 193.00 m Slope 1.3 1.3 % Flat Flat		

Parameter	Soil Group	Land Use							Weighted Value	
		Agriculture	Range	Grass	Woods	Wetland	Gravel	Impervious	Incl. Imperv. NASHYD	Not Incl. Imperv. STANDHYD
Runoff Coefficient ² , C	B	0.26	0.14	0.08	0.08	0.05	0.76	0.90	0.08	n.a.
SCS Curve No. ³ , CN	B	74	65	61	58	50	85	98	61.0	61.0
Initial Abstraction ⁵ , mm		6.0	8.0	5.0	10.0	10.0	2.5	2.0	5.0	5.0

Time of Concentration ⁶		
Total Length	387	m
Average Slope	1.3	%
Airport	60.1	min.
Bransby - Williams	20.2	min.
Applicable Minimum ⁷	10.0	min.
Time to Peak	40.3	min.
	0.67	hr.

Composite Parameters		
Drainage Area	1.46 ha	
Runoff Coefficient	0.08	
SCS Curve No.	61.0	61.0
Modified Curve No. ⁴ , CN*	60.5	60.5
Initial Abstraction.	5.0	5.0

Notes:

- Hydrologic Soil Group obtained from Design Chart H2-6A, M.T.O. Drainage Manual, 1980.
- Runoff coefficient obtained from M.T.O. Design Chart 1.07, M.T.O. Drainage Management Manual, 1997, Hydrologic Analysis and Design, McCuen 2004 and New Jersey Technical Manual for Stream Encroachment, 1984.
- SCS Curve No. obtained from M.T.O. Design Chart 1.09, M.T.O. Drainage Management Manual, 1997, and Table 2-2a, TR-55, page 2-5.
- The modified curve number is adjusted as per Paul Wisner & Associates (1982) and represents antecedent moisture conditions Type II
- Initial Abstraction values taken from the Environmental and Engineering Services Department, The Corporation of the City of London, Dec 2005
- Use Airport Equation to calculate time of concentration for C <= 0.4, and Bransby-Williams for C > 0.4.
- Minimum Time of Concentration for use in the Rational Method and Hydrologic Model has been set to 10 minutes
- All impervious areas have been assumed to be directly connected.

Appendix B

Stormwater Management Pond



Preliminary Pond Sizing -



Project No: 85162
Project Name: 3491 Wallace Point Rd
Designed/Checked By: NN / MJH
Date: 5-Apr-23
Catchment ID: Proposed

1. Site Data

Permanent Pool Volume Required	1,951	m ³	
Extended Detention Volume Required	991	m ³	
Active Storage Required	2,640	m ³	VO6
Maximum Storage Required	2,640	m ³	
Drying Area Required	1,566	m ²	

2. Permanent Pool

Length to Width Ratio at bottom (horz : vert)	4.0	Permanent Pool Depth	0.00	m
Side Slope (horz : vert)	4.0	Bottom Width	36.0	m
		Desired Safety Factor:	1.3	

Main Pool			Sediment Forebay		
Bottom Length	96.0	m	Bottom Length	48.0	m
Bottom Area	3456	m ²	Bottom Area	1728	m ²
Top Width	36.0	m	Top Width	36.0	m
Top Length	96.0	m	Top Length	48.0	m
Top Area	3456	m ²	Top Area	1728	m ²
Volume	0	m ³	Volume	0	m ³

Permanent Pool Summary

Total Volume	0	m ³	Top Width	36	m
Safety Factor	0.00		Top Length	144	m
Top Area	5184	m²	Effective Length to Width Ratio	4.0	

3. Extended Detention

Side Slope (horz : vert)	4.0
Extended Detention Depth	0.60 m

Extended Detention Summary

Volume	3377	m ³	Top Width	41	m
Safety Factor	1.28		Top Length	149	m
Top Area	6071	m²			

4. Freeboard & Offsets

Side Slope (horz : vert)	4.0		Top Width	49	m
Freeboard	0.30	m	Top Length	157	m
Offset from Top of Pond	3.0	m	Top Area	7734	m ²

5. Drying Area

Length of Drying Area	157	Drying Area	0	m ²
Width of Drying Area	0	Safety Factor	0.00	

Including Freeboard and Offset

Top Area	7734	m²	Top Width	49	m
			Top Length	157	m

6. Slope of Site

Side Slope of Pond Grading (horz : vert)	4.0				
Slope Perpendicular to Pond Width	1.0	%			
Slope Perpendicular to Pond Length	1.5	%			
OG Elevation at Outlet	193.5	m	Final Top Width	60	m
Required Outlet Invert Elevation	193.5	m	Final Top Length	171	m
Required Cut or Berm from OG to Top of Pond	-0.9	m	Final Top Area	10184	m²

 ** SIMULATION:01_2-Year_6 hour SCS **

RESERVOIR(0001)		OVERFLOW IS OFF			
IN= 2---> OUT= 1		DT= 5.0 min			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	1.1450	0.1930	
	0.3370	0.0770	1.3850	0.2270	
	0.6240	0.1200	1.6330	0.2640	
	0.8460	0.1510	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	0.737	3.00	10.94
OUTFLOW: ID= 1 (0001)	26.790	0.333	3.50	10.94

PEAK FLOW REDUCTION [Qout/Qin](%)= 45.19
 TIME SHIFT OF PEAK FLOW (min)= 30.00
 MAXIMUM STORAGE USED (ha.m.)= 0.0762

 ** SIMULATION:02_5-Year_6 hour SCS **

RESERVOIR(0001)		OVERFLOW IS OFF			
IN= 2---> OUT= 1		DT= 5.0 min			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	1.1450	0.1930	
	0.3370	0.0770	1.3850	0.2270	
	0.6240	0.1200	1.6330	0.2640	
	0.8460	0.1510	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	1.176	3.00	17.93
OUTFLOW: ID= 1 (0001)	26.790	0.617	3.42	17.93

PEAK FLOW REDUCTION [Qout/Qin](%)= 52.47
 TIME SHIFT OF PEAK FLOW (min)= 25.00
 MAXIMUM STORAGE USED (ha.m.)= 0.1191

 ** SIMULATION:03_10-Year_6 hour SCS **

RESERVOIR(0001)		OVERFLOW IS OFF			
IN= 2---> OUT= 1		DT= 5.0 min			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	1.1450	0.1930	
	0.3370	0.0770	1.3850	0.2270	
	0.6240	0.1200	1.6330	0.2640	
	0.8460	0.1510	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	1.511	3.00	23.27
OUTFLOW: ID= 1 (0001)	26.790	0.841	3.42	23.27

PEAK FLOW REDUCTION [Qout/Qin](%)= 55.70
 TIME SHIFT OF PEAK FLOW (min)= 25.00
 MAXIMUM STORAGE USED (ha.m.)= 0.1504

 ** SIMULATION:04_25-Year_6 hour SCS **

RESERVOIR(0001)		OVERFLOW IS OFF			
IN= 2---> OUT= 1		DT= 5.0 min			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	1.1450	0.1930	
	0.3370	0.0770	1.3850	0.2270	
	0.6240	0.1200	1.6330	0.2640	
	0.8460	0.1510	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	1.962	3.00	30.28
OUTFLOW: ID= 1 (0001)	26.790	1.141	3.42	30.27

PEAK FLOW REDUCTION [Qout/Qin](%)= 58.13
 TIME SHIFT OF PEAK FLOW (min)= 25.00
 MAXIMUM STORAGE USED (ha.m.)= 0.1926

 ** SIMULATION:05_50-Year_6 hour SCS **

RESERVOIR(0001)		OVERFLOW IS OFF			
IN= 2---> OUT= 1		DT= 5.0 min			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	1.1450	0.1930	
	0.3370	0.0770	1.3850	0.2270	
	0.6240	0.1200	1.6330	0.2640	
	0.8460	0.1510	0.0000	0.0000	

0.0000	0.0000		1.1450	0.1930
0.3370	0.0770		1.3850	0.2270
0.6240	0.1200		1.6330	0.2640
0.8460	0.1510		0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	2.323	3.00	35.94
OUTFLOW: ID= 1 (0001)	26.790	1.379	3.42	35.94

PEAK FLOW REDUCTION [Qout/Qin](%)= 59.38
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.2265

** SIMULATION:06_100-Year_6 hour SCS **

RESERVOIR(0001)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 5.0 min					
-----	OUTFLOW (cms)	STORAGE (ha.m.)		OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000		1.1450	0.1930
	0.3370	0.0770		1.3850	0.2270
	0.6240	0.1200		1.6330	0.2640
	0.8460	0.1510		0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	2.707	3.00	41.77
OUTFLOW: ID= 1 (0001)	26.790	1.626	3.42	41.76

PEAK FLOW REDUCTION [Qout/Qin](%)= 60.06
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.2634

** SIMULATION:100-Year_12 hour AES **

RESERVOIR(0001)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 5.0 min					
-----	OUTFLOW (cms)	STORAGE (ha.m.)		OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000		1.1450	0.1930
	0.3370	0.0770		1.3850	0.2270
	0.6240	0.1200		1.6330	0.2640
	0.8460	0.1510		0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	0.753	3.00	47.94
OUTFLOW: ID= 1 (0001)	26.790	0.702	3.25	47.94

PEAK FLOW REDUCTION [Qout/Qin](%)= 93.14
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.1308

** SIMULATION:100-Year_12 hour SCS **

RESERVOIR(0001)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 5.0 min					
-----	OUTFLOW (cms)	STORAGE (ha.m.)		OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000		1.1450	0.1930
	0.3370	0.0770		1.3850	0.2270
	0.6240	0.1200		1.6330	0.2640
	0.8460	0.1510		0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	2.682	6.00	47.85
OUTFLOW: ID= 1 (0001)	26.790	1.621	6.42	47.85

PEAK FLOW REDUCTION [Qout/Qin](%)= 60.46
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.2634

** SIMULATION:100-Year_24 hour SCS **

RESERVOIR(0001)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 5.0 min					
-----	OUTFLOW (cms)	STORAGE (ha.m.)		OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000		1.1450	0.1930
	0.3370	0.0770		1.3850	0.2270
	0.6240	0.1200		1.6330	0.2640
	0.8460	0.1510		0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	2.618	12.00	55.44

OUTFLOW: ID= 1 (0001) 26.790 1.587 12.33 55.44

PEAK FLOW REDUCTION [Qout/Qin](%)= 60.64
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.2582

** SIMULATION:10-Year_12 hour AES **

RESERVOIR(0001)		OVERFLOW IS OFF	
IN= 2--> OUT= 1	DT= 5.0 min		
OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	1.1450	0.1930
0.3370	0.0770	1.3850	0.2270
0.6240	0.1200	1.6330	0.2640
0.8460	0.1510	0.0000	0.0000
AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	0.416	3.00
OUTFLOW: ID= 1 (0001)	26.790	0.396	5.00

PEAK FLOW REDUCTION [Qout/Qin](%)= 95.08
TIME SHIFT OF PEAK FLOW (min)=120.00
MAXIMUM STORAGE USED (ha.m.)= 0.0859

** SIMULATION:10-Year_12 hour SCS **

RESERVOIR(0001)		OVERFLOW IS OFF	
IN= 2--> OUT= 1	DT= 5.0 min		
OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	1.1450	0.1930
0.3370	0.0770	1.3850	0.2270
0.6240	0.1200	1.6330	0.2640
0.8460	0.1510	0.0000	0.0000
AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	1.539	6.00
OUTFLOW: ID= 1 (0001)	26.790	0.871	6.42

PEAK FLOW REDUCTION [Qout/Qin](%)= 56.59
TIME SHIFT OF PEAK FLOW (min)= 25.00

MAXIMUM STORAGE USED (ha.m.)= 0.1549

** SIMULATION:10-Year_24 hour SCS **

RESERVOIR(0001)		OVERFLOW IS OFF	
IN= 2--> OUT= 1	DT= 5.0 min		
OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	1.1450	0.1930
0.3370	0.0770	1.3850	0.2270
0.6240	0.1200	1.6330	0.2640
0.8460	0.1510	0.0000	0.0000
AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	1.510	12.00
OUTFLOW: ID= 1 (0001)	26.790	0.859	12.33

PEAK FLOW REDUCTION [Qout/Qin](%)= 56.86
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.1534

** SIMULATION:12 hour Timmins **

RESERVOIR(0001)		OVERFLOW IS OFF	
IN= 2--> OUT= 1	DT= 5.0 min		
OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	1.1450	0.1930
0.3370	0.0770	1.3850	0.2270
0.6240	0.1200	1.6330	0.2640
0.8460	0.1510	0.0000	0.0000
AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	2.143	7.00
OUTFLOW: ID= 1 (0001)	26.790	1.842	7.17

PEAK FLOW REDUCTION [Qout/Qin](%)= 85.95
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.2954

** SIMULATION:25-Year_12 hour AES **

```

-----
| RESERVOIR( 0001)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min      |
-----
      OUTFLOW  STORAGE | OUTFLOW  STORAGE
      (cms)   (ha.m.) | (cms)   (ha.m.)
      0.0000  0.0000 | 1.1450  0.1930
      0.3370  0.0770 | 1.3850  0.2270
      0.6240  0.1200 | 1.6330  0.2640
      0.8460  0.1510 | 0.0000  0.0000

      AREA      QPEAK      TPEAK      R.V.
      (ha)      (cms)      (hrs)      (mm)
INFLOW : ID= 2 ( 0013) 26.790 0.545 3.00 35.37
OUTFLOW: ID= 1 ( 0001) 26.790 0.508 5.00 35.37
  
```

PEAK FLOW REDUCTION [Qout/Qin](%)= 93.24
 TIME SHIFT OF PEAK FLOW (min)=120.00
 MAXIMUM STORAGE USED (ha.m.)= 0.1029

 ** SIMULATION:25-Year_12 hour SCS **

```

-----
| RESERVOIR( 0001)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min      |
-----
      OUTFLOW  STORAGE | OUTFLOW  STORAGE
      (cms)   (ha.m.) | (cms)   (ha.m.)
      0.0000  0.0000 | 1.1450  0.1930
      0.3370  0.0770 | 1.3850  0.2270
      0.6240  0.1200 | 1.6330  0.2640
      0.8460  0.1510 | 0.0000  0.0000

      AREA      QPEAK      TPEAK      R.V.
      (ha)      (cms)      (hrs)      (mm)
INFLOW : ID= 2 ( 0013) 26.790 1.975 6.00 35.22
OUTFLOW: ID= 1 ( 0001) 26.790 1.160 6.42 35.22
  
```

PEAK FLOW REDUCTION [Qout/Qin](%)= 58.76
 TIME SHIFT OF PEAK FLOW (min)= 25.00
 MAXIMUM STORAGE USED (ha.m.)= 0.1959

 ** SIMULATION:25-Year_24 hour SCS **

```

-----
| RESERVOIR( 0001)| OVERFLOW IS OFF
  
```

```

| IN= 2---> OUT= 1 |
| DT= 5.0 min      |
-----
      OUTFLOW  STORAGE | OUTFLOW  STORAGE
      (cms)   (ha.m.) | (cms)   (ha.m.)
      0.0000  0.0000 | 1.1450  0.1930
      0.3370  0.0770 | 1.3850  0.2270
      0.6240  0.1200 | 1.6330  0.2640
      0.8460  0.1510 | 0.0000  0.0000

      AREA      QPEAK      TPEAK      R.V.
      (ha)      (cms)      (hrs)      (mm)
INFLOW : ID= 2 ( 0013) 26.790 1.939 12.00 41.24
OUTFLOW: ID= 1 ( 0001) 26.790 1.145 12.33 41.24
  
```

PEAK FLOW REDUCTION [Qout/Qin](%)= 59.07
 TIME SHIFT OF PEAK FLOW (min)= 20.00
 MAXIMUM STORAGE USED (ha.m.)= 0.1938

 ** SIMULATION:2-Year_12 hour AES **

```

-----
| RESERVOIR( 0001)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min      |
-----
      OUTFLOW  STORAGE | OUTFLOW  STORAGE
      (cms)   (ha.m.) | (cms)   (ha.m.)
      0.0000  0.0000 | 1.1450  0.1930
      0.3370  0.0770 | 1.3850  0.2270
      0.6240  0.1200 | 1.6330  0.2640
      0.8460  0.1510 | 0.0000  0.0000

      AREA      QPEAK      TPEAK      R.V.
      (ha)      (cms)      (hrs)      (mm)
INFLOW : ID= 2 ( 0013) 26.790 0.202 5.00 13.76
OUTFLOW: ID= 1 ( 0001) 26.790 0.193 5.08 13.76
  
```

PEAK FLOW REDUCTION [Qout/Qin](%)= 95.56
 TIME SHIFT OF PEAK FLOW (min)= 5.00
 MAXIMUM STORAGE USED (ha.m.)= 0.0442

 ** SIMULATION:2-Year_12 hour SCS **

```

-----
| RESERVOIR( 0001)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min      |
-----
      OUTFLOW  STORAGE | OUTFLOW  STORAGE
      (cms)   (ha.m.) | (cms)   (ha.m.)
      0.0000  0.0000 | 1.1450  0.1930
  
```

0.3370	0.0770		1.3850	0.2270
0.6240	0.1200		1.6330	0.2640
0.8460	0.1510		0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	0.788	6.00	13.85
OUTFLOW: ID= 1 (0001)	26.790	0.375	6.42	13.85

PEAK FLOW REDUCTION [Qout/Qin](%)= 47.54
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.0828

** SIMULATION:2-Year_24 hour SCS **

RESERVOIR(0001)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 5.0 min					
-----	OUTFLOW	STORAGE		OUTFLOW	STORAGE
	(cms)	(ha.m.)		(cms)	(ha.m.)
	0.0000	0.0000		1.1450	0.1930
	0.3370	0.0770		1.3850	0.2270
	0.6240	0.1200		1.6330	0.2640
	0.8460	0.1510		0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	0.773	12.00	16.22
OUTFLOW: ID= 1 (0001)	26.790	0.371	12.42	16.22

PEAK FLOW REDUCTION [Qout/Qin](%)= 47.99
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.0821

** SIMULATION:50-Year_12 hour AES **

RESERVOIR(0001)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 5.0 min					
-----	OUTFLOW	STORAGE		OUTFLOW	STORAGE
	(cms)	(ha.m.)		(cms)	(ha.m.)
	0.0000	0.0000		1.1450	0.1930
	0.3370	0.0770		1.3850	0.2270
	0.6240	0.1200		1.6330	0.2640
	0.8460	0.1510		0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	0.646	3.00	41.47
OUTFLOW: ID= 1 (0001)	26.790	0.597	3.25	41.47

PEAK FLOW REDUCTION [Qout/Qin](%)= 92.44
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.1161

** SIMULATION:50-Year_12 hour SCS **

RESERVOIR(0001)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 5.0 min					
-----	OUTFLOW	STORAGE		OUTFLOW	STORAGE
	(cms)	(ha.m.)		(cms)	(ha.m.)
	0.0000	0.0000		1.1450	0.1930
	0.3370	0.0770		1.3850	0.2270
	0.6240	0.1200		1.6330	0.2640
	0.8460	0.1510		0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	2.315	6.00	41.45
OUTFLOW: ID= 1 (0001)	26.790	1.387	6.42	41.45

PEAK FLOW REDUCTION [Qout/Qin](%)= 59.89
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.2282

** SIMULATION:50-Year_24 hour SCS **

RESERVOIR(0001)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 5.0 min					
-----	OUTFLOW	STORAGE		OUTFLOW	STORAGE
	(cms)	(ha.m.)		(cms)	(ha.m.)
	0.0000	0.0000		1.1450	0.1930
	0.3370	0.0770		1.3850	0.2270
	0.6240	0.1200		1.6330	0.2640
	0.8460	0.1510		0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	2.277	12.00	48.39
OUTFLOW: ID= 1 (0001)	26.790	1.369	12.33	48.39

PEAK FLOW REDUCTION [Qout/Qin](%)= 60.15
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.2256

** SIMULATION:5-Year_12 hour AES **

| RESERVOIR(0001)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
DT= 5.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 1.1450 0.1930
0.3370 0.0770 | 1.3850 0.2270
0.6240 0.1200 | 1.6330 0.2640
0.8460 0.1510 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0013) 26.790 0.323 3.00 21.69
OUTFLOW: ID= 1 (0001) 26.790 0.307 5.08 21.69

PEAK FLOW REDUCTION [Qout/Qin](%)= 94.90
TIME SHIFT OF PEAK FLOW (min)=125.00
MAXIMUM STORAGE USED (ha.m.)= 0.0702

** SIMULATION:5-Year_12 hour SCS **

| RESERVOIR(0001)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
DT= 5.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 1.1450 0.1930
0.3370 0.0770 | 1.3850 0.2270
0.6240 0.1200 | 1.6330 0.2640
0.8460 0.1510 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0013) 26.790 1.225 6.00 21.81
OUTFLOW: ID= 1 (0001) 26.790 0.662 6.42 21.81

PEAK FLOW REDUCTION [Qout/Qin](%)= 54.02
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.1254

** SIMULATION:5-Year_24 hour SCS **

| RESERVOIR(0001)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
DT= 5.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 1.1450 0.1930
0.3370 0.0770 | 1.3850 0.2270
0.6240 0.1200 | 1.6330 0.2640
0.8460 0.1510 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0013) 26.790 1.193 12.00 25.35
OUTFLOW: ID= 1 (0001) 26.790 0.645 12.42 25.34

PEAK FLOW REDUCTION [Qout/Qin](%)= 54.07
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.1233

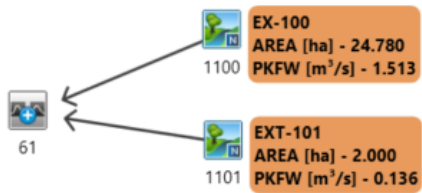
Appendix C

Hydrologic Model – VO6

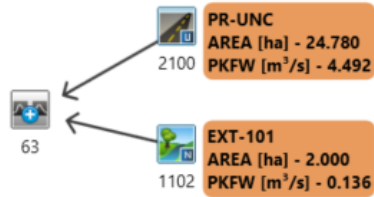


Visual Otthymo Model Configuration

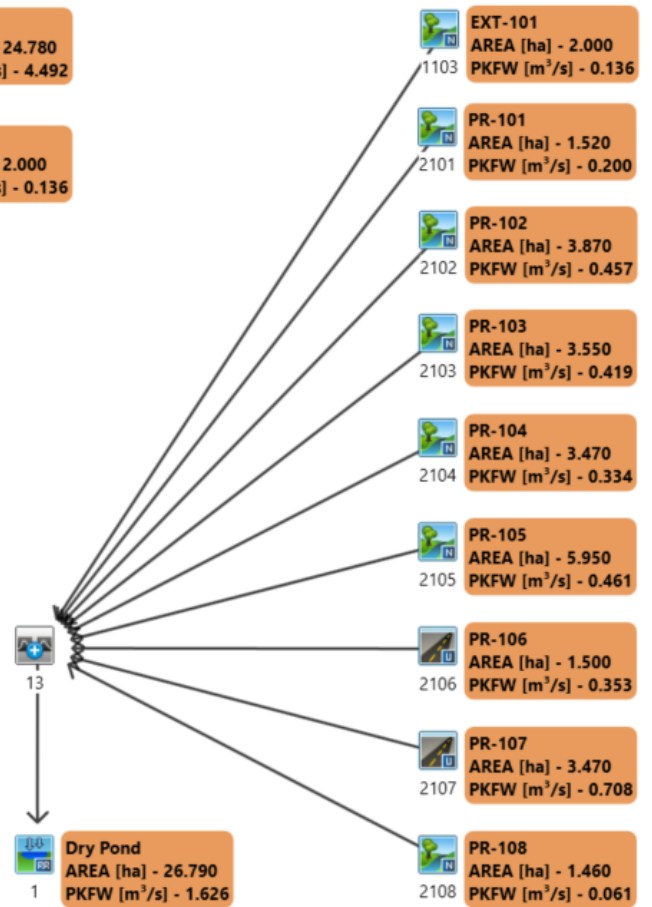
Existing



Proposed Uncontrolled



Proposed Controlled



=====

V V I SSSS U U A L (v 6.2.2008)
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
W I SSSS UUUU A A LLLLL

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

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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\V02\voin.dat

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Summary filename:
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a3de-c09e-4d7c-b43f-946ff30e3d42\scen

DATE: 04/05/2023 TIME: 11:32:30

USER:

COMMENTS: _____

** SIMULATION : 01_2-Year_6 hour SCS **

| READ STORM | Filename: C:\Users\nnapper\AppData
| | ata\Local\Temp\

| | aa485c45-5c41-4f04-b9f7-20c929bcd42e\c2933827
| Ptotal= 38.60 mm | Comments: 2-Year_6 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	1.50	1.50	3.90	3.00	8.50	4.50	2.30
0.25	1.50	1.75	3.90	3.25	8.50	4.75	2.30
0.50	2.30	2.00	4.60	3.50	3.90	5.00	1.50
0.75	2.30	2.25	4.60	3.75	3.90	5.25	1.50
1.00	2.30	2.50	23.20	4.00	3.10	5.50	1.50
1.25	2.30	2.75	60.40	4.25	3.10	5.75	1.50

| CALIB |
| NASHYD (2108) | Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| U.H. Tp(hrs)= 0.67

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30
0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.012 (i)
TIME TO PEAK (hrs)= 3.667
RUNOFF VOLUME (mm)= 5.660

TOTAL RAINFALL (mm)= 38.600
RUNOFF COEFFICIENT = 0.147

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

CALIB
NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.16

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30
0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.040 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 7.258
TOTAL RAINFALL (mm)= 38.600
RUNOFF COEFFICIENT = 0.188

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

CALIB

NASHYD (2102) | Area (ha)= 3.87 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.20

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30
0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.093 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 7.278
TOTAL RAINFALL (mm)= 38.600
RUNOFF COEFFICIENT = 0.189

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

CALIB
NASHYD (2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.20

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30
0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.086 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 7.278
TOTAL RAINFALL (mm)= 38.600
RUNOFF COEFFICIENT = 0.189

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

CALIB
NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.27

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30

0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.068 (i)
TIME TO PEAK (hrs)= 3.167
RUNOFF VOLUME (mm)= 7.287
TOTAL RAINFALL (mm)= 38.600
RUNOFF COEFFICIENT = 0.189

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

CALIB
NASHYD (2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.37

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30
0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50

1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.093 (i)
 TIME TO PEAK (hrs)= 3.250
 RUNOFF VOLUME (mm)= 7.290
 TOTAL RAINFALL (mm)= 38.600
 RUNOFF COEFFICIENT = 0.189

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

CALIB	
STANDHYD (2106)	Area (ha)= 1.50
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30
0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50

1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Max.Eff.Inten.(mm/hr)= 60.40 14.16
 over (min) 5.00 50.00
 Storage Coeff. (min)= 2.96 (ii) 45.30 (ii)
 Unit Hyd. Tpeak (min)= 5.00 50.00
 Unit Hyd. peak (cms)= 0.28 0.02

TOTALS

PEAK FLOW (cms)= 0.13 0.02 0.130 (iii)
 TIME TO PEAK (hrs)= 3.00 3.67 3.00
 RUNOFF VOLUME (mm)= 37.60 16.80 27.18
 TOTAL RAINFALL (mm)= 38.60 38.60 38.60
 RUNOFF COEFFICIENT = 0.97 0.44 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 85.0 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 (2107)	Area (ha)= 3.47
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30
0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50

0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Max.Eff.Inten.(mm/hr)= 60.40 11.98
over (min) 5.00 100.00
Storage Coeff. (min)= 3.36 (ii) 96.64 (ii)
Unit Hyd. Tpeak (min)= 5.00 100.00
Unit Hyd. peak (cms)= 0.26 0.01

TOTALS

PEAK FLOW (cms)=	0.29	0.02	0.292 (iii)
TIME TO PEAK (hrs)=	3.00	4.58	3.00
RUNOFF VOLUME (mm)=	37.60	16.80	27.18
TOTAL RAINFALL (mm)=	38.60	38.60	38.60
RUNOFF COEFFICIENT =	0.97	0.44	0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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			
NASHYD (1103)	Area (ha)= 2.00	Curve Number (CN)= 69.4	
ID= 1 DT= 5.0 min	Ia (mm)= 4.40	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.49		

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30

0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.028 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 8.000
TOTAL RAINFALL (mm)= 38.600
RUNOFF COEFFICIENT = 0.207

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

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1103):	2.00	0.028	3.42	8.00
+ ID2= 2 (2101):	1.52	0.040	3.08	7.26
=====				
ID = 3 (0013):	3.52	0.058	3.08	7.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	3.52	0.058	3.08	7.68
+ ID2= 2 (2102):	3.87	0.093	3.08	7.28
=====				
ID = 1 (0013):	7.39	0.151	3.08	7.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	7.39	0.151	3.08	7.47
+ ID2= 2 (2103):	3.55	0.086	3.08	7.28
=====				
ID = 3 (0013):	10.94	0.237	3.08	7.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	10.94	0.237	3.08	7.41
+ ID2= 2 (2104):	3.47	0.068	3.17	7.29
=====				
ID = 1 (0013):	14.41	0.302	3.08	7.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	14.41	0.302	3.08	7.38
+ ID2= 2 (2105):	5.95	0.093	3.25	7.29
=====				
ID = 3 (0013):	20.36	0.376	3.08	7.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	20.36	0.376	3.08	7.35
+ ID2= 2 (2106):	1.50	0.130	3.00	27.18
=====				
ID = 1 (0013):	21.86	0.442	3.00	8.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	21.86	0.442	3.00	8.71
+ ID2= 2 (2107):	3.47	0.292	3.00	27.18
=====				
ID = 3 (0013):	25.33	0.734	3.00	11.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	25.33	0.734	3.00	11.24
+ ID2= 2 (2108):	1.46	0.012	3.67	5.66
=====				
ID = 1 (0013):	26.79	0.737	3.00	10.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0001)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	1.1450	0.1930
	0.3370	0.0770	1.3850	0.2270
	0.6240	0.1200	1.6330	0.2640
	0.8460	0.1510	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	0.737	3.00	10.94
OUTFLOW: ID= 1 (0001)	26.790	0.333	3.50	10.94

PEAK FLOW REDUCTION [Qout/Qin](%)= 45.19
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.0762

CALIB			
NASHYD (1100)	Area (ha)=	24.78	Curve Number (CN)= 75.7
ID= 1 DT= 5.0 min	Ia (mm)=	6.20	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.70	

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30
0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.312 (i)
TIME TO PEAK (hrs)= 3.750
RUNOFF VOLUME (mm)= 9.214
TOTAL RAINFALL (mm)= 38.600
RUNOFF COEFFICIENT = 0.239

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

CALIB			
NASHYD (1101)	Area (ha)= 2.00	Curve Number (CN)= 69.4	
ID= 1 DT= 5.0 min	Ia (mm)= 4.40	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.49		

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30

0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.028 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 8.000
TOTAL RAINFALL (mm)= 38.600
RUNOFF COEFFICIENT = 0.207

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

ADD HYD (0061)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (1100):	24.78	0.312	3.75	9.21
+ ID2= 2 (1101):	2.00	0.028	3.42	8.00
ID = 3 (0061):	26.78	0.337	3.67	9.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)= 24.78	Dir. Conn.(%)= 45.00
STANDHYD (2100)		
ID= 1 DT= 5.0 min	Total Imp(%)= 45.00	
Surface Area (ha)= 11.15	IMPERVIOUS	PERVIOUS (i)
Dep. Storage (mm)= 1.00		13.63
Average Slope (%)= 2.00		1.50
Length (m)= 406.45		2.00
Mannings n = 0.013		800.00
		0.250

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30
0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Max.Eff.Inten.(mm/hr)= 60.40 11.98
over (min) 5.00 110.00
Storage Coeff. (min)= 5.89 (ii) 105.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 110.00
Unit Hyd. peak (cms)= 0.19 0.01

TOTALS

PEAK FLOW (cms)= 1.78 0.18 1.797 (iii)
TIME TO PEAK (hrs)= 3.00 4.75 3.00
RUNOFF VOLUME (mm)= 37.60 16.80 26.16
TOTAL RAINFALL (mm)= 38.60 38.60 38.60
RUNOFF COEFFICIENT = 0.97 0.44 0.68

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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
NASHYD (1102) | Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	1.50	1.583	3.90	3.083	8.50	4.58	2.30
0.167	1.50	1.667	3.90	3.167	8.50	4.67	2.30
0.250	1.50	1.750	3.90	3.250	8.50	4.75	2.30
0.333	1.50	1.833	3.90	3.333	8.50	4.83	2.30
0.417	1.50	1.917	3.90	3.417	8.50	4.92	2.30
0.500	1.50	2.000	3.90	3.500	8.50	5.00	2.30
0.583	2.30	2.083	4.60	3.583	3.90	5.08	1.50
0.667	2.30	2.167	4.60	3.667	3.90	5.17	1.50
0.750	2.30	2.250	4.60	3.750	3.90	5.25	1.50
0.833	2.30	2.333	4.60	3.833	3.90	5.33	1.50
0.917	2.30	2.417	4.60	3.917	3.90	5.42	1.50
1.000	2.30	2.500	4.60	4.000	3.90	5.50	1.50
1.083	2.30	2.583	23.20	4.083	3.10	5.58	1.50
1.167	2.30	2.667	23.20	4.167	3.10	5.67	1.50
1.250	2.30	2.750	23.20	4.250	3.10	5.75	1.50
1.333	2.30	2.833	60.40	4.333	3.10	5.83	1.50
1.417	2.30	2.917	60.40	4.417	3.10	5.92	1.50
1.500	2.30	3.000	60.40	4.500	3.10	6.00	1.50

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.028 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 8.000
TOTAL RAINFALL (mm)= 38.600
RUNOFF COEFFICIENT = 0.207

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

ADD HYD (0063)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1102):	2.00	0.028	3.42	8.00
+ ID2= 2 (2100):	24.78	1.797	3.00	26.16
ID = 3 (0063):	26.78	1.809	3.00	24.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.2.2008)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

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

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\5ff0b908-2f8f-423d-a8e6-1139e7496029\7f02
6536-bf0f-4e37-b34e-748d364b0f7c\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\5ff0b908-2f8f-423d-a8e6-1139e7496029\7f02
6536-bf0f-4e37-b34e-748d364b0f7c\scen

DATE: 04/05/2023 TIME: 11:32:30

USER:

COMMENTS: _____

** SIMULATION : 02_5-Year_6 hour SCS **

READ STORM	Filename: C:\Users\nnapper\AppData ata\Local\Temp\ aa485c45-5c41-4f04-b9f7-20c929bcd42e\c911da71
Ptotal= 52.28 mm	Comments: 5-Year_6 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	2.10	1.50	5.20	3.00	11.50	4.50	3.10
0.25	2.10	1.75	5.20	3.25	11.50	4.75	3.10
0.50	3.10	2.00	6.30	3.50	5.20	5.00	2.10
0.75	3.10	2.25	6.30	3.75	5.20	5.25	2.10
1.00	3.10	2.50	31.40	4.00	4.20	5.50	2.10
1.25	3.10	2.75	81.70	4.25	4.20	5.75	2.10

| CALIB |
| NASHYD (2108) | Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.67

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	2.10	1.583	5.20	3.083	11.50	4.58	3.10
0.167	2.10	1.667	5.20	3.167	11.50	4.67	3.10
0.250	2.10	1.750	5.20	3.250	11.50	4.75	3.10
0.333	2.10	1.833	5.20	3.333	11.50	4.83	3.10
0.417	2.10	1.917	5.20	3.417	11.50	4.92	3.10
0.500	2.10	2.000	5.20	3.500	11.50	5.00	3.10
0.583	3.10	2.083	6.30	3.583	5.20	5.08	2.10
0.667	3.10	2.167	6.30	3.667	5.20	5.17	2.10
0.750	3.10	2.250	6.30	3.750	5.20	5.25	2.10
0.833	3.10	2.333	6.30	3.833	5.20	5.33	2.10
0.917	3.10	2.417	6.30	3.917	5.20	5.42	2.10
1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10
1.500	3.10	3.000	81.70	4.500	4.20	6.00	2.10

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.022 (i)
TIME TO PEAK (hrs)= 3.667
RUNOFF VOLUME (mm)= 10.486
TOTAL RAINFALL (mm)= 52.275
RUNOFF COEFFICIENT = 0.201

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

CALIB
NASHYD (2101)
ID= 1 DT= 5.0 min
Area (ha)= 1.52
Ia (mm)= 4.60
U.H. Tp(hrs)= 0.16
Curve Number (CN)= 67.1
of Linear Res.(N)= 3.00

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	2.10	1.583	5.20	3.083	11.50	4.58	3.10
0.167	2.10	1.667	5.20	3.167	11.50	4.67	3.10
0.250	2.10	1.750	5.20	3.250	11.50	4.75	3.10
0.333	2.10	1.833	5.20	3.333	11.50	4.83	3.10
0.417	2.10	1.917	5.20	3.417	11.50	4.92	3.10
0.500	2.10	2.000	5.20	3.500	11.50	5.00	3.10
0.583	3.10	2.083	6.30	3.583	5.20	5.08	2.10
0.667	3.10	2.167	6.30	3.667	5.20	5.17	2.10
0.750	3.10	2.250	6.30	3.750	5.20	5.25	2.10
0.833	3.10	2.333	6.30	3.833	5.20	5.33	2.10
0.917	3.10	2.417	6.30	3.917	5.20	5.42	2.10
1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10
1.500	3.10	3.000	81.70	4.500	4.20	6.00	2.10

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.074 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 13.138
TOTAL RAINFALL (mm)= 52.275
RUNOFF COEFFICIENT = 0.251

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

CALIB
NASHYD (2102)
ID= 1 DT= 5.0 min
Area (ha)= 3.87
Ia (mm)= 4.60
U.H. Tp(hrs)= 0.20
Curve Number (CN)= 67.1
of Linear Res.(N)= 3.00

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	2.10	1.583	5.20	3.083	11.50	4.58	3.10
0.167	2.10	1.667	5.20	3.167	11.50	4.67	3.10
0.250	2.10	1.750	5.20	3.250	11.50	4.75	3.10
0.333	2.10	1.833	5.20	3.333	11.50	4.83	3.10
0.417	2.10	1.917	5.20	3.417	11.50	4.92	3.10
0.500	2.10	2.000	5.20	3.500	11.50	5.00	3.10
0.583	3.10	2.083	6.30	3.583	5.20	5.08	2.10
0.667	3.10	2.167	6.30	3.667	5.20	5.17	2.10
0.750	3.10	2.250	6.30	3.750	5.20	5.25	2.10
0.833	3.10	2.333	6.30	3.833	5.20	5.33	2.10
0.917	3.10	2.417	6.30	3.917	5.20	5.42	2.10
1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10
1.500	3.10	3.000	81.70	4.500	4.20	6.00	2.10

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.171 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 13.173
TOTAL RAINFALL (mm)= 52.275
RUNOFF COEFFICIENT = 0.252

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

CALIB
NASHYD (2103)
ID= 1 DT= 5.0 min
Area (ha)= 3.55
Ia (mm)= 4.60
U.H. Tp(hrs)= 0.20
Curve Number (CN)= 67.1
of Linear Res.(N)= 3.00

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	2.10	1.583	5.20	3.083	11.50	4.58	3.10

0.167	2.10	1.667	5.20	3.167	11.50	4.67	3.10
0.250	2.10	1.750	5.20	3.250	11.50	4.75	3.10
0.333	2.10	1.833	5.20	3.333	11.50	4.83	3.10
0.417	2.10	1.917	5.20	3.417	11.50	4.92	3.10
0.500	2.10	2.000	5.20	3.500	11.50	5.00	3.10
0.583	3.10	2.083	6.30	3.583	5.20	5.08	2.10
0.667	3.10	2.167	6.30	3.667	5.20	5.17	2.10
0.750	3.10	2.250	6.30	3.750	5.20	5.25	2.10
0.833	3.10	2.333	6.30	3.833	5.20	5.33	2.10
0.917	3.10	2.417	6.30	3.917	5.20	5.42	2.10
1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10
1.500	3.10	3.000	81.70	4.500	4.20	6.00	2.10

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.157 (i)
 TIME TO PEAK (hrs)= 3.083
 RUNOFF VOLUME (mm)= 13.173
 TOTAL RAINFALL (mm)= 52.275
 RUNOFF COEFFICIENT = 0.252

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

CALIB							
NASHYD (2104)	Area (ha)=	3.47	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.27					

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	2.10	1.583	5.20	3.083	11.50	4.58	3.10
0.167	2.10	1.667	5.20	3.167	11.50	4.67	3.10
0.250	2.10	1.750	5.20	3.250	11.50	4.75	3.10
0.333	2.10	1.833	5.20	3.333	11.50	4.83	3.10
0.417	2.10	1.917	5.20	3.417	11.50	4.92	3.10
0.500	2.10	2.000	5.20	3.500	11.50	5.00	3.10
0.583	3.10	2.083	6.30	3.583	5.20	5.08	2.10
0.667	3.10	2.167	6.30	3.667	5.20	5.17	2.10
0.750	3.10	2.250	6.30	3.750	5.20	5.25	2.10

0.833	3.10	2.333	6.30	3.833	5.20	5.33	2.10
0.917	3.10	2.417	6.30	3.917	5.20	5.42	2.10
1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10
1.500	3.10	3.000	81.70	4.500	4.20	6.00	2.10

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.125 (i)
 TIME TO PEAK (hrs)= 3.167
 RUNOFF VOLUME (mm)= 13.190
 TOTAL RAINFALL (mm)= 52.275
 RUNOFF COEFFICIENT = 0.252

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

CALIB							
NASHYD (2105)	Area (ha)=	5.95	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.37					

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	2.10	1.583	5.20	3.083	11.50	4.58	3.10
0.167	2.10	1.667	5.20	3.167	11.50	4.67	3.10
0.250	2.10	1.750	5.20	3.250	11.50	4.75	3.10
0.333	2.10	1.833	5.20	3.333	11.50	4.83	3.10
0.417	2.10	1.917	5.20	3.417	11.50	4.92	3.10
0.500	2.10	2.000	5.20	3.500	11.50	5.00	3.10
0.583	3.10	2.083	6.30	3.583	5.20	5.08	2.10
0.667	3.10	2.167	6.30	3.667	5.20	5.17	2.10
0.750	3.10	2.250	6.30	3.750	5.20	5.25	2.10
0.833	3.10	2.333	6.30	3.833	5.20	5.33	2.10
0.917	3.10	2.417	6.30	3.917	5.20	5.42	2.10
1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10

1.500 3.10 | 3.000 81.70 | 4.500 4.20 | 6.00 2.10

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.171 (i)
TIME TO PEAK (hrs)= 3.250
RUNOFF VOLUME (mm)= 13.196
TOTAL RAINFALL (mm)= 52.275
RUNOFF COEFFICIENT = 0.252

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

CALIB
STANDHYD (2106)
ID= 1 DT= 5.0 min
Area (ha)= 1.50
Total Imp(%)= 50.00
Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.75 0.75
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.20 1.20
Length (m)= 100.00 166.70
Mannings n = 0.013 0.250

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 2.10 | 1.583 5.20 | 3.083 11.50 | 4.58 3.10
0.167 2.10 | 1.667 5.20 | 3.167 11.50 | 4.67 3.10
0.250 2.10 | 1.750 5.20 | 3.250 11.50 | 4.75 3.10
0.333 2.10 | 1.833 5.20 | 3.333 11.50 | 4.83 3.10
0.417 2.10 | 1.917 5.20 | 3.417 11.50 | 4.92 3.10
0.500 2.10 | 2.000 5.20 | 3.500 11.50 | 5.00 3.10
0.583 3.10 | 2.083 6.30 | 3.583 5.20 | 5.08 2.10
0.667 3.10 | 2.167 6.30 | 3.667 5.20 | 5.17 2.10
0.750 3.10 | 2.250 6.30 | 3.750 5.20 | 5.25 2.10
0.833 3.10 | 2.333 6.30 | 3.833 5.20 | 5.33 2.10
0.917 3.10 | 2.417 6.30 | 3.917 5.20 | 5.42 2.10
1.000 3.10 | 2.500 6.30 | 4.000 5.20 | 5.50 2.10
1.083 3.10 | 2.583 31.40 | 4.083 4.20 | 5.58 2.10
1.167 3.10 | 2.667 31.40 | 4.167 4.20 | 5.67 2.10
1.250 3.10 | 2.750 31.40 | 4.250 4.20 | 5.75 2.10
1.333 3.10 | 2.833 81.70 | 4.333 4.20 | 5.83 2.10
1.417 3.10 | 2.917 81.70 | 4.417 4.20 | 5.92 2.10
1.500 3.10 | 3.000 81.70 | 4.500 4.20 | 6.00 2.10

Max.Eff.Inten.(mm/hr)= 81.70 27.17
over (min) 5.00 40.00
Storage Coeff. (min)= 2.62 (ii) 35.24 (ii)
Unit Hyd. Tpeak (min)= 5.00 40.00
Unit Hyd. peak (cms)= 0.29 0.03

PEAK FLOW (cms)= 0.17 0.03 0.182 (iii)
TIME TO PEAK (hrs)= 3.00 3.50 3.00
RUNOFF VOLUME (mm)= 51.27 26.97 39.11
TOTAL RAINFALL (mm)= 52.28 52.28 52.28
RUNOFF COEFFICIENT = 0.98 0.52 0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107)
ID= 1 DT= 5.0 min
Area (ha)= 3.47
Total Imp(%)= 50.00
Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.74 1.74
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.82 1.82
Length (m)= 152.10 685.00
Mannings n = 0.013 0.250

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 2.10 | 1.583 5.20 | 3.083 11.50 | 4.58 3.10
0.167 2.10 | 1.667 5.20 | 3.167 11.50 | 4.67 3.10
0.250 2.10 | 1.750 5.20 | 3.250 11.50 | 4.75 3.10
0.333 2.10 | 1.833 5.20 | 3.333 11.50 | 4.83 3.10
0.417 2.10 | 1.917 5.20 | 3.417 11.50 | 4.92 3.10
0.500 2.10 | 2.000 5.20 | 3.500 11.50 | 5.00 3.10
0.583 3.10 | 2.083 6.30 | 3.583 5.20 | 5.08 2.10
0.667 3.10 | 2.167 6.30 | 3.667 5.20 | 5.17 2.10
0.750 3.10 | 2.250 6.30 | 3.750 5.20 | 5.25 2.10
0.833 3.10 | 2.333 6.30 | 3.833 5.20 | 5.33 2.10
0.917 3.10 | 2.417 6.30 | 3.917 5.20 | 5.42 2.10

1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10
1.500	3.10	3.000	81.70	4.500	4.20	6.00	2.10

Max.Eff.Inten.(mm/hr)= 81.70 19.30
over (min) 5.00 85.00
Storage Coeff. (min)= 2.98 (ii) 80.04 (ii)
Unit Hyd. Tpeak (min)= 5.00 85.00
Unit Hyd. peak (cms)= 0.28 0.01

TOTALS
PEAK FLOW (cms)= 0.39 0.04 0.400 (iii)
TIME TO PEAK (hrs)= 3.00 4.33 3.00
RUNOFF VOLUME (mm)= 51.28 26.97 39.11
TOTAL RAINFALL (mm)= 52.28 52.28 52.28
RUNOFF COEFFICIENT = 0.98 0.52 0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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							
NASHYD (1103)	Area (ha)=	2.00	Curve Number (CN)=	69.4			
ID= 1 DT= 5.0 min	Ia (mm)=	4.40	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.49					

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	2.10	1.583	5.20	3.083	11.50	4.58	3.10
0.167	2.10	1.667	5.20	3.167	11.50	4.67	3.10
0.250	2.10	1.750	5.20	3.250	11.50	4.75	3.10
0.333	2.10	1.833	5.20	3.333	11.50	4.83	3.10
0.417	2.10	1.917	5.20	3.417	11.50	4.92	3.10
0.500	2.10	2.000	5.20	3.500	11.50	5.00	3.10
0.583	3.10	2.083	6.30	3.583	5.20	5.08	2.10
0.667	3.10	2.167	6.30	3.667	5.20	5.17	2.10
0.750	3.10	2.250	6.30	3.750	5.20	5.25	2.10

0.833	3.10	2.333	6.30	3.833	5.20	5.33	2.10
0.917	3.10	2.417	6.30	3.917	5.20	5.42	2.10
1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10
1.500	3.10	3.000	81.70	4.500	4.20	6.00	2.10

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.051 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 14.335
TOTAL RAINFALL (mm)= 52.275
RUNOFF COEFFICIENT = 0.274

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

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1103):	2.00	0.051	3.42	14.34
+ ID2= 2 (2101):	1.52	0.074	3.00	13.14
=====				
ID = 3 (0013):	3.52	0.107	3.08	13.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	3.52	0.107	3.08	13.82
+ ID2= 2 (2102):	3.87	0.171	3.08	13.17
=====				
ID = 1 (0013):	7.39	0.278	3.08	13.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)

```
ID1= 1 ( 0013):    7.39    0.278    3.08    13.48
+ ID2= 2 ( 2103):    3.55    0.157    3.08    13.17
=====
ID = 3 ( 0013):    10.94    0.435    3.08    13.38
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 3 ( 0013):    10.94    0.435    3.08    13.38
+ ID2= 2 ( 2104):    3.47    0.125    3.17    13.19
=====
ID = 1 ( 0013):    14.41    0.555    3.08    13.33
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 1 + 2 = 3 |
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 1 ( 0013):    14.41    0.555    3.08    13.33
+ ID2= 2 ( 2105):    5.95    0.171    3.25    13.20
=====
ID = 3 ( 0013):    20.36    0.695    3.08    13.29
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 3 ( 0013):    20.36    0.695    3.08    13.29
+ ID2= 2 ( 2106):    1.50    0.182    3.00    39.11
=====
ID = 1 ( 0013):    21.86    0.770    3.00    15.07
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 1 + 2 = 3 |
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 1 ( 0013):    21.86    0.770    3.00    15.07
+ ID2= 2 ( 2107):    3.47    0.400    3.00    39.11
```

```
=====
ID = 3 ( 0013):    25.33    1.169    3.00    18.36
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 3 ( 0013):    25.33    1.169    3.00    18.36
+ ID2= 2 ( 2108):    1.46    0.022    3.67    10.49
=====
ID = 1 ( 0013):    26.79    1.176    3.00    17.93
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| RESERVOIR( 0001) |
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
=====
          OVERFLOW IS OFF
=====
          OUTFLOW    STORAGE    OUTFLOW    STORAGE
          (cms)    (ha.m.)    (cms)    (ha.m.)
          0.0000    0.0000    1.1450    0.1930
          0.3370    0.0770    1.3850    0.2270
          0.6240    0.1200    1.6330    0.2640
          0.8460    0.1510    0.0000    0.0000
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
INFLOW : ID= 2 ( 0013)    26.790    1.176    3.00    17.93
OUTFLOW: ID= 1 ( 0001)    26.790    0.617    3.42    17.93
```

```
PEAK FLOW REDUCTION [Qout/Qin](%)= 52.47
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.1191
```

```
| CALIB
| NASHYD ( 1100) |
| ID= 1 DT= 5.0 min |
=====
Area (ha)= 24.78 Curve Number (CN)= 75.7
Ia (mm)= 6.20 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.70
```

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 2.10 | 1.583 5.20 | 3.083 11.50 | 4.58 3.10
```

0.167	2.10	1.667	5.20	3.167	11.50	4.67	3.10
0.250	2.10	1.750	5.20	3.250	11.50	4.75	3.10
0.333	2.10	1.833	5.20	3.333	11.50	4.83	3.10
0.417	2.10	1.917	5.20	3.417	11.50	4.92	3.10
0.500	2.10	2.000	5.20	3.500	11.50	5.00	3.10
0.583	3.10	2.083	6.30	3.583	5.20	5.08	2.10
0.667	3.10	2.167	6.30	3.667	5.20	5.17	2.10
0.750	3.10	2.250	6.30	3.750	5.20	5.25	2.10
0.833	3.10	2.333	6.30	3.833	5.20	5.33	2.10
0.917	3.10	2.417	6.30	3.917	5.20	5.42	2.10
1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10
1.500	3.10	3.000	81.70	4.500	4.20	6.00	2.10

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.577 (i)
 TIME TO PEAK (hrs)= 3.667
 RUNOFF VOLUME (mm)= 16.636
 TOTAL RAINFALL (mm)= 52.275
 RUNOFF COEFFICIENT = 0.318

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

CALIB			
NASHYD (1101)	Area (ha)= 2.00	Curve Number (CN)= 69.4	
ID= 1 DT= 5.0 min	Ia (mm)= 4.40	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.49		

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	2.10	1.583	5.20	3.083	11.50	4.58	3.10
0.167	2.10	1.667	5.20	3.167	11.50	4.67	3.10
0.250	2.10	1.750	5.20	3.250	11.50	4.75	3.10
0.333	2.10	1.833	5.20	3.333	11.50	4.83	3.10
0.417	2.10	1.917	5.20	3.417	11.50	4.92	3.10
0.500	2.10	2.000	5.20	3.500	11.50	5.00	3.10
0.583	3.10	2.083	6.30	3.583	5.20	5.08	2.10
0.667	3.10	2.167	6.30	3.667	5.20	5.17	2.10
0.750	3.10	2.250	6.30	3.750	5.20	5.25	2.10

0.833	3.10	2.333	6.30	3.833	5.20	5.33	2.10
0.917	3.10	2.417	6.30	3.917	5.20	5.42	2.10
1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10
1.500	3.10	3.000	81.70	4.500	4.20	6.00	2.10

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.051 (i)
 TIME TO PEAK (hrs)= 3.417
 RUNOFF VOLUME (mm)= 14.335
 TOTAL RAINFALL (mm)= 52.275
 RUNOFF COEFFICIENT = 0.274

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

ADD HYD (0061)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.78	0.577	3.67	16.64
+ ID2= 2 (1101):	2.00	0.051	3.42	14.34
ID = 3 (0061):	26.78	0.624	3.67	16.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (2100)	Area (ha)= 24.78		
ID= 1 DT= 5.0 min	Total Imp(%)= 45.00	Dir. Conn.(%)= 45.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.15	13.63
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	406.45	800.00
Mannings n =	0.013	0.250

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	2.10	1.583	5.20	3.083	11.50	4.58	3.10
0.167	2.10	1.667	5.20	3.167	11.50	4.67	3.10
0.250	2.10	1.750	5.20	3.250	11.50	4.75	3.10
0.333	2.10	1.833	5.20	3.333	11.50	4.83	3.10
0.417	2.10	1.917	5.20	3.417	11.50	4.92	3.10
0.500	2.10	2.000	5.20	3.500	11.50	5.00	3.10
0.583	3.10	2.083	6.30	3.583	5.20	5.08	2.10
0.667	3.10	2.167	6.30	3.667	5.20	5.17	2.10
0.750	3.10	2.250	6.30	3.750	5.20	5.25	2.10
0.833	3.10	2.333	6.30	3.833	5.20	5.33	2.10
0.917	3.10	2.417	6.30	3.917	5.20	5.42	2.10
1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10
1.500	3.10	3.000	81.70	4.500	4.20	6.00	2.10

Max.Eff.Inten.(mm/hr)= 81.70 19.30
over (min) 5.00 90.00
Storage Coeff. (min)= 5.22 (ii) 87.45 (ii)
Unit Hyd. Tpeak (min)= 5.00 90.00
Unit Hyd. peak (cms)= 0.21 0.01

TOTALS

PEAK FLOW (cms)= 2.44 0.33 2.491 (iii)
TIME TO PEAK (hrs)= 3.00 4.42 3.00
RUNOFF VOLUME (mm)= 51.27 26.97 37.90
TOTAL RAINFALL (mm)= 52.28 52.28 52.28
RUNOFF COEFFICIENT = 0.98 0.52 0.73

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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
NASHYD (1102) | Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	2.10	1.583	5.20	3.083	11.50	4.58	3.10
0.167	2.10	1.667	5.20	3.167	11.50	4.67	3.10
0.250	2.10	1.750	5.20	3.250	11.50	4.75	3.10
0.333	2.10	1.833	5.20	3.333	11.50	4.83	3.10
0.417	2.10	1.917	5.20	3.417	11.50	4.92	3.10
0.500	2.10	2.000	5.20	3.500	11.50	5.00	3.10
0.583	3.10	2.083	6.30	3.583	5.20	5.08	2.10
0.667	3.10	2.167	6.30	3.667	5.20	5.17	2.10
0.750	3.10	2.250	6.30	3.750	5.20	5.25	2.10
0.833	3.10	2.333	6.30	3.833	5.20	5.33	2.10
0.917	3.10	2.417	6.30	3.917	5.20	5.42	2.10
1.000	3.10	2.500	6.30	4.000	5.20	5.50	2.10
1.083	3.10	2.583	31.40	4.083	4.20	5.58	2.10
1.167	3.10	2.667	31.40	4.167	4.20	5.67	2.10
1.250	3.10	2.750	31.40	4.250	4.20	5.75	2.10
1.333	3.10	2.833	81.70	4.333	4.20	5.83	2.10
1.417	3.10	2.917	81.70	4.417	4.20	5.92	2.10
1.500	3.10	3.000	81.70	4.500	4.20	6.00	2.10

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.051 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 14.335
TOTAL RAINFALL (mm)= 52.275
RUNOFF COEFFICIENT = 0.274

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

ADD HYD (0063)
1 + 2 = 3
ID1= 1 (1102): 2.00 0.051 3.42 14.34
+ ID2= 2 (2100): 24.78 2.491 3.00 37.90
=====

ID = 3 (0063): 26.78 2.514 3.00 36.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.2.2008)
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 SSSS UUUU A A LLLLL

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

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\bcd0
4a9b-e05a-4d46-a144-c07acb0f266b\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\bcd0
4a9b-e05a-4d46-a144-c07acb0f266b\scen

DATE: 04/05/2023 TIME: 11:32:31

USER:

COMMENTS: _____

** SIMULATION : 03_10-Year_6 hour SCS **

| READ STORM | Filename: C:\Users\nnapper\AppData
| | ata\Local\Temp\
| | aa485c45-5c41-4f04-b9f7-20c929bcd42e\3faac09b
| Ptotal= 61.57 mm | Comments: 10-Year_6 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	2.50	1.50	6.20	3.00	13.50	4.50	3.70

0.25	2.50	1.75	6.10	3.25	13.50	4.75	3.70
0.50	3.70	2.00	7.40	3.50	6.20	5.00	2.50
0.75	3.70	2.25	7.40	3.75	6.20	5.25	2.50
1.00	3.70	2.50	36.90	4.00	4.90	5.50	2.50
1.25	3.70	2.75	95.90	4.25	4.90	5.75	2.50

| CALIB |
| NASHYD (2108) | Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.67

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	2.50	1.583	6.20	3.083	13.50	4.58	3.70
0.167	2.50	1.667	6.20	3.167	13.50	4.67	3.70
0.250	2.50	1.750	6.20	3.250	13.50	4.75	3.70
0.333	2.50	1.833	6.10	3.333	13.50	4.83	3.70
0.417	2.50	1.917	6.10	3.417	13.50	4.92	3.70
0.500	2.50	2.000	6.10	3.500	13.50	5.00	3.70
0.583	3.70	2.083	7.40	3.583	6.20	5.08	2.50
0.667	3.70	2.167	7.40	3.667	6.20	5.17	2.50
0.750	3.70	2.250	7.40	3.750	6.20	5.25	2.50
0.833	3.70	2.333	7.40	3.833	6.20	5.33	2.50
0.917	3.70	2.417	7.40	3.917	6.20	5.42	2.50
1.000	3.70	2.500	7.40	4.000	6.20	5.50	2.50
1.083	3.70	2.583	36.90	4.083	4.90	5.58	2.50
1.167	3.70	2.667	36.90	4.167	4.90	5.67	2.50
1.250	3.70	2.750	36.90	4.250	4.90	5.75	2.50
1.333	3.70	2.833	95.90	4.333	4.90	5.83	2.50
1.417	3.70	2.917	95.90	4.417	4.90	5.92	2.50
1.500	3.70	3.000	95.90	4.500	4.90	6.00	2.50

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.030 (i)
TIME TO PEAK (hrs)= 3.667
RUNOFF VOLUME (mm)= 14.390
TOTAL RAINFALL (mm)= 61.575
RUNOFF COEFFICIENT = 0.234

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

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| CALIB |
| NASHYD ( 2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----|
| U.H. Tp(hrs)= 0.16

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

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----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.083 2.50 | 1.583 6.20 | 3.083 13.50 | 4.58 3.70
0.167 2.50 | 1.667 6.20 | 3.167 13.50 | 4.67 3.70
0.250 2.50 | 1.750 6.20 | 3.250 13.50 | 4.75 3.70
0.333 2.50 | 1.833 6.10 | 3.333 13.50 | 4.83 3.70
0.417 2.50 | 1.917 6.10 | 3.417 13.50 | 4.92 3.70
0.500 2.50 | 2.000 6.10 | 3.500 13.50 | 5.00 3.70
0.583 3.70 | 2.083 7.40 | 3.583 6.20 | 5.08 2.50
0.667 3.70 | 2.167 7.40 | 3.667 6.20 | 5.17 2.50
0.750 3.70 | 2.250 7.40 | 3.750 6.20 | 5.25 2.50
0.833 3.70 | 2.333 7.40 | 3.833 6.20 | 5.33 2.50
0.917 3.70 | 2.417 7.40 | 3.917 6.20 | 5.42 2.50
1.000 3.70 | 2.500 7.40 | 4.000 6.20 | 5.50 2.50
1.083 3.70 | 2.583 36.90 | 4.083 4.90 | 5.58 2.50
1.167 3.70 | 2.667 36.90 | 4.167 4.90 | 5.67 2.50
1.250 3.70 | 2.750 36.90 | 4.250 4.90 | 5.75 2.50
1.333 3.70 | 2.833 95.90 | 4.333 4.90 | 5.83 2.50
1.417 3.70 | 2.917 95.90 | 4.417 4.90 | 5.92 2.50
1.500 3.70 | 3.000 95.90 | 4.500 4.90 | 6.00 2.50

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Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.101 (i)
 TIME TO PEAK (hrs)= 3.000
 RUNOFF VOLUME (mm)= 17.803
 TOTAL RAINFALL (mm)= 61.575
 RUNOFF COEFFICIENT = 0.289

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

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-----
| CALIB |
| NASHYD ( 2102) | Area (ha)= 3.87 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----|
| U.H. Tp(hrs)= 0.20

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

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----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.083 2.50 | 1.583 6.20 | 3.083 13.50 | 4.58 3.70
0.167 2.50 | 1.667 6.20 | 3.167 13.50 | 4.67 3.70
0.250 2.50 | 1.750 6.20 | 3.250 13.50 | 4.75 3.70
0.333 2.50 | 1.833 6.10 | 3.333 13.50 | 4.83 3.70
0.417 2.50 | 1.917 6.10 | 3.417 13.50 | 4.92 3.70
0.500 2.50 | 2.000 6.10 | 3.500 13.50 | 5.00 3.70
0.583 3.70 | 2.083 7.40 | 3.583 6.20 | 5.08 2.50
0.667 3.70 | 2.167 7.40 | 3.667 6.20 | 5.17 2.50
0.750 3.70 | 2.250 7.40 | 3.750 6.20 | 5.25 2.50
0.833 3.70 | 2.333 7.40 | 3.833 6.20 | 5.33 2.50
0.917 3.70 | 2.417 7.40 | 3.917 6.20 | 5.42 2.50
1.000 3.70 | 2.500 7.40 | 4.000 6.20 | 5.50 2.50
1.083 3.70 | 2.583 36.90 | 4.083 4.90 | 5.58 2.50
1.167 3.70 | 2.667 36.90 | 4.167 4.90 | 5.67 2.50
1.250 3.70 | 2.750 36.90 | 4.250 4.90 | 5.75 2.50
1.333 3.70 | 2.833 95.90 | 4.333 4.90 | 5.83 2.50
1.417 3.70 | 2.917 95.90 | 4.417 4.90 | 5.92 2.50
1.500 3.70 | 3.000 95.90 | 4.500 4.90 | 6.00 2.50

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Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.232 (i)
 TIME TO PEAK (hrs)= 3.083
 RUNOFF VOLUME (mm)= 17.850
 TOTAL RAINFALL (mm)= 61.575
 RUNOFF COEFFICIENT = 0.290

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

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-----
| CALIB |
| NASHYD ( 2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----|
| U.H. Tp(hrs)= 0.20

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

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----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | ' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | ' hrs mm/hr | hrs mm/hr
0.083 2.50 | 1.583 6.20 | 3.083 13.50 | 4.58 3.70
0.167 2.50 | 1.667 6.20 | 3.167 13.50 | 4.67 3.70
0.250 2.50 | 1.750 6.20 | 3.250 13.50 | 4.75 3.70
0.333 2.50 | 1.833 6.10 | 3.333 13.50 | 4.83 3.70

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0.417	2.50	1.917	6.10	3.417	13.50	4.92	3.70
0.500	2.50	2.000	6.10	3.500	13.50	5.00	3.70
0.583	3.70	2.083	7.40	3.583	6.20	5.08	2.50
0.667	3.70	2.167	7.40	3.667	6.20	5.17	2.50
0.750	3.70	2.250	7.40	3.750	6.20	5.25	2.50
0.833	3.70	2.333	7.40	3.833	6.20	5.33	2.50
0.917	3.70	2.417	7.40	3.917	6.20	5.42	2.50
1.000	3.70	2.500	7.40	4.000	6.20	5.50	2.50
1.083	3.70	2.583	36.90	4.083	4.90	5.58	2.50
1.167	3.70	2.667	36.90	4.167	4.90	5.67	2.50
1.250	3.70	2.750	36.90	4.250	4.90	5.75	2.50
1.333	3.70	2.833	95.90	4.333	4.90	5.83	2.50
1.417	3.70	2.917	95.90	4.417	4.90	5.92	2.50
1.500	3.70	3.000	95.90	4.500	4.90	6.00	2.50

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.213 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 17.850
TOTAL RAINFALL (mm)= 61.575
RUNOFF COEFFICIENT = 0.290

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

CALIB	
NASHYD (2104)	Area (ha)= 3.47 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.27

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	2.50	1.583	6.20	3.083	13.50	4.58	3.70
0.167	2.50	1.667	6.20	3.167	13.50	4.67	3.70
0.250	2.50	1.750	6.20	3.250	13.50	4.75	3.70
0.333	2.50	1.833	6.10	3.333	13.50	4.83	3.70
0.417	2.50	1.917	6.10	3.417	13.50	4.92	3.70
0.500	2.50	2.000	6.10	3.500	13.50	5.00	3.70
0.583	3.70	2.083	7.40	3.583	6.20	5.08	2.50
0.667	3.70	2.167	7.40	3.667	6.20	5.17	2.50
0.750	3.70	2.250	7.40	3.750	6.20	5.25	2.50
0.833	3.70	2.333	7.40	3.833	6.20	5.33	2.50
0.917	3.70	2.417	7.40	3.917	6.20	5.42	2.50
1.000	3.70	2.500	7.40	4.000	6.20	5.50	2.50

1.083	3.70	2.583	36.90	4.083	4.90	5.58	2.50
1.167	3.70	2.667	36.90	4.167	4.90	5.67	2.50
1.250	3.70	2.750	36.90	4.250	4.90	5.75	2.50
1.333	3.70	2.833	95.90	4.333	4.90	5.83	2.50
1.417	3.70	2.917	95.90	4.417	4.90	5.92	2.50
1.500	3.70	3.000	95.90	4.500	4.90	6.00	2.50

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.170 (i)
TIME TO PEAK (hrs)= 3.167
RUNOFF VOLUME (mm)= 17.873
TOTAL RAINFALL (mm)= 61.575
RUNOFF COEFFICIENT = 0.290

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

CALIB	
NASHYD (2105)	Area (ha)= 5.95 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.37

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	2.50	1.583	6.20	3.083	13.50	4.58	3.70
0.167	2.50	1.667	6.20	3.167	13.50	4.67	3.70
0.250	2.50	1.750	6.20	3.250	13.50	4.75	3.70
0.333	2.50	1.833	6.10	3.333	13.50	4.83	3.70
0.417	2.50	1.917	6.10	3.417	13.50	4.92	3.70
0.500	2.50	2.000	6.10	3.500	13.50	5.00	3.70
0.583	3.70	2.083	7.40	3.583	6.20	5.08	2.50
0.667	3.70	2.167	7.40	3.667	6.20	5.17	2.50
0.750	3.70	2.250	7.40	3.750	6.20	5.25	2.50
0.833	3.70	2.333	7.40	3.833	6.20	5.33	2.50
0.917	3.70	2.417	7.40	3.917	6.20	5.42	2.50
1.000	3.70	2.500	7.40	4.000	6.20	5.50	2.50
1.083	3.70	2.583	36.90	4.083	4.90	5.58	2.50
1.167	3.70	2.667	36.90	4.167	4.90	5.67	2.50
1.250	3.70	2.750	36.90	4.250	4.90	5.75	2.50
1.333	3.70	2.833	95.90	4.333	4.90	5.83	2.50
1.417	3.70	2.917	95.90	4.417	4.90	5.92	2.50
1.500	3.70	3.000	95.90	4.500	4.90	6.00	2.50

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.233 (i)
 TIME TO PEAK (hrs)= 3.250
 RUNOFF VOLUME (mm)= 17.881
 TOTAL RAINFALL (mm)= 61.575
 RUNOFF COEFFICIENT = 0.290

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

CALIB
 STANDHYD (2106)
 ID= 1 DT= 5.0 min
 Area (ha)= 1.50
 Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PVIOUS (i)
 Surface Area (ha)= 0.75 0.75
 Dep. Storage (mm)= 1.00 1.50
 Average Slope (%)= 1.20 1.20
 Length (m)= 100.00 166.70
 Mannings n = 0.013 0.250

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	2.50	1.583	6.20	3.083	13.50	4.58	3.70
0.167	2.50	1.667	6.20	3.167	13.50	4.67	3.70
0.250	2.50	1.750	6.20	3.250	13.50	4.75	3.70
0.333	2.50	1.833	6.10	3.333	13.50	4.83	3.70
0.417	2.50	1.917	6.10	3.417	13.50	4.92	3.70
0.500	2.50	2.000	6.10	3.500	13.50	5.00	3.70
0.583	3.70	2.083	7.40	3.583	6.20	5.08	2.50
0.667	3.70	2.167	7.40	3.667	6.20	5.17	2.50
0.750	3.70	2.250	7.40	3.750	6.20	5.25	2.50
0.833	3.70	2.333	7.40	3.833	6.20	5.33	2.50
0.917	3.70	2.417	7.40	3.917	6.20	5.42	2.50
1.000	3.70	2.500	7.40	4.000	6.20	5.50	2.50
1.083	3.70	2.583	36.90	4.083	4.90	5.58	2.50
1.167	3.70	2.667	36.90	4.167	4.90	5.67	2.50
1.250	3.70	2.750	36.90	4.250	4.90	5.75	2.50
1.333	3.70	2.833	95.90	4.333	4.90	5.83	2.50
1.417	3.70	2.917	95.90	4.417	4.90	5.92	2.50
1.500	3.70	3.000	95.90	4.500	4.90	6.00	2.50

Max.Eff.Inten.(mm/hr)= 95.90 38.94
 over (min) 5.00 35.00
 Storage Coeff. (min)= 2.46 (ii) 30.71 (ii)

Unit Hyd. Tpeak (min)= 5.00 35.00
 Unit Hyd. peak (cms)= 0.30 0.04

TOTALS

PEAK FLOW (cms)= 0.20 0.05 0.220 (iii)
 TIME TO PEAK (hrs)= 3.00 3.42 3.00
 RUNOFF VOLUME (mm)= 60.57 34.40 47.48
 TOTAL RAINFALL (mm)= 61.58 61.58 61.58
 RUNOFF COEFFICIENT = 0.98 0.56 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 85.0 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 (2107)
 ID= 1 DT= 5.0 min
 Area (ha)= 3.47
 Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PVIOUS (i)
 Surface Area (ha)= 1.74 1.74
 Dep. Storage (mm)= 1.00 1.50
 Average Slope (%)= 1.82 1.82
 Length (m)= 152.10 685.00
 Mannings n = 0.013 0.250

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	2.50	1.583	6.20	3.083	13.50	4.58	3.70
0.167	2.50	1.667	6.20	3.167	13.50	4.67	3.70
0.250	2.50	1.750	6.20	3.250	13.50	4.75	3.70
0.333	2.50	1.833	6.10	3.333	13.50	4.83	3.70
0.417	2.50	1.917	6.10	3.417	13.50	4.92	3.70
0.500	2.50	2.000	6.10	3.500	13.50	5.00	3.70
0.583	3.70	2.083	7.40	3.583	6.20	5.08	2.50
0.667	3.70	2.167	7.40	3.667	6.20	5.17	2.50
0.750	3.70	2.250	7.40	3.750	6.20	5.25	2.50
0.833	3.70	2.333	7.40	3.833	6.20	5.33	2.50
0.917	3.70	2.417	7.40	3.917	6.20	5.42	2.50
1.000	3.70	2.500	7.40	4.000	6.20	5.50	2.50
1.083	3.70	2.583	36.90	4.083	4.90	5.58	2.50
1.167	3.70	2.667	36.90	4.167	4.90	5.67	2.50

1.250	3.70	2.750	36.90	4.250	4.90	5.75	2.50
1.333	3.70	2.833	95.90	4.333	4.90	5.83	2.50
1.417	3.70	2.917	95.90	4.417	4.90	5.92	2.50
1.500	3.70	3.000	95.90	4.500	4.90	6.00	2.50

Max.Eff.Inten.(mm/hr)= 95.90 24.60
over (min) 5.00 75.00
Storage Coeff. (min)= 2.79 (ii) 72.74 (ii)
Unit Hyd. Tpeak (min)= 5.00 75.00
Unit Hyd. peak (cms)= 0.28 0.02

TOTALS
PEAK FLOW (cms)= 0.46 0.06 0.473 (iii)
TIME TO PEAK (hrs)= 3.00 4.17 3.00
RUNOFF VOLUME (mm)= 60.57 34.40 47.48
TOTAL RAINFALL (mm)= 61.58 61.58 61.58
RUNOFF COEFFICIENT = 0.98 0.56 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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							
NASHYD (1103)	Area (ha)=	2.00	Curve Number (CN)=	69.4			
ID= 1 DT= 5.0 min	Ia (mm)=	4.40	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.49					

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	2.50	1.583	6.20	3.083	13.50	4.58	3.70
0.167	2.50	1.667	6.20	3.167	13.50	4.67	3.70
0.250	2.50	1.750	6.20	3.250	13.50	4.75	3.70
0.333	2.50	1.833	6.10	3.333	13.50	4.83	3.70
0.417	2.50	1.917	6.10	3.417	13.50	4.92	3.70
0.500	2.50	2.000	6.10	3.500	13.50	5.00	3.70
0.583	3.70	2.083	7.40	3.583	6.20	5.08	2.50
0.667	3.70	2.167	7.40	3.667	6.20	5.17	2.50
0.750	3.70	2.250	7.40	3.750	6.20	5.25	2.50
0.833	3.70	2.333	7.40	3.833	6.20	5.33	2.50
0.917	3.70	2.417	7.40	3.917	6.20	5.42	2.50
1.000	3.70	2.500	7.40	4.000	6.20	5.50	2.50

1.083	3.70	2.583	36.90	4.083	4.90	5.58	2.50
1.167	3.70	2.667	36.90	4.167	4.90	5.67	2.50
1.250	3.70	2.750	36.90	4.250	4.90	5.75	2.50
1.333	3.70	2.833	95.90	4.333	4.90	5.83	2.50
1.417	3.70	2.917	95.90	4.417	4.90	5.92	2.50
1.500	3.70	3.000	95.90	4.500	4.90	6.00	2.50

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.070 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 19.322
TOTAL RAINFALL (mm)= 61.575
RUNOFF COEFFICIENT = 0.314

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

ADD HYD (0013)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1103):	2.00	0.070	3.42	19.32
+ ID2= 2 (2101):	1.52	0.101	3.00	17.80
=====				
ID = 3 (0013):	3.52	0.146	3.08	18.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0013):	3.52	0.146	3.08	18.67
+ ID2= 2 (2102):	3.87	0.232	3.08	17.85
=====				
ID = 1 (0013):	7.39	0.378	3.08	18.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0013):	7.39	0.378	3.08	18.24
+ ID2= 2 (2103):	3.55	0.213	3.08	17.85
=====				

ID = 3 (0013): 10.94 0.591 3.08 18.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
ID1= 3 ( 0013): 10.94 0.591 3.08 18.11
+ ID2= 2 ( 2104): 3.47 0.170 3.17 17.87
=====
ID = 1 ( 0013): 14.41 0.756 3.08 18.05
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 1 + 2 = 3 |
=====
ID1= 1 ( 0013): 14.41 0.756 3.08 18.05
+ ID2= 2 ( 2105): 5.95 0.233 3.25 17.88
=====
ID = 3 ( 0013): 20.36 0.948 3.08 18.00
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
ID1= 3 ( 0013): 20.36 0.948 3.08 18.00
+ ID2= 2 ( 2106): 1.50 0.220 3.00 47.48
=====
ID = 1 ( 0013): 21.86 1.029 3.00 20.03
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 1 + 2 = 3 |
=====
ID1= 1 ( 0013): 21.86 1.029 3.00 20.03
+ ID2= 2 ( 2107): 3.47 0.473 3.00 47.48
=====
ID = 3 ( 0013): 25.33 1.502 3.00 23.79
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
ID1= 3 ( 0013): 25.33 1.502 3.00 23.79
+ ID2= 2 ( 2108): 1.46 0.030 3.67 14.39
=====
ID = 1 ( 0013): 26.79 1.511 3.00 23.27
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| RESERVOIR( 0001) |
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
=====
OVERFLOW IS OFF
=====
OUTFLOW (cms) STORAGE (ha.m.) | OUTFLOW (cms) STORAGE (ha.m.)
0.0000 0.0000 | 1.1450 0.1930
0.3370 0.0770 | 1.3850 0.2270
0.6240 0.1200 | 1.6330 0.2640
0.8460 0.1510 | 0.0000 0.0000
=====
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
INFLOW : ID= 2 ( 0013) 26.790 1.511 3.00 23.27
OUTFLOW: ID= 1 ( 0001) 26.790 0.841 3.42 23.27
```

PEAK FLOW REDUCTION [Qout/Qin](%)= 55.70
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.1504

```
| CALIB |
| NASHYD ( 1100) |
| ID= 1 DT= 5.0 min |
=====
Area (ha)= 24.78 Curve Number (CN)= 75.7
Ia (mm)= 6.20 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.70
```

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 2.50 | 1.583 6.20 | 3.083 13.50 | 4.58 3.70
0.167 2.50 | 1.667 6.20 | 3.167 13.50 | 4.67 3.70
0.250 2.50 | 1.750 6.20 | 3.250 13.50 | 4.75 3.70
0.333 2.50 | 1.833 6.10 | 3.333 13.50 | 4.83 3.70
```

0.417	2.50	1.917	6.10	3.417	13.50	4.92	3.70
0.500	2.50	2.000	6.10	3.500	13.50	5.00	3.70
0.583	3.70	2.083	7.40	3.583	6.20	5.08	2.50
0.667	3.70	2.167	7.40	3.667	6.20	5.17	2.50
0.750	3.70	2.250	7.40	3.750	6.20	5.25	2.50
0.833	3.70	2.333	7.40	3.833	6.20	5.33	2.50
0.917	3.70	2.417	7.40	3.917	6.20	5.42	2.50
1.000	3.70	2.500	7.40	4.000	6.20	5.50	2.50
1.083	3.70	2.583	36.90	4.083	4.90	5.58	2.50
1.167	3.70	2.667	36.90	4.167	4.90	5.67	2.50
1.250	3.70	2.750	36.90	4.250	4.90	5.75	2.50
1.333	3.70	2.833	95.90	4.333	4.90	5.83	2.50
1.417	3.70	2.917	95.90	4.417	4.90	5.92	2.50
1.500	3.70	3.000	95.90	4.500	4.90	6.00	2.50

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.784 (i)
TIME TO PEAK (hrs)= 3.667
RUNOFF VOLUME (mm)= 22.397
TOTAL RAINFALL (mm)= 61.575
RUNOFF COEFFICIENT = 0.364

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

CALIB			
NASHYD (1101)	Area (ha)= 2.00	Curve Number (CN)= 69.4	
ID= 1 DT= 5.0 min	Ia (mm)= 4.40	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.49		

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	2.50	1.583	6.20	3.083	13.50	4.58	3.70
0.167	2.50	1.667	6.20	3.167	13.50	4.67	3.70
0.250	2.50	1.750	6.20	3.250	13.50	4.75	3.70
0.333	2.50	1.833	6.10	3.333	13.50	4.83	3.70
0.417	2.50	1.917	6.10	3.417	13.50	4.92	3.70
0.500	2.50	2.000	6.10	3.500	13.50	5.00	3.70
0.583	3.70	2.083	7.40	3.583	6.20	5.08	2.50
0.667	3.70	2.167	7.40	3.667	6.20	5.17	2.50
0.750	3.70	2.250	7.40	3.750	6.20	5.25	2.50
0.833	3.70	2.333	7.40	3.833	6.20	5.33	2.50
0.917	3.70	2.417	7.40	3.917	6.20	5.42	2.50
1.000	3.70	2.500	7.40	4.000	6.20	5.50	2.50

1.083	3.70	2.583	36.90	4.083	4.90	5.58	2.50
1.167	3.70	2.667	36.90	4.167	4.90	5.67	2.50
1.250	3.70	2.750	36.90	4.250	4.90	5.75	2.50
1.333	3.70	2.833	95.90	4.333	4.90	5.83	2.50
1.417	3.70	2.917	95.90	4.417	4.90	5.92	2.50
1.500	3.70	3.000	95.90	4.500	4.90	6.00	2.50

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.070 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 19.322
TOTAL RAINFALL (mm)= 61.575
RUNOFF COEFFICIENT = 0.314

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

ADD HYD (0061)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.78	0.784	3.67	22.40
+ ID2= 2 (1101):	2.00	0.070	3.42	19.32
=====				
ID = 3 (0061):	26.78	0.846	3.67	22.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (2100)	Area (ha)= 24.78		
ID= 1 DT= 5.0 min	Total Imp(%)= 45.00	Dir. Conn.(%)= 45.00	

IMPERVIOUS			PERVIOUS (i)		
Surface Area (ha)=	11.15		13.63		
Dep. Storage (mm)=	1.00		1.50		
Average Slope (%)=	2.00		2.00		
Length (m)=	406.45		800.00		
Mannings n =	0.013		0.250		

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	2.50	1.583	6.20	3.083	13.50	4.58	3.70
0.167	2.50	1.667	6.20	3.167	13.50	4.67	3.70

```

----- TRANSFORMED HYETOGRAPH -----
TIME    RAIN | TIME    RAIN | TIME    RAIN | TIME    RAIN
hrs      mm/hr | hrs      mm/hr | hrs      mm/hr | hrs      mm/hr

```

V	V	I	SSSSS	U	U	A	L	(v 6.2.2008)
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	
W	I	SSSSS	UUUUU	A	A	LLLLL		

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

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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\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\b833
1c62-4cb3-46be-84fe-00b7aa4634e4\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\b833
1c62-4cb3-46be-84fe-00b7aa4634e4\scen

DATE: 04/05/2023 TIME: 11:32:31

USER:

COMMENTS: _____

** SIMULATION : 04_25-Year_6 hour SCS **

| READ STORM | Filename: C:\Users\nnapper\AppData
| | ata\Local\Temp\
| | aa485c45-5c41-4f04-b9f7-20c929bcd42e\cf5b81e6
| Ptotal= 72.85 mm | Comments: 25-Year_6 hour SCS

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.00	2.90	1.50	7.30		3.00	16.00	4.50	4.40
0.25	2.90	1.75	7.30		3.25	16.00	4.75	4.40
0.50	4.40	2.00	8.70		3.50	7.30	5.00	2.90

0.75	4.40	2.25	8.70		3.75	7.30	5.25	2.90
1.00	4.40	2.50	43.70		4.00	5.80	5.50	2.90
1.25	4.40	2.75	113.70		4.25	5.80	5.75	2.90

| CALIB |
| NASHYD (2108) | Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.67

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	2.90	1.583	7.30		3.083	16.00	4.58	4.40
0.167	2.90	1.667	7.30		3.167	16.00	4.67	4.40
0.250	2.90	1.750	7.30		3.250	16.00	4.75	4.40
0.333	2.90	1.833	7.30		3.333	16.00	4.83	4.40
0.417	2.90	1.917	7.30		3.417	16.00	4.92	4.40
0.500	2.90	2.000	7.30		3.500	16.00	5.00	4.40
0.583	4.40	2.083	8.70		3.583	7.30	5.08	2.90
0.667	4.40	2.167	8.70		3.667	7.30	5.17	2.90
0.750	4.40	2.250	8.70		3.750	7.30	5.25	2.90
0.833	4.40	2.333	8.70		3.833	7.30	5.33	2.90
0.917	4.40	2.417	8.70		3.917	7.30	5.42	2.90
1.000	4.40	2.500	8.70		4.000	7.30	5.50	2.90
1.083	4.40	2.583	43.70		4.083	5.80	5.58	2.90
1.167	4.40	2.667	43.70		4.167	5.80	5.67	2.90
1.250	4.40	2.750	43.70		4.250	5.80	5.75	2.90
1.333	4.40	2.833	113.70		4.333	5.80	5.83	2.90
1.417	4.40	2.917	113.70		4.417	5.80	5.92	2.90
1.500	4.40	3.000	113.70		4.500	5.80	6.00	2.90

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.041 (i)
TIME TO PEAK (hrs)= 3.667
RUNOFF VOLUME (mm)= 19.699
TOTAL RAINFALL (mm)= 72.850
RUNOFF COEFFICIENT = 0.270

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

| CALIB |

| NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.16

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 2.90 | 1.583 7.30 | 3.083 16.00 | 4.58 4.40
0.167 2.90 | 1.667 7.30 | 3.167 16.00 | 4.67 4.40
0.250 2.90 | 1.750 7.30 | 3.250 16.00 | 4.75 4.40
0.333 2.90 | 1.833 7.30 | 3.333 16.00 | 4.83 4.40
0.417 2.90 | 1.917 7.30 | 3.417 16.00 | 4.92 4.40
0.500 2.90 | 2.000 7.30 | 3.500 16.00 | 5.00 4.40
0.583 4.40 | 2.083 8.70 | 3.583 7.30 | 5.08 2.90
0.667 4.40 | 2.167 8.70 | 3.667 7.30 | 5.17 2.90
0.750 4.40 | 2.250 8.70 | 3.750 7.30 | 5.25 2.90
0.833 4.40 | 2.333 8.70 | 3.833 7.30 | 5.33 2.90
0.917 4.40 | 2.417 8.70 | 3.917 7.30 | 5.42 2.90
1.000 4.40 | 2.500 8.70 | 4.000 7.30 | 5.50 2.90
1.083 4.40 | 2.583 43.70 | 4.083 5.80 | 5.58 2.90
1.167 4.40 | 2.667 43.70 | 4.167 5.80 | 5.67 2.90
1.250 4.40 | 2.750 43.70 | 4.250 5.80 | 5.75 2.90
1.333 4.40 | 2.833 113.70 | 4.333 5.80 | 5.83 2.90
1.417 4.40 | 2.917 113.70 | 4.417 5.80 | 5.92 2.90
1.500 4.40 | 3.000 113.70 | 4.500 5.80 | 6.00 2.90

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.138 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 24.052
TOTAL RAINFALL (mm)= 72.850
RUNOFF COEFFICIENT = 0.330

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

| CALIB |
| NASHYD (2102) | Area (ha)= 3.87 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.20

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 2.90 | 1.583 7.30 | 3.083 16.00 | 4.58 4.40
0.167 2.90 | 1.667 7.30 | 3.167 16.00 | 4.67 4.40
0.250 2.90 | 1.750 7.30 | 3.250 16.00 | 4.75 4.40
0.333 2.90 | 1.833 7.30 | 3.333 16.00 | 4.83 4.40
0.417 2.90 | 1.917 7.30 | 3.417 16.00 | 4.92 4.40
0.500 2.90 | 2.000 7.30 | 3.500 16.00 | 5.00 4.40
0.583 4.40 | 2.083 8.70 | 3.583 7.30 | 5.08 2.90
0.667 4.40 | 2.167 8.70 | 3.667 7.30 | 5.17 2.90
0.750 4.40 | 2.250 8.70 | 3.750 7.30 | 5.25 2.90
0.833 4.40 | 2.333 8.70 | 3.833 7.30 | 5.33 2.90
0.917 4.40 | 2.417 8.70 | 3.917 7.30 | 5.42 2.90
1.000 4.40 | 2.500 8.70 | 4.000 7.30 | 5.50 2.90
1.083 4.40 | 2.583 43.70 | 4.083 5.80 | 5.58 2.90
1.167 4.40 | 2.667 43.70 | 4.167 5.80 | 5.67 2.90
1.250 4.40 | 2.750 43.70 | 4.250 5.80 | 5.75 2.90
1.333 4.40 | 2.833 113.70 | 4.333 5.80 | 5.83 2.90
1.417 4.40 | 2.917 113.70 | 4.417 5.80 | 5.92 2.90
1.500 4.40 | 3.000 113.70 | 4.500 5.80 | 6.00 2.90

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.317 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 24.115
TOTAL RAINFALL (mm)= 72.850
RUNOFF COEFFICIENT = 0.331

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

| CALIB |
| NASHYD (2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.20

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 2.90 | 1.583 7.30 | 3.083 16.00 | 4.58 4.40
0.167 2.90 | 1.667 7.30 | 3.167 16.00 | 4.67 4.40
0.250 2.90 | 1.750 7.30 | 3.250 16.00 | 4.75 4.40
0.333 2.90 | 1.833 7.30 | 3.333 16.00 | 4.83 4.40
0.417 2.90 | 1.917 7.30 | 3.417 16.00 | 4.92 4.40
0.500 2.90 | 2.000 7.30 | 3.500 16.00 | 5.00 4.40

0.583	4.40	2.083	8.70	3.583	7.30	5.08	2.90
0.667	4.40	2.167	8.70	3.667	7.30	5.17	2.90
0.750	4.40	2.250	8.70	3.750	7.30	5.25	2.90
0.833	4.40	2.333	8.70	3.833	7.30	5.33	2.90
0.917	4.40	2.417	8.70	3.917	7.30	5.42	2.90
1.000	4.40	2.500	8.70	4.000	7.30	5.50	2.90
1.083	4.40	2.583	43.70	4.083	5.80	5.58	2.90
1.167	4.40	2.667	43.70	4.167	5.80	5.67	2.90
1.250	4.40	2.750	43.70	4.250	5.80	5.75	2.90
1.333	4.40	2.833	113.70	4.333	5.80	5.83	2.90
1.417	4.40	2.917	113.70	4.417	5.80	5.92	2.90
1.500	4.40	3.000	113.70	4.500	5.80	6.00	2.90

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.290 (i)
 TIME TO PEAK (hrs)= 3.083
 RUNOFF VOLUME (mm)= 24.115
 TOTAL RAINFALL (mm)= 72.850
 RUNOFF COEFFICIENT = 0.331

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

CALIB	
NASHYD (2104)	Area (ha)= 3.47 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.27

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	2.90	1.583	7.30	3.083	16.00	4.58	4.40
0.167	2.90	1.667	7.30	3.167	16.00	4.67	4.40
0.250	2.90	1.750	7.30	3.250	16.00	4.75	4.40
0.333	2.90	1.833	7.30	3.333	16.00	4.83	4.40
0.417	2.90	1.917	7.30	3.417	16.00	4.92	4.40
0.500	2.90	2.000	7.30	3.500	16.00	5.00	4.40
0.583	4.40	2.083	8.70	3.583	7.30	5.08	2.90
0.667	4.40	2.167	8.70	3.667	7.30	5.17	2.90
0.750	4.40	2.250	8.70	3.750	7.30	5.25	2.90
0.833	4.40	2.333	8.70	3.833	7.30	5.33	2.90
0.917	4.40	2.417	8.70	3.917	7.30	5.42	2.90
1.000	4.40	2.500	8.70	4.000	7.30	5.50	2.90
1.083	4.40	2.583	43.70	4.083	5.80	5.58	2.90
1.167	4.40	2.667	43.70	4.167	5.80	5.67	2.90

1.250	4.40	2.750	43.70	4.250	5.80	5.75	2.90
1.333	4.40	2.833	113.70	4.333	5.80	5.83	2.90
1.417	4.40	2.917	113.70	4.417	5.80	5.92	2.90
1.500	4.40	3.000	113.70	4.500	5.80	6.00	2.90

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.231 (i)
 TIME TO PEAK (hrs)= 3.167
 RUNOFF VOLUME (mm)= 24.147
 TOTAL RAINFALL (mm)= 72.850
 RUNOFF COEFFICIENT = 0.331

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

CALIB	
NASHYD (2105)	Area (ha)= 5.95 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.37

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	2.90	1.583	7.30	3.083	16.00	4.58	4.40
0.167	2.90	1.667	7.30	3.167	16.00	4.67	4.40
0.250	2.90	1.750	7.30	3.250	16.00	4.75	4.40
0.333	2.90	1.833	7.30	3.333	16.00	4.83	4.40
0.417	2.90	1.917	7.30	3.417	16.00	4.92	4.40
0.500	2.90	2.000	7.30	3.500	16.00	5.00	4.40
0.583	4.40	2.083	8.70	3.583	7.30	5.08	2.90
0.667	4.40	2.167	8.70	3.667	7.30	5.17	2.90
0.750	4.40	2.250	8.70	3.750	7.30	5.25	2.90
0.833	4.40	2.333	8.70	3.833	7.30	5.33	2.90
0.917	4.40	2.417	8.70	3.917	7.30	5.42	2.90
1.000	4.40	2.500	8.70	4.000	7.30	5.50	2.90
1.083	4.40	2.583	43.70	4.083	5.80	5.58	2.90
1.167	4.40	2.667	43.70	4.167	5.80	5.67	2.90
1.250	4.40	2.750	43.70	4.250	5.80	5.75	2.90
1.333	4.40	2.833	113.70	4.333	5.80	5.83	2.90
1.417	4.40	2.917	113.70	4.417	5.80	5.92	2.90
1.500	4.40	3.000	113.70	4.500	5.80	6.00	2.90

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.318 (i)

TIME TO PEAK (hrs)= 3.250
RUNOFF VOLUME (mm)= 24.157
TOTAL RAINFALL (mm)= 72.850
RUNOFF COEFFICIENT = 0.332

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

CALIB
STANDHYD (2106)
ID= 1 DT= 5.0 min

Area (ha)= 1.50
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.75 0.75
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.20 1.20
Length (m)= 100.00 166.70
Mannings n = 0.013 0.250

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	2.90	1.583	7.30	3.083	16.00	4.58	4.40
0.167	2.90	1.667	7.30	3.167	16.00	4.67	4.40
0.250	2.90	1.750	7.30	3.250	16.00	4.75	4.40
0.333	2.90	1.833	7.30	3.333	16.00	4.83	4.40
0.417	2.90	1.917	7.30	3.417	16.00	4.92	4.40
0.500	2.90	2.000	7.30	3.500	16.00	5.00	4.40
0.583	4.40	2.083	8.70	3.583	7.30	5.08	2.90
0.667	4.40	2.167	8.70	3.667	7.30	5.17	2.90
0.750	4.40	2.250	8.70	3.750	7.30	5.25	2.90
0.833	4.40	2.333	8.70	3.833	7.30	5.33	2.90
0.917	4.40	2.417	8.70	3.917	7.30	5.42	2.90
1.000	4.40	2.500	8.70	4.000	7.30	5.50	2.90
1.083	4.40	2.583	43.70	4.083	5.80	5.58	2.90
1.167	4.40	2.667	43.70	4.167	5.80	5.67	2.90
1.250	4.40	2.750	43.70	4.250	5.80	5.75	2.90
1.333	4.40	2.833	113.70	4.333	5.80	5.83	2.90
1.417	4.40	2.917	113.70	4.417	5.80	5.92	2.90
1.500	4.40	3.000	113.70	4.500	5.80	6.00	2.90

Max.Eff.Inten.(mm/hr)= 113.70 56.37
over (min) 5.00 30.00
Storage Coeff. (min)= 2.30 (ii) 26.66 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.30 0.04

PEAK FLOW (cms)= 0.24 0.07 0.272 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 71.85 43.82 57.83
TOTAL RAINFALL (mm)= 72.85 72.85 72.85
RUNOFF COEFFICIENT = 0.99 0.60 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107)
ID= 1 DT= 5.0 min

Area (ha)= 3.47
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.74 1.74
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.82 1.82
Length (m)= 152.10 685.00
Mannings n = 0.013 0.250

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	2.90	1.583	7.30	3.083	16.00	4.58	4.40
0.167	2.90	1.667	7.30	3.167	16.00	4.67	4.40
0.250	2.90	1.750	7.30	3.250	16.00	4.75	4.40
0.333	2.90	1.833	7.30	3.333	16.00	4.83	4.40
0.417	2.90	1.917	7.30	3.417	16.00	4.92	4.40
0.500	2.90	2.000	7.30	3.500	16.00	5.00	4.40
0.583	4.40	2.083	8.70	3.583	7.30	5.08	2.90
0.667	4.40	2.167	8.70	3.667	7.30	5.17	2.90
0.750	4.40	2.250	8.70	3.750	7.30	5.25	2.90
0.833	4.40	2.333	8.70	3.833	7.30	5.33	2.90
0.917	4.40	2.417	8.70	3.917	7.30	5.42	2.90
1.000	4.40	2.500	8.70	4.000	7.30	5.50	2.90
1.083	4.40	2.583	43.70	4.083	5.80	5.58	2.90
1.167	4.40	2.667	43.70	4.167	5.80	5.67	2.90
1.250	4.40	2.750	43.70	4.250	5.80	5.75	2.90
1.333	4.40	2.833	113.70	4.333	5.80	5.83	2.90

1.417	4.40	2.917	113.70	4.417	5.80	5.92	2.90
1.500	4.40	3.000	113.70	4.500	5.80	6.00	2.90

Max.Eff.Inten.(mm/hr)= 113.70 31.43
over (min) 5.00 70.00
Storage Coeff. (min)= 2.61 (ii) 66.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 70.00
Unit Hyd. peak (cms)= 0.29 0.02

TOTALS
PEAK FLOW (cms)= 0.55 0.08 0.565 (iii)
TIME TO PEAK (hrs)= 3.00 4.00 3.00
RUNOFF VOLUME (mm)= 71.85 43.82 57.82
TOTAL RAINFALL (mm)= 72.85 72.85 72.85
RUNOFF COEFFICIENT = 0.99 0.60 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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			
NASHYD (1103)	Area (ha)= 2.00	Curve Number (CN)= 69.4	
ID= 1 DT= 5.0 min	Ia (mm)= 4.40	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.49		

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	2.90	1.583	7.30	3.083	16.00	4.58	4.40
0.167	2.90	1.667	7.30	3.167	16.00	4.67	4.40
0.250	2.90	1.750	7.30	3.250	16.00	4.75	4.40
0.333	2.90	1.833	7.30	3.333	16.00	4.83	4.40
0.417	2.90	1.917	7.30	3.417	16.00	4.92	4.40
0.500	2.90	2.000	7.30	3.500	16.00	5.00	4.40
0.583	4.40	2.083	8.70	3.583	7.30	5.08	2.90
0.667	4.40	2.167	8.70	3.667	7.30	5.17	2.90
0.750	4.40	2.250	8.70	3.750	7.30	5.25	2.90
0.833	4.40	2.333	8.70	3.833	7.30	5.33	2.90
0.917	4.40	2.417	8.70	3.917	7.30	5.42	2.90
1.000	4.40	2.500	8.70	4.000	7.30	5.50	2.90
1.083	4.40	2.583	43.70	4.083	5.80	5.58	2.90
1.167	4.40	2.667	43.70	4.167	5.80	5.67	2.90

1.250	4.40	2.750	43.70	4.250	5.80	5.75	2.90
1.333	4.40	2.833	113.70	4.333	5.80	5.83	2.90
1.417	4.40	2.917	113.70	4.417	5.80	5.92	2.90
1.500	4.40	3.000	113.70	4.500	5.80	6.00	2.90

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.094 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 25.964
TOTAL RAINFALL (mm)= 72.850
RUNOFF COEFFICIENT = 0.356

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

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1103):	2.00	0.094	3.42	25.96
+ ID2= 2 (2101):	1.52	0.138	3.00	24.05
=====				
ID = 3 (0013):	3.52	0.199	3.08	25.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	3.52	0.199	3.08	25.14
+ ID2= 2 (2102):	3.87	0.317	3.08	24.12
=====				
ID = 1 (0013):	7.39	0.515	3.08	24.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	7.39	0.515	3.08	24.60
+ ID2= 2 (2103):	3.55	0.290	3.08	24.12
=====				
ID = 3 (0013):	10.94	0.806	3.08	24.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  10.94  0.806   3.08   24.44
+ ID2= 2 ( 2104):   3.47  0.231   3.17   24.15
=====
ID = 1 ( 0013):  14.41  1.031   3.08   24.37
-----
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):  14.41  1.031   3.08   24.37
+ ID2= 2 ( 2105):   5.95  0.318   3.25   24.16
=====
ID = 3 ( 0013):  20.36  1.296   3.08   24.31
-----
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  20.36  1.296   3.08   24.31
+ ID2= 2 ( 2106):   1.50  0.272   3.00   57.83
=====
ID = 1 ( 0013):  21.86  1.398   3.08   26.61
-----
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):  21.86  1.398   3.08   26.61
+ ID2= 2 ( 2107):   3.47  0.565   3.00   57.82
=====
ID = 3 ( 0013):  25.33  1.950   3.00   30.89
-----
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  25.33  1.950   3.00   30.89
+ ID2= 2 ( 2108):   1.46  0.041   3.67   19.70
=====
ID = 1 ( 0013):  26.79  1.962   3.00   30.28
-----
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| RESERVOIR( 0001)|
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
-----
OVERFLOW IS OFF
          OUTFLOW   STORAGE   OUTFLOW   STORAGE
          (cms)   (ha.m.)   (cms)   (ha.m.)
0.0000   0.0000   1.1450   0.1930
0.3370   0.0770   1.3850   0.2270
0.6240   0.1200   1.6330   0.2640
0.8460   0.1510   0.0000   0.0000
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
INFLOW : ID= 2 ( 0013)  26.790   1.962   3.00   30.28
OUTFLOW: ID= 1 ( 0001)  26.790   1.141   3.42   30.27
-----
```

PEAK FLOW REDUCTION [Qout/Qin](%)= 58.13
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.1926

```
-----
| CALIB
| NASHYD ( 1100)|
| ID= 1 DT= 5.0 min |
-----
Area (ha)= 24.78   Curve Number (CN)= 75.7
Ia (mm)= 6.20     # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.70
-----
```

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

```
-----
          TIME   RAIN   TIME   RAIN   TIME   RAIN   TIME   RAIN
          hrs   mm/hr   hrs   mm/hr   hrs   mm/hr   hrs   mm/hr
-----
0.083   2.90   1.583   7.30   3.083   16.00   4.58   4.40
0.167   2.90   1.667   7.30   3.167   16.00   4.67   4.40
0.250   2.90   1.750   7.30   3.250   16.00   4.75   4.40
0.333   2.90   1.833   7.30   3.333   16.00   4.83   4.40
0.417   2.90   1.917   7.30   3.417   16.00   4.92   4.40
0.500   2.90   2.000   7.30   3.500   16.00   5.00   4.40
-----
```

0.583	4.40	2.083	8.70	3.583	7.30	5.08	2.90
0.667	4.40	2.167	8.70	3.667	7.30	5.17	2.90
0.750	4.40	2.250	8.70	3.750	7.30	5.25	2.90
0.833	4.40	2.333	8.70	3.833	7.30	5.33	2.90
0.917	4.40	2.417	8.70	3.917	7.30	5.42	2.90
1.000	4.40	2.500	8.70	4.000	7.30	5.50	2.90
1.083	4.40	2.583	43.70	4.083	5.80	5.58	2.90
1.167	4.40	2.667	43.70	4.167	5.80	5.67	2.90
1.250	4.40	2.750	43.70	4.250	5.80	5.75	2.90
1.333	4.40	2.833	113.70	4.333	5.80	5.83	2.90
1.417	4.40	2.917	113.70	4.417	5.80	5.92	2.90
1.500	4.40	3.000	113.70	4.500	5.80	6.00	2.90

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 1.060 (i)
TIME TO PEAK (hrs)= 3.667
RUNOFF VOLUME (mm)= 29.977
TOTAL RAINFALL (mm)= 72.850
RUNOFF COEFFICIENT = 0.411

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

CALIB	
NASHYD (1101)	Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min	Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.49

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	2.90	1.583	7.30	3.083	16.00	4.58	4.40
0.167	2.90	1.667	7.30	3.167	16.00	4.67	4.40
0.250	2.90	1.750	7.30	3.250	16.00	4.75	4.40
0.333	2.90	1.833	7.30	3.333	16.00	4.83	4.40
0.417	2.90	1.917	7.30	3.417	16.00	4.92	4.40
0.500	2.90	2.000	7.30	3.500	16.00	5.00	4.40
0.583	4.40	2.083	8.70	3.583	7.30	5.08	2.90
0.667	4.40	2.167	8.70	3.667	7.30	5.17	2.90
0.750	4.40	2.250	8.70	3.750	7.30	5.25	2.90
0.833	4.40	2.333	8.70	3.833	7.30	5.33	2.90
0.917	4.40	2.417	8.70	3.917	7.30	5.42	2.90
1.000	4.40	2.500	8.70	4.000	7.30	5.50	2.90
1.083	4.40	2.583	43.70	4.083	5.80	5.58	2.90
1.167	4.40	2.667	43.70	4.167	5.80	5.67	2.90

1.250	4.40	2.750	43.70	4.250	5.80	5.75	2.90
1.333	4.40	2.833	113.70	4.333	5.80	5.83	2.90
1.417	4.40	2.917	113.70	4.417	5.80	5.92	2.90
1.500	4.40	3.000	113.70	4.500	5.80	6.00	2.90

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.094 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 25.964
TOTAL RAINFALL (mm)= 72.850
RUNOFF COEFFICIENT = 0.356

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

ADD HYD (0061)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1100):	24.78	1.060	3.67	29.98
+ ID2= 2 (1101):	2.00	0.094	3.42	25.96
=====				
ID = 3 (0061):	26.78	1.145	3.67	29.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (2100)	Area (ha)= 24.78
ID= 1 DT= 5.0 min	Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	11.15			13.63
Dep. Storage	(mm)=	1.00			1.50
Average Slope	(%)=	2.00			2.00
Length	(m)=	406.45			800.00
Mannings n	=	0.013			0.250

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	2.90	1.583	7.30	3.083	16.00	4.58	4.40
0.167	2.90	1.667	7.30	3.167	16.00	4.67	4.40
0.250	2.90	1.750	7.30	3.250	16.00	4.75	4.40
0.333	2.90	1.833	7.30	3.333	16.00	4.83	4.40

0.417	2.90	1.917	7.30	3.417	16.00	4.92	4.40
0.500	2.90	2.000	7.30	3.500	16.00	5.00	4.40
0.583	4.40	2.083	8.70	3.583	7.30	5.08	2.90
0.667	4.40	2.167	8.70	3.667	7.30	5.17	2.90
0.750	4.40	2.250	8.70	3.750	7.30	5.25	2.90
0.833	4.40	2.333	8.70	3.833	7.30	5.33	2.90
0.917	4.40	2.417	8.70	3.917	7.30	5.42	2.90
1.000	4.40	2.500	8.70	4.000	7.30	5.50	2.90
1.083	4.40	2.583	43.70	4.083	5.80	5.58	2.90
1.167	4.40	2.667	43.70	4.167	5.80	5.67	2.90
1.250	4.40	2.750	43.70	4.250	5.80	5.75	2.90
1.333	4.40	2.833	113.70	4.333	5.80	5.83	2.90
1.417	4.40	2.917	113.70	4.417	5.80	5.92	2.90
1.500	4.40	3.000	113.70	4.500	5.80	6.00	2.90

Max.Eff.Inten.(mm/hr)= 113.70 31.43
over (min) 5.00 75.00
Storage Coeff. (min)= 4.57 (ii) 72.23 (ii)
Unit Hyd. Tpeak (min)= 5.00 75.00
Unit Hyd. peak (cms)= 0.23 0.02

TOTALS
PEAK FLOW (cms)= 3.44 0.62 3.566 (iii)
TIME TO PEAK (hrs)= 3.00 4.08 3.00
RUNOFF VOLUME (mm)= 71.85 43.82 56.43
TOTAL RAINFALL (mm)= 72.85 72.85 72.85
RUNOFF COEFFICIENT = 0.99 0.60 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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							
NASHYD (1102)	Area (ha)=	2.00	Curve Number (CN)=	69.4			
ID= 1 DT= 5.0 min	Ia (mm)=	4.40	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.49					

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	2.90	1.583	7.30	3.083	16.00	4.58	4.40
0.167	2.90	1.667	7.30	3.167	16.00	4.67	4.40

0.250	2.90	1.750	7.30	3.250	16.00	4.75	4.40
0.333	2.90	1.833	7.30	3.333	16.00	4.83	4.40
0.417	2.90	1.917	7.30	3.417	16.00	4.92	4.40
0.500	2.90	2.000	7.30	3.500	16.00	5.00	4.40
0.583	4.40	2.083	8.70	3.583	7.30	5.08	2.90
0.667	4.40	2.167	8.70	3.667	7.30	5.17	2.90
0.750	4.40	2.250	8.70	3.750	7.30	5.25	2.90
0.833	4.40	2.333	8.70	3.833	7.30	5.33	2.90
0.917	4.40	2.417	8.70	3.917	7.30	5.42	2.90
1.000	4.40	2.500	8.70	4.000	7.30	5.50	2.90
1.083	4.40	2.583	43.70	4.083	5.80	5.58	2.90
1.167	4.40	2.667	43.70	4.167	5.80	5.67	2.90
1.250	4.40	2.750	43.70	4.250	5.80	5.75	2.90
1.333	4.40	2.833	113.70	4.333	5.80	5.83	2.90
1.417	4.40	2.917	113.70	4.417	5.80	5.92	2.90
1.500	4.40	3.000	113.70	4.500	5.80	6.00	2.90

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.094 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 25.964
TOTAL RAINFALL (mm)= 72.850
RUNOFF COEFFICIENT = 0.356

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

ADD HYD (0063)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1102):	2.00	0.094	3.42	25.96
+ ID2= 2 (2100):	24.78	3.566	3.00	56.43
=====				
ID = 3 (0063):	26.78	3.611	3.00	54.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V	V	I	SSSSS	U	U	A	L	(v 6.2.2008)
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		
000	TTTTT	TTTTT	H	H	Y	Y	M M	000 TM

O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\371
cfe8-3513-4d17-af5b-499630891651\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\371
cfe8-3513-4d17-af5b-499630891651\scen

DATE: 04/05/2023 TIME: 11:32:31

USER:

COMMENTS: _____

** SIMULATION : 05_50-Year_6 hour SCS **

| READ STORM | Filename: C:\Users\nnapper\AppData
| | ata\Local\Temp\
| | aa485c45-5c41-4f04-b9f7-20c929bcd42e\faa8a05e
| Ptotal= 81.45 mm | Comments: 50-Year_6 hour SCS

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.00	3.30	1.50	8.10	3.00	17.90	4.50	4.90	
0.25	3.30	1.75	8.10	3.25	17.90	4.75	4.90	
0.50	4.90	2.00	9.80	3.50	8.10	5.00	3.30	
0.75	4.90	2.25	9.80	3.75	8.10	5.25	3.30	
1.00	4.90	2.50	48.80	4.00	6.50	5.50	3.30	

1.25 4.90 | 2.75 127.00 | 4.25 6.50 | 5.75 3.30

| CALIB |
| NASHYD (2108) | Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.67

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90	
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90	
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90	
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90	
0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90	
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90	
0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30	
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30	
0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30	
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30	
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30	
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30	
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30	
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30	
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30	
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30	
1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30	
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30	

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.051 (i)
TIME TO PEAK (hrs)= 3.667
RUNOFF VOLUME (mm)= 24.122
TOTAL RAINFALL (mm)= 81.450
RUNOFF COEFFICIENT = 0.296

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

| CALIB |
| NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

----- U.H. Tp(hrs)= 0.16

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90
0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90
0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30
0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30
1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.169 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 29.194
TOTAL RAINFALL (mm)= 81.450
RUNOFF COEFFICIENT = 0.358

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

CALIB			
NASHYD (2102)	Area (ha)= 3.87	Curve Number (CN)= 67.1	
ID= 1 DT= 5.0 min	Ia (mm)= 4.60	# of Linear Res.(N)= 3.00	

U.H. Tp(hrs)= 0.20			

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90
0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90
0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30
0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30
1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.385 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 29.270
TOTAL RAINFALL (mm)= 81.450
RUNOFF COEFFICIENT = 0.359

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

CALIB			
NASHYD (2103)	Area (ha)= 3.55	Curve Number (CN)= 67.1	
ID= 1 DT= 5.0 min	Ia (mm)= 4.60	# of Linear Res.(N)= 3.00	

U.H. Tp(hrs)= 0.20			

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90
0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90
0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30

0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30
1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.353 (i)
 TIME TO PEAK (hrs)= 3.083
 RUNOFF VOLUME (mm)= 29.270
 TOTAL RAINFALL (mm)= 81.450
 RUNOFF COEFFICIENT = 0.359

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

CALIB	
NASHYD (2104)	Area (ha)= 3.47 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.27

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90
0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90
0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30
0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30

1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.281 (i)
 TIME TO PEAK (hrs)= 3.167
 RUNOFF VOLUME (mm)= 29.308
 TOTAL RAINFALL (mm)= 81.450
 RUNOFF COEFFICIENT = 0.360

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

CALIB	
NASHYD (2105)	Area (ha)= 5.95 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.37

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90
0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90
0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30
0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30
1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.388 (i)
 TIME TO PEAK (hrs)= 3.250
 RUNOFF VOLUME (mm)= 29.321

TOTAL RAINFALL (mm)= 81.450

RUNOFF COEFFICIENT = 0.360

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

CALIB
STANDHYD (2106)
ID= 1 DT= 5.0 min

Area (ha)= 1.50
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.75 0.75
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.20 1.20
Length (m)= 100.00 166.70
Mannings n = 0.013 0.250

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90
0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90
0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30
0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30
1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30

Max.Eff.Inten.(mm/hr)= 127.00 65.97
over (min) 5.00 30.00
Storage Coeff. (min)= 2.20 (ii) 25.08 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.30 0.04

PEAK FLOW (cms)= 0.26 0.08 *TOTALS* 0.307 (iii)

TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 80.45 51.23 65.83
TOTAL RAINFALL (mm)= 81.45 81.45 81.45
RUNOFF COEFFICIENT = 0.99 0.63 0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107)
ID= 1 DT= 5.0 min

Area (ha)= 3.47
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.74 1.74
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.82 1.82
Length (m)= 152.10 685.00
Mannings n = 0.013 0.250

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90
0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90
0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30
0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30
1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30

Max.Eff.Inten.(mm/hr)= 127.00 36.73
over (min) 5.00 65.00
Storage Coeff. (min)= 2.50 (ii) 62.08 (ii)
Unit Hyd. Tpeak (min)= 5.00 65.00
Unit Hyd. peak (cms)= 0.29 0.02

TOTALS

PEAK FLOW (cms)= 0.61 0.10 0.636 (iii)
TIME TO PEAK (hrs)= 3.00 3.92 3.00
RUNOFF VOLUME (mm)= 80.45 51.23 65.83
TOTAL RAINFALL (mm)= 81.45 81.45 81.45
RUNOFF COEFFICIENT = 0.99 0.63 0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.49

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90
0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90
0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30
0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30

1.417 4.90 | 2.917 127.00 | 4.417 6.50 | 5.92 3.30
1.500 4.90 | 3.000 127.00 | 4.500 6.50 | 6.00 3.30

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.115 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 31.402
TOTAL RAINFALL (mm)= 81.450
RUNOFF COEFFICIENT = 0.386

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

| ADD HYD (0013) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (1103): 2.00 0.115 3.42 31.40
+ ID2= 2 (2101): 1.52 0.169 3.00 29.19
=====

ID = 3 (0013): 3.52 0.242 3.08 30.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0013) |
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0013): 3.52 0.242 3.08 30.45
+ ID2= 2 (2102): 3.87 0.385 3.08 29.27
=====

ID = 1 (0013): 7.39 0.627 3.08 29.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0013) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0013): 7.39 0.627 3.08 29.83
+ ID2= 2 (2103): 3.55 0.353 3.08 29.27
=====

ID = 3 (0013): 10.94 0.980 3.08 29.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  10.94  0.980   3.08   29.65
+ ID2= 2 ( 2104):   3.47  0.281   3.17   29.31
=====
ID = 1 ( 0013):  14.41  1.255   3.08   29.57

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):  14.41  1.255   3.08   29.57
+ ID2= 2 ( 2105):   5.95  0.388   3.25   29.32
=====
ID = 3 ( 0013):  20.36  1.581   3.08   29.50

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  20.36  1.581   3.08   29.50
+ ID2= 2 ( 2106):   1.50  0.307   3.00   65.83
=====
ID = 1 ( 0013):  21.86  1.697   3.08   31.99

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):  21.86  1.697   3.08   31.99
+ ID2= 2 ( 2107):   3.47  0.636   3.00   65.83
=====
ID = 3 ( 0013):  25.33  2.306   3.00   36.62

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  25.33  2.306   3.00   36.62
+ ID2= 2 ( 2108):   1.46  0.051   3.67   24.12
=====
ID = 1 ( 0013):  26.79  2.323   3.00   35.94

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| RESERVOIR( 0001)|
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
-----
          OVERFLOW IS OFF
          OUTFLOW   STORAGE   OUTFLOW   STORAGE
          (cms)   (ha.m.)   (cms)   (ha.m.)
          0.0000   0.0000   1.1450   0.1930
          0.3370   0.0770   1.3850   0.2270
          0.6240   0.1200   1.6330   0.2640
          0.8460   0.1510   0.0000   0.0000
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
INFLOW : ID= 2 ( 0013)  26.790   2.323   3.00   35.94
OUTFLOW: ID= 1 ( 0001)  26.790   1.379   3.42   35.94

```

PEAK FLOW REDUCTION [Qout/Qin](%)= 59.38
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.2265

```

-----
| CALIB
| NASHYD ( 1100)|
| ID= 1 DT= 5.0 min |
-----
          Area (ha)= 24.78   Curve Number (CN)= 75.7
          Ia (mm)= 6.20   # of Linear Res.(N)= 3.00
          U.H. Tp(hrs)= 0.70

```

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   3.30   1.583   8.10   3.083   17.90   4.58   4.90
0.167   3.30   1.667   8.10   3.167   17.90   4.67   4.90
0.250   3.30   1.750   8.10   3.250   17.90   4.75   4.90
0.333   3.30   1.833   8.10   3.333   17.90   4.83   4.90
0.417   3.30   1.917   8.10   3.417   17.90   4.92   4.90
0.500   3.30   2.000   8.10   3.500   17.90   5.00   4.90
0.583   4.90   2.083   9.80   3.583   8.10   5.08   3.30
0.667   4.90   2.167   9.80   3.667   8.10   5.17   3.30

```

0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30
1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 1.283 (i)
TIME TO PEAK (hrs)= 3.667
RUNOFF VOLUME (mm)= 36.116
TOTAL RAINFALL (mm)= 81.450
RUNOFF COEFFICIENT = 0.443

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

CALIB							
NASHYD (1101)	Area (ha)=	2.00	Curve Number (CN)=	69.4			
ID= 1 DT= 5.0 min	Ia (mm)=	4.40	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.49					

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90
0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90
0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30
0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30

1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.115 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 31.402
TOTAL RAINFALL (mm)= 81.450
RUNOFF COEFFICIENT = 0.386

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

ADD HYD (0061)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.78	1.283	3.67	36.12
+ ID2= 2 (1101):	2.00	0.115	3.42	31.40
=====				
ID = 3 (0061):	26.78	1.385	3.67	35.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (2100)	Area (ha)=	24.78	
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.15	13.63
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	406.45	800.00
Mannings n =	0.013	0.250

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90
0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90

0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30
0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30
1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30

Max.Eff.Inten.(mm/hr)= 127.00 36.73
over (min) 5.00 70.00
Storage Coeff. (min)= 4.37 (ii) 67.95 (ii)
Unit Hyd. Tpeak (min)= 5.00 70.00
Unit Hyd. peak (cms)= 0.23 0.02

TOTALS
PEAK FLOW (cms)= 3.85 0.76 4.026 (iii)
TIME TO PEAK (hrs)= 3.00 4.00 3.00
RUNOFF VOLUME (mm)= 80.45 51.23 64.38
TOTAL RAINFALL (mm)= 81.45 81.45 81.45
RUNOFF COEFFICIENT = 0.99 0.63 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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							
NASHYD (1102)	Area (ha)=	2.00	Curve Number (CN)=	69.4			
ID= 1 DT= 5.0 min	Ia (mm)=	4.40	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.49					

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	3.30	1.583	8.10	3.083	17.90	4.58	4.90
0.167	3.30	1.667	8.10	3.167	17.90	4.67	4.90
0.250	3.30	1.750	8.10	3.250	17.90	4.75	4.90
0.333	3.30	1.833	8.10	3.333	17.90	4.83	4.90

0.417	3.30	1.917	8.10	3.417	17.90	4.92	4.90
0.500	3.30	2.000	8.10	3.500	17.90	5.00	4.90
0.583	4.90	2.083	9.80	3.583	8.10	5.08	3.30
0.667	4.90	2.167	9.80	3.667	8.10	5.17	3.30
0.750	4.90	2.250	9.80	3.750	8.10	5.25	3.30
0.833	4.90	2.333	9.80	3.833	8.10	5.33	3.30
0.917	4.90	2.417	9.80	3.917	8.10	5.42	3.30
1.000	4.90	2.500	9.80	4.000	8.10	5.50	3.30
1.083	4.90	2.583	48.80	4.083	6.50	5.58	3.30
1.167	4.90	2.667	48.80	4.167	6.50	5.67	3.30
1.250	4.90	2.750	48.80	4.250	6.50	5.75	3.30
1.333	4.90	2.833	127.00	4.333	6.50	5.83	3.30
1.417	4.90	2.917	127.00	4.417	6.50	5.92	3.30
1.500	4.90	3.000	127.00	4.500	6.50	6.00	3.30

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.115 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 31.402
TOTAL RAINFALL (mm)= 81.450
RUNOFF COEFFICIENT = 0.386

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

ADD HYD (0063)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1102):	2.00	0.115	3.42	31.40
+ ID2= 2 (2100):	24.78	4.026	3.00	64.38
ID = 3 (0063):	26.78	4.081	3.00	61.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.2.2008)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V I SSSS UUUU A A LLLL

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

000 T T H H Y M M 000
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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\17fc
0f03-c6b4-47cb-81b7-4035d71e0dae\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\17fc
0f03-c6b4-47cb-81b7-4035d71e0dae\scen

DATE: 04/05/2023 TIME: 11:32:30

USER:

COMMENTS: _____

** SIMULATION : 06_100-Year_6 hour SCS **

READ STORM	Filename: C:\Users\nnapper\AppData\Local\Temp\aa485c45-5c41-4f04-b9f7-20c929bcd42e\4f51d072
Ptotal= 89.93 mm	Comments: 100-Year_6 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	3.60	1.50	9.00	3.00	19.80	4.50	5.40
0.25	3.60	1.75	9.00	3.25	19.80	4.75	5.40
0.50	5.40	2.00	10.80	3.50	9.00	5.00	3.60
0.75	5.40	2.25	10.80	3.75	9.00	5.25	3.60
1.00	5.40	2.50	53.90	4.00	7.20	5.50	3.60
1.25	5.40	2.75	140.20	4.25	7.20	5.75	3.60

CALIB	Area (ha)=	1.46	Curve Number (CN)=	60.5
NASHYD (2108)	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.67		

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60
0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.061 (i)
TIME TO PEAK (hrs)= 3.667
RUNOFF VOLUME (mm)= 28.760
TOTAL RAINFALL (mm)= 89.925
RUNOFF COEFFICIENT = 0.320

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

CALIB	Area (ha)=	1.52	Curve Number (CN)=	67.1
NASHYD (2101)	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.16		

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60
0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.200 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 34.534
TOTAL RAINFALL (mm)= 89.925
RUNOFF COEFFICIENT = 0.384

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

CALIB	
NASHYD (2102)	Area (ha)= 3.87 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.20

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40

0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60
0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.457 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 34.625
TOTAL RAINFALL (mm)= 89.925
RUNOFF COEFFICIENT = 0.385

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

CALIB	
NASHYD (2103)	Area (ha)= 3.55 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.20

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60

0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.419 (i)
 TIME TO PEAK (hrs)= 3.083
 RUNOFF VOLUME (mm)= 34.625
 TOTAL RAINFALL (mm)= 89.925
 RUNOFF COEFFICIENT = 0.385

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

CALIB	
NASHYD (2104)	Area (ha)= 3.47 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.27

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60
0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.334 (i)
 TIME TO PEAK (hrs)= 3.167
 RUNOFF VOLUME (mm)= 34.670
 TOTAL RAINFALL (mm)= 89.925
 RUNOFF COEFFICIENT = 0.386

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

CALIB	
NASHYD (2105)	Area (ha)= 5.95 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.37

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60
0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.461 (i)
 TIME TO PEAK (hrs)= 3.250
 RUNOFF VOLUME (mm)= 34.685
 TOTAL RAINFALL (mm)= 89.925
 RUNOFF COEFFICIENT = 0.386

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

CALIB
STANDHYD (2106)
ID= 1 DT= 5.0 min

Area (ha)= 1.50
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 0.75 0.75
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.20 1.20
Length (m)= 100.00 166.70
Mannings n = 0.013 0.250

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60
0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Max.Eff.Inten.(mm/hr)= 140.20 75.66
over (min) 5.00 25.00
Storage Coeff. (min)= 2.11 (ii) 23.77 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.31 0.05

TOTALS
PEAK FLOW (cms)= 0.29 0.10 0.353 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 88.92 58.68 73.79

TOTAL RAINFALL (mm)= 89.93 89.93 89.93
RUNOFF COEFFICIENT = 0.99 0.65 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107)
ID= 1 DT= 5.0 min

Area (ha)= 3.47
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 1.74 1.74
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.82 1.82
Length (m)= 152.10 685.00
Mannings n = 0.013 0.250

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60
0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Max.Eff.Inten.(mm/hr)= 140.20 42.08

over (min) 5.00 60.00
Storage Coeff. (min)= 2.40 (ii) 58.83 (ii)
Unit Hyd. Tpeak (min)= 5.00 60.00
Unit Hyd. peak (cms)= 0.30 0.02

TOTALS
PEAK FLOW (cms)= 0.67 0.12 0.708 (iii)
TIME TO PEAK (hrs)= 3.00 3.83 3.00
RUNOFF VOLUME (mm)= 88.92 58.68 73.79
TOTAL RAINFALL (mm)= 89.93 89.93 89.93
RUNOFF COEFFICIENT = 0.99 0.65 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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
NASHYD (1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60
0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.136 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 37.029
TOTAL RAINFALL (mm)= 89.925
RUNOFF COEFFICIENT = 0.412

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

ADD HYD (0013) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (1103): 2.00 0.136 3.42 37.03
+ ID2= 2 (2101): 1.52 0.200 3.00 34.53
=====

ID = 3 (0013): 3.52 0.287 3.08 35.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013) |
3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0013): 3.52 0.287 3.08 35.95
+ ID2= 2 (2102): 3.87 0.457 3.08 34.62
=====

ID = 1 (0013): 7.39 0.744 3.08 35.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0013): 7.39 0.744 3.08 35.26
+ ID2= 2 (2103): 3.55 0.419 3.08 34.62
=====

ID = 3 (0013): 10.94 1.163 3.08 35.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)					
3 + 2 = 1					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 3 (0013):	10.94	1.163	3.08	35.05	
+ ID2= 2 (2104):	3.47	0.334	3.17	34.67	
=====					
ID = 1 (0013):	14.41	1.489	3.08	34.96	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0013):	14.41	1.489	3.08	34.96	
+ ID2= 2 (2105):	5.95	0.461	3.25	34.68	
=====					
ID = 3 (0013):	20.36	1.878	3.08	34.88	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)					
3 + 2 = 1					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 3 (0013):	20.36	1.878	3.08	34.88	
+ ID2= 2 (2106):	1.50	0.353	3.00	73.79	
=====					
ID = 1 (0013):	21.86	2.021	3.08	37.55	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0013):	21.86	2.021	3.08	37.55	
+ ID2= 2 (2107):	3.47	0.708	3.00	73.79	
=====					
ID = 3 (0013):	25.33	2.687	3.00	42.51	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)					
3 + 2 = 1					
	AREA	QPEAK	TPEAK	R.V.	

	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	25.33	2.687	3.00	42.51
+ ID2= 2 (2108):	1.46	0.061	3.67	28.76
=====				
ID = 1 (0013):	26.79	2.707	3.00	41.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0001)		OVERFLOW IS OFF			
IN= 2---> OUT= 1					
DT= 5.0 min					
	OUTFLOW	STORAGE	OUTFLOW	STORAGE	
	(cms)	(ha.m.)	(cms)	(ha.m.)	
	0.0000	0.0000	1.1450	0.1930	
	0.3370	0.0770	1.3850	0.2270	
	0.6240	0.1200	1.6330	0.2640	
	0.8460	0.1510	0.0000	0.0000	
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0013)	26.790	2.707	3.00	41.77	
OUTFLOW: ID= 1 (0001)	26.790	1.626	3.42	41.76	

PEAK FLOW REDUCTION [Qout/Qin](%)= 60.06
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.2634

CALIB			
NASHYD (1100)		Area (ha)=	24.78
ID= 1 DT= 5.0 min		Ia (mm)=	6.20
		U.H. Tp(hrs)=	0.70
		Curve Number (CN)=	75.7
		# of Linear Res.(N)=	3.00

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60

0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 1.513 (i)
 TIME TO PEAK (hrs)= 3.667
 RUNOFF VOLUME (mm)= 42.417
 TOTAL RAINFALL (mm)= 89.925
 RUNOFF COEFFICIENT = 0.472

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

CALIB							
NASHYD (1101)	Area (ha)=	2.00	Curve Number (CN)=	69.4			
ID= 1 DT= 5.0 min	Ia (mm)=	4.40	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.49					

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60
0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.136 (i)
 TIME TO PEAK (hrs)= 3.417
 RUNOFF VOLUME (mm)= 37.029
 TOTAL RAINFALL (mm)= 89.925
 RUNOFF COEFFICIENT = 0.412

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

ADD HYD (0061)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.78	1.513	3.67	42.42
+ ID2= 2 (1101):	2.00	0.136	3.42	37.03
=====				
ID = 3 (0061):	26.78	1.633	3.67	42.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB							
STANDHYD (2100)	Area (ha)=	24.78					
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)=	45.00			

IMPERVIOUS			PERVIOUS (i)		
Surface Area (ha)=	11.15	13.63			
Dep. Storage (mm)=	1.00	1.50			
Average Slope (%)=	2.00	2.00			
Length (m)=	406.45	800.00			
Mannings n =	0.013	0.250			

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40
0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60

0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60
0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Max.Eff.Inten.(mm/hr)= 140.20 42.08
over (min) 5.00 65.00
Storage Coeff. (min)= 4.20 (ii) 64.41 (ii)
Unit Hyd. Tpeak (min)= 5.00 65.00
Unit Hyd. peak (cms)= 0.24 0.02

TOTALS

PEAK FLOW (cms)=	4.27	0.91	4.492 (iii)
TIME TO PEAK (hrs)=	3.00	3.92	3.00
RUNOFF VOLUME (mm)=	88.93	58.68	72.29
TOTAL RAINFALL (mm)=	89.93	89.93	89.93
RUNOFF COEFFICIENT =	0.99	0.65	0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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			
NASHYD (1102)	Area (ha)= 2.00	Curve Number (CN)= 69.4	
ID= 1 DT= 5.0 min	Ia (mm)= 4.40	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.49		

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	3.60	1.583	9.00	3.083	19.80	4.58	5.40
0.167	3.60	1.667	9.00	3.167	19.80	4.67	5.40
0.250	3.60	1.750	9.00	3.250	19.80	4.75	5.40
0.333	3.60	1.833	9.00	3.333	19.80	4.83	5.40
0.417	3.60	1.917	9.00	3.417	19.80	4.92	5.40
0.500	3.60	2.000	9.00	3.500	19.80	5.00	5.40

0.583	5.40	2.083	10.80	3.583	9.00	5.08	3.60
0.667	5.40	2.167	10.80	3.667	9.00	5.17	3.60
0.750	5.40	2.250	10.80	3.750	9.00	5.25	3.60
0.833	5.40	2.333	10.80	3.833	9.00	5.33	3.60
0.917	5.40	2.417	10.80	3.917	9.00	5.42	3.60
1.000	5.40	2.500	10.80	4.000	9.00	5.50	3.60
1.083	5.40	2.583	53.90	4.083	7.20	5.58	3.60
1.167	5.40	2.667	53.90	4.167	7.20	5.67	3.60
1.250	5.40	2.750	53.90	4.250	7.20	5.75	3.60
1.333	5.40	2.833	140.20	4.333	7.20	5.83	3.60
1.417	5.40	2.917	140.20	4.417	7.20	5.92	3.60
1.500	5.40	3.000	140.20	4.500	7.20	6.00	3.60

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.136 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 37.029
TOTAL RAINFALL (mm)= 89.925
RUNOFF COEFFICIENT = 0.412

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

ADD HYD (0063)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1102):	2.00	0.136	3.42	37.03
+ ID2= 2 (2100):	24.78	4.492	3.00	72.29
=====				
ID = 3 (0063):	26.78	4.559	3.00	69.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.2.2008)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

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

Developed and Distributed by Smart City Water Inc

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	12.80	3.00	14.80	6.00	3.00	9.00	0.00
0.17	12.80	3.17	14.80	6.17	3.00	9.17	0.00
0.33	12.80	3.33	14.80	6.33	3.00	9.33	0.00
0.50	12.80	3.50	14.80	6.50	3.00	9.50	0.00
0.67	12.80	3.67	14.80	6.67	3.00	9.67	0.00
0.83	12.80	3.83	14.80	6.83	3.00	9.83	0.00
1.00	25.60	4.00	13.80	7.00	1.00	10.00	0.00
1.17	25.60	4.17	13.80	7.17	1.00	10.17	0.00
1.33	25.60	4.33	13.80	7.33	1.00	10.33	0.00

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00
0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00
0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00
1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00
1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00

2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.029 (i)
TIME TO PEAK (hrs)= 5.083
RUNOFF VOLUME (mm)= 33.768
TOTAL RAINFALL (mm)= 98.600
RUNOFF COEFFICIENT = 0.342

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

CALIB							
NASHYD (2101)	Area (ha)=	1.52	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.16					

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	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00
0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00
0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00
1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00

1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00
2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.040 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 40.250
TOTAL RAINFALL (mm)= 98.600
RUNOFF COEFFICIENT = 0.408

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

CALIB							
NASHYD (2102)	Area (ha)=	3.87	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00

0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00
0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00
1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00
1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00
2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.102 (i)
 TIME TO PEAK (hrs)= 3.000
 RUNOFF VOLUME (mm)= 40.355
 TOTAL RAINFALL (mm)= 98.600
 RUNOFF COEFFICIENT = 0.409

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

CALIB			
NASHYD (2103)	Area (ha)=	3.55	Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)= 3.00

	U.H. Tp(hrs)=	0.20	

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	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00
0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00
0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00
1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00
1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00
2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.093 (i)
 TIME TO PEAK (hrs)= 3.000
 RUNOFF VOLUME (mm)= 40.355
 TOTAL RAINFALL (mm)= 98.600
 RUNOFF COEFFICIENT = 0.409

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

| CALIB |
| NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.27

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	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00
0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00
0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00
1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00
1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00
2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.089 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 40.408
TOTAL RAINFALL (mm)= 98.600
RUNOFF COEFFICIENT = 0.410

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

| CALIB |
| NASHYD (2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.37

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	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00
0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00
0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00
1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00
1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00

2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.150 (i)
 TIME TO PEAK (hrs)= 3.083
 RUNOFF VOLUME (mm)= 40.425
 TOTAL RAINFALL (mm)= 98.600
 RUNOFF COEFFICIENT = 0.410

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

CALIB	
STANDHYD (2106)	
ID= 1 DT= 5.0 min	

Area (ha)= 1.50
 Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00
0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00

0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00
1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00
1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00
2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 25.60 15.69
 over (min) 5.00 45.00
 Storage Coeff. (min)= 4.17 (ii) 44.80 (ii)
 Unit Hyd. Tpeak (min)= 5.00 45.00
 Unit Hyd. peak (cms)= 0.24 0.03

TOTALS
 PEAK FLOW (cms)= 0.05 0.03 0.071 (iii)
 TIME TO PEAK (hrs)= 2.00 3.42 2.00
 RUNOFF VOLUME (mm)= 97.60 66.43 82.00
 TOTAL RAINFALL (mm)= 98.60 98.60 98.60
 RUNOFF COEFFICIENT = 0.99 0.67 0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 85.0 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 (2107) | Area (ha)= 3.47
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00
0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00
0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00
1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00
1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00
2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00

2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)=	25.60	15.44
over (min)	5.00	90.00
Storage Coeff. (min)=	4.73 (ii)	89.00 (ii)
Unit Hyd. Tpeak (min)=	5.00	90.00
Unit Hyd. peak (cms)=	0.22	0.01

TOTALS

PEAK FLOW (cms)=	0.12	0.06	0.138 (iii)
TIME TO PEAK (hrs)=	2.00	5.08	2.00
RUNOFF VOLUME (mm)=	97.60	66.43	82.00
TOTAL RAINFALL (mm)=	98.60	98.60	98.60
RUNOFF COEFFICIENT =	0.99	0.67	0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.49

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	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00
0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00
0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00

1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00
1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00
2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.052 (i)
 TIME TO PEAK (hrs)= 3.250
 RUNOFF VOLUME (mm)= 43.032
 TOTAL RAINFALL (mm)= 98.600
 RUNOFF COEFFICIENT = 0.436

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

ADD HYD (0013)				
1 + 2 = 3				

ID1= 1 (1103):	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
	2.00	0.052	3.25	43.03
+ ID2= 2 (2101):	1.52	0.040	3.00	40.25
=====				
ID = 3 (0013):	3.52	0.092	3.00	41.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				

	AREA	QPEAK	TPEAK	R.V.

	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	3.52	0.092	3.00	41.83
+ ID2= 2 (2102):	3.87	0.102	3.00	40.36
=====				
ID = 1 (0013):	7.39	0.193	3.00	41.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	7.39	0.193	3.00	41.06
+ ID2= 2 (2103):	3.55	0.093	3.00	40.36
=====				
ID = 3 (0013):	10.94	0.286	3.00	40.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	10.94	0.286	3.00	40.83
+ ID2= 2 (2104):	3.47	0.089	3.08	40.41
=====				
ID = 1 (0013):	14.41	0.375	3.00	40.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	14.41	0.375	3.00	40.73
+ ID2= 2 (2105):	5.95	0.150	3.08	40.43
=====				
ID = 3 (0013):	20.36	0.523	3.00	40.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	20.36	0.523	3.00	40.64

+ ID2= 2 (2106): 1.50 0.071 2.00 82.00
=====

ID = 1 (0013):	21.86	0.592	3.00	43.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	21.86	0.592	3.00	43.48
+ ID2= 2 (2107):	3.47	0.138	2.00	82.00
=====				
ID = 3 (0013):	25.33	0.728	3.00	48.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	25.33	0.728	3.00	48.76
+ ID2= 2 (2108):	1.46	0.029	5.08	33.77
=====				
ID = 1 (0013):	26.79	0.753	3.00	47.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0001)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	1.1450	0.1930
	0.3370	0.0770	1.3850	0.2270
	0.6240	0.1200	1.6330	0.2640
	0.8460	0.1510	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	0.753	3.00	47.94
OUTFLOW: ID= 1 (0001)	26.790	0.702	3.25	47.94

PEAK FLOW REDUCTION [Qout/Qin](%)= 93.14
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.1308

CALIB	Area	(ha)=	24.78	Curve Number	(CN)=	75.7
NASHYD (1100)	Ia	(mm)=	6.20	# of Linear Res.(N)=	3.00	
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.70				

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	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00
0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00
0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00
1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00
1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00
2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.717 (i)
TIME TO PEAK (hrs)= 3.500
RUNOFF VOLUME (mm)= 49.085
TOTAL RAINFALL (mm)= 98.600
RUNOFF COEFFICIENT = 0.498

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

| CALIB |
| NASHYD (1101) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.49

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 12.80 | 3.083 14.80 | 6.083 3.00 | 9.08 0.00
0.167 12.80 | 3.167 14.80 | 6.167 3.00 | 9.17 0.00
0.250 12.80 | 3.250 14.80 | 6.250 3.00 | 9.25 0.00
0.333 12.80 | 3.333 14.80 | 6.333 3.00 | 9.33 0.00
0.417 12.80 | 3.417 14.80 | 6.417 3.00 | 9.42 0.00
0.500 12.80 | 3.500 14.80 | 6.500 3.00 | 9.50 0.00
0.583 12.80 | 3.583 14.80 | 6.583 3.00 | 9.58 0.00
0.667 12.80 | 3.667 14.80 | 6.667 3.00 | 9.67 0.00
0.750 12.80 | 3.750 14.80 | 6.750 3.00 | 9.75 0.00
0.833 12.80 | 3.833 14.80 | 6.833 3.00 | 9.83 0.00
0.917 12.80 | 3.917 14.80 | 6.917 3.00 | 9.92 0.00
1.000 12.80 | 4.000 14.80 | 7.000 3.00 | 10.00 0.00
1.083 25.60 | 4.083 13.80 | 7.083 1.00 | 10.08 0.00
1.167 25.60 | 4.167 13.80 | 7.167 1.00 | 10.17 0.00
1.250 25.60 | 4.250 13.80 | 7.250 1.00 | 10.25 0.00
1.333 25.60 | 4.333 13.80 | 7.333 1.00 | 10.33 0.00
1.417 25.60 | 4.417 13.80 | 7.417 1.00 | 10.42 0.00
1.500 25.60 | 4.500 13.80 | 7.500 1.00 | 10.50 0.00
1.583 25.60 | 4.583 13.80 | 7.583 1.00 | 10.58 0.00
1.667 25.60 | 4.667 13.80 | 7.667 1.00 | 10.67 0.00
1.750 25.60 | 4.750 13.80 | 7.750 1.00 | 10.75 0.00
1.833 25.60 | 4.833 13.80 | 7.833 1.00 | 10.83 0.00
1.917 25.60 | 4.917 13.80 | 7.917 1.00 | 10.92 0.00
2.000 25.60 | 5.000 13.80 | 8.000 1.00 | 11.00 0.00
2.083 19.70 | 5.083 7.90 | 8.083 0.00 | 11.08 0.00
2.167 19.70 | 5.167 7.90 | 8.167 0.00 | 11.17 0.00
2.250 19.70 | 5.250 7.90 | 8.250 0.00 | 11.25 0.00
2.333 19.70 | 5.333 7.90 | 8.333 0.00 | 11.33 0.00

2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.052 (i)
TIME TO PEAK (hrs)= 3.250
RUNOFF VOLUME (mm)= 43.032
TOTAL RAINFALL (mm)= 98.600
RUNOFF COEFFICIENT = 0.436

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

| ADD HYD (0061) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (1100): 24.78 0.717 3.50 49.09
+ ID2= 2 (1101): 2.00 0.052 3.25 43.03
===== ID = 3 (0061): 26.78 0.768 3.50 48.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (2100) | Area (ha)= 24.78
| ID= 1 DT= 5.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	11.15	13.63
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	406.45	800.00
Mannings n	=	0.013	0.250

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	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00
0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00
0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00
1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00
1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00
2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00
2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 25.60 15.44
over (min) 10.00 100.00
Storage Coeff. (min)= 8.30 (ii) 98.21 (ii)
Unit Hyd. Tpeak (min)= 10.00 100.00
Unit Hyd. peak (cms)= 0.13 0.01

PEAK FLOW (cms)= 0.79 0.44 0.890 (iii)
TIME TO PEAK (hrs)= 2.00 5.25 3.00
RUNOFF VOLUME (mm)= 97.60 66.43 80.46
TOTAL RAINFALL (mm)= 98.60 98.60 98.60
RUNOFF COEFFICIENT = 0.99 0.67 0.82

TOTALS

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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
NASHYD (1102)
ID= 1 DT= 5.0 min
Area (ha)= 2.00 Curve Number (CN)= 69.4
Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	12.80	3.083	14.80	6.083	3.00	9.08	0.00
0.167	12.80	3.167	14.80	6.167	3.00	9.17	0.00
0.250	12.80	3.250	14.80	6.250	3.00	9.25	0.00
0.333	12.80	3.333	14.80	6.333	3.00	9.33	0.00
0.417	12.80	3.417	14.80	6.417	3.00	9.42	0.00
0.500	12.80	3.500	14.80	6.500	3.00	9.50	0.00
0.583	12.80	3.583	14.80	6.583	3.00	9.58	0.00
0.667	12.80	3.667	14.80	6.667	3.00	9.67	0.00
0.750	12.80	3.750	14.80	6.750	3.00	9.75	0.00
0.833	12.80	3.833	14.80	6.833	3.00	9.83	0.00
0.917	12.80	3.917	14.80	6.917	3.00	9.92	0.00
1.000	12.80	4.000	14.80	7.000	3.00	10.00	0.00
1.083	25.60	4.083	13.80	7.083	1.00	10.08	0.00
1.167	25.60	4.167	13.80	7.167	1.00	10.17	0.00
1.250	25.60	4.250	13.80	7.250	1.00	10.25	0.00
1.333	25.60	4.333	13.80	7.333	1.00	10.33	0.00
1.417	25.60	4.417	13.80	7.417	1.00	10.42	0.00
1.500	25.60	4.500	13.80	7.500	1.00	10.50	0.00
1.583	25.60	4.583	13.80	7.583	1.00	10.58	0.00
1.667	25.60	4.667	13.80	7.667	1.00	10.67	0.00
1.750	25.60	4.750	13.80	7.750	1.00	10.75	0.00
1.833	25.60	4.833	13.80	7.833	1.00	10.83	0.00
1.917	25.60	4.917	13.80	7.917	1.00	10.92	0.00
2.000	25.60	5.000	13.80	8.000	1.00	11.00	0.00
2.083	19.70	5.083	7.90	8.083	0.00	11.08	0.00
2.167	19.70	5.167	7.90	8.167	0.00	11.17	0.00
2.250	19.70	5.250	7.90	8.250	0.00	11.25	0.00
2.333	19.70	5.333	7.90	8.333	0.00	11.33	0.00
2.417	19.70	5.417	7.90	8.417	0.00	11.42	0.00
2.500	19.70	5.500	7.90	8.500	0.00	11.50	0.00
2.583	19.70	5.583	7.90	8.583	0.00	11.58	0.00

2.667	19.70	5.667	7.90	8.667	0.00	11.67	0.00
2.750	19.70	5.750	7.90	8.750	0.00	11.75	0.00
2.833	19.70	5.833	7.90	8.833	0.00	11.83	0.00
2.917	19.70	5.917	7.90	8.917	0.00	11.92	0.00
3.000	19.70	6.000	7.90	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.052 (i)
TIME TO PEAK (hrs)= 3.250
RUNOFF VOLUME (mm)= 43.032
TOTAL RAINFALL (mm)= 98.600
RUNOFF COEFFICIENT = 0.436

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

ADD HYD (0063)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1102):	2.00	0.052	3.25	43.03
+ ID2= 2 (2100):	24.78	0.890	3.00	80.46
ID = 3 (0063):	26.78	0.941	3.00	77.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V	V	I	SSSS	U	U	A	L	(v 6.2.2008)
V	V	I	SS	U	U	A	A	L
V	V	I	SS	U	U	A	A	A
V	V	I	SS	U	U	A	A	L
VV	I	SSSS	UUUU	A	A	LLLL		

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

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\d6e49500-947f-4114-914f-c9751e0960ed\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\d6e49500-947f-4114-914f-c9751e0960ed\scen

DATE: 04/05/2023

TIME: 11:32:34

USER:

COMMENTS: _____

** SIMULATION : 100-Year_12 hour SCS **

READ STORM	Filename: C:\Users\nnapper\AppData\Local\Temp\aa485c45-5c41-4f04-b9f7-20c929bcd42e\c663e9c8
Ptotal= 98.48 mm	Comments: 100-Year_12 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	2.50	3.00	3.90	6.00	17.70	9.00	3.40
0.25	2.50	3.25	3.90	6.25	17.70	9.25	3.40
0.50	2.50	3.50	3.90	6.50	7.90	9.50	3.40
0.75	2.50	3.75	3.90	6.75	7.90	9.75	3.40
1.00	2.50	4.00	5.90	7.00	5.90	10.00	2.00
1.25	2.50	4.25	5.90	7.25	5.90	10.25	2.00
1.50	2.50	4.50	7.90	7.50	5.90	10.50	2.00
1.75	2.50	4.75	7.90	7.75	5.90	10.75	2.00
2.00	3.00	5.00	11.80	8.00	3.40	11.00	2.00
2.25	3.00	5.25	11.80	8.25	3.40	11.25	2.00
2.50	3.00	5.50	47.20	8.50	3.40	11.50	2.00
2.75	3.00	5.75	129.90	8.75	3.40	11.75	2.00

CALIB					
NASHYD (2108)	Area (ha)=	1.46	Curve Number (CN)=	60.5	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
-----	U.H. Tp(hrs)=	0.67			

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	2.50	3.083	3.90	6.083	17.70	9.08	3.40
0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40
0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)=	0.061 (i)
TIME TO PEAK (hrs)=	6.583
RUNOFF VOLUME (mm)=	33.694
TOTAL RAINFALL (mm)=	98.475
RUNOFF COEFFICIENT	= 0.342

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

CALIB					
NASHYD (2101)	Area (ha)=	1.52	Curve Number (CN)=	67.1	
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00	
-----	U.H. Tp(hrs)=	0.16			

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	2.50	3.083	3.90	6.083	17.70	9.08	3.40
0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40
0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00

2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.200 (i)
 TIME TO PEAK (hrs)= 6.000
 RUNOFF VOLUME (mm)= 40.166
 TOTAL RAINFALL (mm)= 98.475
 RUNOFF COEFFICIENT = 0.408

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

CALIB							
NASHYD (2102)	Area (ha)=	3.87	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	2.50	3.083	3.90	6.083	17.70	9.08	3.40
0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40
0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00

1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.454 (i)
 TIME TO PEAK (hrs)= 6.083
 RUNOFF VOLUME (mm)= 40.271
 TOTAL RAINFALL (mm)= 98.475
 RUNOFF COEFFICIENT = 0.409

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

CALIB							
NASHYD (2103)	Area (ha)=	3.55	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	2.50	3.083	3.90	6.083	17.70	9.08	3.40
0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40

0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.416 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 40.271
TOTAL RAINFALL (mm)= 98.475
RUNOFF COEFFICIENT = 0.409

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

CALIB			
NASHYD (2104)	Area (ha)=	3.47	Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.27	

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

---- TRANSFORMED HYETOGRAPH ----			
TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.50	3.083	3.90	6.083	17.70	9.08	3.40
0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40
0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.333 (i)
TIME TO PEAK (hrs)= 6.167
RUNOFF VOLUME (mm)= 40.324
TOTAL RAINFALL (mm)= 98.475
RUNOFF COEFFICIENT = 0.409

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

CALIB
NASHYD (2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.37

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	2.50	3.083	3.90	6.083	17.70	9.08	3.40
0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40
0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.463 (i)
TIME TO PEAK (hrs)= 6.250
RUNOFF VOLUME (mm)= 40.341
TOTAL RAINFALL (mm)= 98.475
RUNOFF COEFFICIENT = 0.410

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

CALIB
STANDHYD (2106) | Area (ha)= 1.50
ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.75 0.75
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.20 1.20
Length (m)= 100.00 166.70
Mannings n = 0.013 0.250

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	2.50	3.083	3.90	6.083	17.70	9.08	3.40
0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40
0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00

2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Max.Eff.Inten.(mm/hr)= 129.90 72.75
over (min) 5.00 25.00
Storage Coeff. (min)= 2.18 (ii) 24.18 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.31 0.05

TOTALS

PEAK FLOW (cms)= 0.27 0.10 0.331 (iii)
TIME TO PEAK (hrs)= 6.00 6.25 6.00
RUNOFF VOLUME (mm)= 97.47 66.32 81.89
TOTAL RAINFALL (mm)= 98.47 98.47 98.47
RUNOFF COEFFICIENT = 0.99 0.67 0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107) | Area (ha)= 3.47
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	2.50	3.083	3.90	6.083	17.70	9.08	3.40
0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40
0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Max.Eff.Inten.(mm/hr)= 129.90 40.17
over (min) 5.00 60.00
Storage Coeff. (min)= 2.47 (ii) 59.96 (ii)
Unit Hyd. Tpeak (min)= 5.00 60.00
Unit Hyd. peak (cms)= 0.29 0.02

TOTALS

PEAK FLOW (cms)= 0.63 0.12 0.663 (iii)
TIME TO PEAK (hrs)= 6.00 6.83 6.00
RUNOFF VOLUME (mm)= 97.47 66.32 81.89
TOTAL RAINFALL (mm)= 98.47 98.47 98.47

RUNOFF COEFFICIENT = 0.99 0.67 0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	2.50	3.083	3.90	6.083	17.70	9.08	3.40
0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40
0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00

2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.136 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 42.944
TOTAL RAINFALL (mm)= 98.475
RUNOFF COEFFICIENT = 0.436

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

| ADD HYD (0013) |
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1103):	2.00	0.136	6.42	42.94
+ ID2= 2 (2101):	1.52	0.200	6.00	40.17
=====				
ID = 3 (0013):	3.52	0.289	6.08	41.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0013) |
3 + 2 = 1

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	3.52	0.289	6.08	41.74
+ ID2= 2 (2102):	3.87	0.454	6.08	40.27
=====				
ID = 1 (0013):	7.39	0.743	6.08	40.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0013) |
1 + 2 = 3

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

```
ID1= 1 ( 0013):    7.39    0.743    6.08    40.97
+ ID2= 2 ( 2103):    3.55    0.416    6.08    40.27
=====
ID = 3 ( 0013):    10.94    1.159    6.08    40.74
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
ID1= 3 ( 0013):    10.94    1.159    6.08    40.74
+ ID2= 2 ( 2104):    3.47    0.333    6.17    40.32
=====
ID = 1 ( 0013):    14.41    1.488    6.08    40.64
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 1 + 2 = 3 |
=====
ID1= 1 ( 0013):    14.41    1.488    6.08    40.64
+ ID2= 2 ( 2105):    5.95    0.463    6.25    40.34
=====
ID = 3 ( 0013):    20.36    1.889    6.08    40.56
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
ID1= 3 ( 0013):    20.36    1.889    6.08    40.56
+ ID2= 2 ( 2106):    1.50    0.331    6.00    81.89
=====
ID = 1 ( 0013):    21.86    2.027    6.08    43.39
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 1 + 2 = 3 |
=====
ID1= 1 ( 0013):    21.86    2.027    6.08    43.39
+ ID2= 2 ( 2107):    3.47    0.663    6.00    81.89
```

```
=====
ID = 3 ( 0013):    25.33    2.659    6.00    48.67
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
ID1= 3 ( 0013):    25.33    2.659    6.00    48.67
+ ID2= 2 ( 2108):    1.46    0.061    6.58    33.69
=====
ID = 1 ( 0013):    26.79    2.682    6.00    47.85
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| RESERVOIR( 0001) |
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
=====
OVERFLOW IS OFF
=====
OUTFLOW    STORAGE    |    OUTFLOW    STORAGE
(cms)      (ha.m.)    |    (cms)      (ha.m.)
0.0000     0.0000    |    1.1450     0.1930
0.3370     0.0770    |    1.3850     0.2270
0.6240     0.1200    |    1.6330     0.2640
0.8460     0.1510    |    0.0000     0.0000
=====
AREA        QPEAK        TPEAK        R.V.
(ha)        (cms)        (hrs)        (mm)
INFLOW : ID= 2 ( 0013)    26.790    2.682    6.00    47.85
OUTFLOW: ID= 1 ( 0001)    26.790    1.621    6.42    47.85
```

```
PEAK FLOW REDUCTION [Qout/Qin](%)= 60.46
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.2634
```

```
| CALIB
| NASHYD ( 1100) |
| ID= 1 DT= 5.0 min |
=====
Area (ha)= 24.78 Curve Number (CN)= 75.7
Ia (mm)= 6.20 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.70
```

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 2.50 | 3.083 3.90 | 6.083 17.70 | 9.08 3.40
```

0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40
0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 1.516 (i)
 TIME TO PEAK (hrs)= 6.583
 RUNOFF VOLUME (mm)= 48.988
 TOTAL RAINFALL (mm)= 98.475
 RUNOFF COEFFICIENT = 0.497

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

 | CALIB |
 | NASHYD (1101) | Area (ha)= 2.00 Curve Number (CN)= 69.4

|ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
 ----- U.H. Tp(hrs)= 0.49

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	2.50	3.083	3.90	6.083	17.70	9.08	3.40
0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40
0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.136 (i)
 TIME TO PEAK (hrs)= 6.417

RUNOFF VOLUME (mm)= 42.944
TOTAL RAINFALL (mm)= 98.475
RUNOFF COEFFICIENT = 0.436

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

```
-----
| ADD HYD ( 0061) |
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 1100): 24.78  1.516  6.58  48.99
+ ID2= 2 ( 1101): 2.00  0.136  6.42  42.94
=====
ID = 3 ( 0061): 26.78  1.642  6.58  48.54
-----
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| CALIB |
| STANDHYD ( 2100) |
| ID= 1 DT= 5.0 min |
-----
          Area (ha)= 24.78
          Total Imp(%)= 45.00   Dir. Conn.(%)= 45.00
```

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.15	13.63
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	406.45	800.00
Mannings n =	0.013	0.250

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  2.50   3.083  3.90   6.083  17.70   9.08   3.40
0.167  2.50   3.167  3.90   6.167  17.70   9.17   3.40
0.250  2.50   3.250  3.90   6.250  17.70   9.25   3.40
0.333  2.50   3.333  3.90   6.333  17.70   9.33   3.40
0.417  2.50   3.417  3.90   6.417  17.70   9.42   3.40
0.500  2.50   3.500  3.90   6.500  17.70   9.50   3.40
0.583  2.50   3.583  3.90   6.583  7.90    9.58   3.40
0.667  2.50   3.667  3.90   6.667  7.90    9.67   3.40
0.750  2.50   3.750  3.90   6.750  7.90    9.75   3.40
0.833  2.50   3.833  3.90   6.833  7.90    9.83   3.40
0.917  2.50   3.917  3.90   6.917  7.90    9.92   3.40
1.000  2.50   4.000  3.90   7.000  7.90    10.00  3.40
1.083  2.50   4.083  5.90   7.083  5.90    10.08  2.00
```

1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Max.Eff.Inten.(mm/hr)=	129.90	40.17
over (min)	5.00	70.00
Storage Coeff. (min)=	4.34 (ii)	65.67 (ii)
Unit Hyd. Tpeak (min)=	5.00	70.00
Unit Hyd. peak (cms)=	0.23	0.02

		TOTALS
PEAK FLOW (cms)=	3.94	0.87
TIME TO PEAK (hrs)=	6.00	7.00
RUNOFF VOLUME (mm)=	97.47	66.32
TOTAL RAINFALL (mm)=	98.47	98.47
RUNOFF COEFFICIENT =	0.99	0.67
		0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD ( 1102) |
| ID= 1 DT= 5.0 min |
-----
          Area (ha)= 2.00   Curve Number (CN)= 69.4
          Ia (mm)= 4.40   # of Linear Res.(N)= 3.00
          U.H. Tp(hrs)= 0.49
```

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	2.50	3.083	3.90	6.083	17.70	9.08	3.40
0.167	2.50	3.167	3.90	6.167	17.70	9.17	3.40
0.250	2.50	3.250	3.90	6.250	17.70	9.25	3.40
0.333	2.50	3.333	3.90	6.333	17.70	9.33	3.40
0.417	2.50	3.417	3.90	6.417	17.70	9.42	3.40
0.500	2.50	3.500	3.90	6.500	17.70	9.50	3.40
0.583	2.50	3.583	3.90	6.583	7.90	9.58	3.40
0.667	2.50	3.667	3.90	6.667	7.90	9.67	3.40
0.750	2.50	3.750	3.90	6.750	7.90	9.75	3.40
0.833	2.50	3.833	3.90	6.833	7.90	9.83	3.40
0.917	2.50	3.917	3.90	6.917	7.90	9.92	3.40
1.000	2.50	4.000	3.90	7.000	7.90	10.00	3.40
1.083	2.50	4.083	5.90	7.083	5.90	10.08	2.00
1.167	2.50	4.167	5.90	7.167	5.90	10.17	2.00
1.250	2.50	4.250	5.90	7.250	5.90	10.25	2.00
1.333	2.50	4.333	5.90	7.333	5.90	10.33	2.00
1.417	2.50	4.417	5.90	7.417	5.90	10.42	2.00
1.500	2.50	4.500	5.90	7.500	5.90	10.50	2.00
1.583	2.50	4.583	7.90	7.583	5.90	10.58	2.00
1.667	2.50	4.667	7.90	7.667	5.90	10.67	2.00
1.750	2.50	4.750	7.90	7.750	5.90	10.75	2.00
1.833	2.50	4.833	7.90	7.833	5.90	10.83	2.00
1.917	2.50	4.917	7.90	7.917	5.90	10.92	2.00
2.000	2.50	5.000	7.90	8.000	5.90	11.00	2.00
2.083	3.00	5.083	11.80	8.083	3.40	11.08	2.00
2.167	3.00	5.167	11.80	8.167	3.40	11.17	2.00
2.250	3.00	5.250	11.80	8.250	3.40	11.25	2.00
2.333	3.00	5.333	11.80	8.333	3.40	11.33	2.00
2.417	3.00	5.417	11.80	8.417	3.40	11.42	2.00
2.500	3.00	5.500	11.80	8.500	3.40	11.50	2.00
2.583	3.00	5.583	47.20	8.583	3.40	11.58	2.00
2.667	3.00	5.667	47.20	8.667	3.40	11.67	2.00
2.750	3.00	5.750	47.20	8.750	3.40	11.75	2.00
2.833	3.00	5.833	129.90	8.833	3.40	11.83	2.00
2.917	3.00	5.917	129.90	8.917	3.40	11.92	2.00
3.000	3.00	6.000	129.90	9.000	3.40	12.00	2.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.136 (i)

TIME TO PEAK (hrs)= 6.417

RUNOFF VOLUME (mm)= 42.944

TOTAL RAINFALL (mm)= 98.475

RUNOFF COEFFICIENT = 0.436

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

```

-----
| ADD HYD ( 0063)|
| 1 + 2 = 3 |
-----
                AREA   QPEAK   TPEAK   R.V.
                (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 1102):   2.00   0.136   6.42   42.94
+ ID2= 2 ( 2100):  24.78   4.187   6.00   80.34
=====
ID = 3 ( 0063):   26.78   4.259   6.00   77.55
=====

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
V  V  I  SSSSS  U  U  A  L          (v 6.2.2008)
V  V  I  SS    U  U  A  A  L
V  V  I  SS    U  U  A  A  A  L
V  V  I  SS    U  U  A  A  L
  VV  I  SSSSS  UUUUU  A  A  LLLLL
000  TTTT  TTTT  H  H  Y  Y  M  M  000  TM
O  O  T  T  H  H  Y  Y  MM  MM  O  O
O  O  T  T  H  H  Y  M  M  O  O
000  T  T  H  H  Y  M  M  000

```

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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\V02\voin.dat

Output filename:

C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\3d4c
b56c-cec2-417a-84cb-dadc2fc287cc\scen

Summary filename:

C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\3d4c
b56c-cec2-417a-84cb-dadc2fc287cc\scen

DATE: 04/05/2023

TIME: 11:32:34

USER:

COMMENTS: _____

** SIMULATION : 100-Year_24 hour SCS **

READ STORM	Filename: C:\Users\nnapper\AppData
	Local\Temp\
	aa485c45-5c41-4f04-b9f7-20c929bcd42e\2d0fe975
Ptotal=108.80 mm	Comments: 100-Year_24 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	1.20	6.00	2.20	12.00	15.70	18.00	2.00
0.25	1.20	6.25	2.20	12.25	15.70	18.25	2.00
0.50	1.20	6.50	2.20	12.50	8.00	18.50	2.00
0.75	1.20	6.75	2.20	12.75	8.00	18.75	2.00
1.00	1.20	7.00	2.20	13.00	1.50	19.00	2.00
1.25	1.20	7.25	2.20	13.25	1.50	19.25	2.00
1.50	1.20	7.50	2.20	13.50	8.90	19.50	2.00
1.75	1.20	7.75	2.20	13.75	8.90	19.75	2.00
2.00	1.40	8.00	2.90	14.00	3.30	20.00	1.30
2.25	1.40	8.25	2.90	14.25	3.30	20.25	1.30
2.50	1.40	8.50	2.90	14.50	3.30	20.50	1.30
2.75	1.40	8.75	2.90	14.75	3.30	20.75	1.30
3.00	1.40	9.00	3.50	15.00	3.30	21.00	1.30
3.25	1.40	9.25	3.50	15.25	3.30	21.25	1.30
3.50	1.40	9.50	3.90	15.50	3.30	21.50	1.30
3.75	1.40	9.75	3.90	15.75	3.30	21.75	1.30
4.00	1.70	10.00	5.00	16.00	2.00	22.00	1.30
4.25	1.70	10.25	5.00	16.25	2.00	22.25	1.30
4.50	1.70	10.50	6.70	16.50	2.00	22.50	1.30
4.75	1.70	10.75	6.70	16.75	2.00	22.75	1.30
5.00	1.70	11.00	10.40	17.00	2.00	23.00	1.30
5.25	1.70	11.25	10.40	17.25	2.00	23.25	1.30
5.50	1.70	11.50	45.20	17.50	2.00	23.50	1.30
5.75	1.70	11.75	120.00	17.75	2.00	23.75	1.30

CALIB					
NASHYD (2108)	Area (ha)=	1.46	Curve Number (CN)=	60.5	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.67			

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30

3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.061 (i)

TIME TO PEAK (hrs)= 12.583

RUNOFF VOLUME (mm)= 39.958

TOTAL RAINFALL (mm)= 108.800

RUNOFF COEFFICIENT = 0.367

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

CALIB	Area (ha)=	1.52	Curve Number (CN)=	67.1
NASHYD (2101)	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.16		

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30
3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30

3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.197 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 47.254
TOTAL RAINFALL (mm)= 108.800
RUNOFF COEFFICIENT = 0.434

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

CALIB			
NASHYD (2102)	Area (ha)=	3.87	Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.20	

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30
3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30

4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.445 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 47.377
TOTAL RAINFALL (mm)= 108.800
RUNOFF COEFFICIENT = 0.435

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

| CALIB |
| NASHYD (2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.20

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 | 6.083 2.20 | 12.083 15.71 | 18.08 2.00

0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30
3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30

4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.408 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 47.377
TOTAL RAINFALL (mm)= 108.800
RUNOFF COEFFICIENT = 0.435

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

| CALIB |
| NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.27

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00

0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30
3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30

4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.327 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 47.440
TOTAL RAINFALL (mm)= 108.800
RUNOFF COEFFICIENT = 0.436

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

CALIB			
NASHYD (2105)	Area (ha)=	5.95	Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.37	

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00

0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30
3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30

5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.457 (i)
 TIME TO PEAK (hrs)= 12.250
 RUNOFF VOLUME (mm)= 47.459
 TOTAL RAINFALL (mm)= 108.800
 RUNOFF COEFFICIENT = 0.436

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

CALIB	
STANDHYD (2106)	Area (ha)= 1.50
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00

0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30
3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30

4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Max.Eff.Inten.(mm/hr)= 120.00 69.88
over (min) 5.00 25.00
Storage Coeff. (min)= 2.25 (ii) 24.60 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.30 0.05

TOTALS
PEAK FLOW (cms)= 0.25 0.09 0.309 (iii)
TIME TO PEAK (hrs)= 12.00 12.25 12.00
RUNOFF VOLUME (mm)= 107.80 75.68 91.73
TOTAL RAINFALL (mm)= 108.80 108.80 108.80
RUNOFF COEFFICIENT = 0.99 0.70 0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107) | Area (ha)= 3.47
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30
3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30

3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Max.Eff.Inten.(mm/hr)=	120.00	38.31
over (min)	5.00	65.00
Storage Coeff. (min)=	2.55 (ii)	61.14 (ii)
Unit Hyd. Tpeak (min)=	5.00	65.00
Unit Hyd. peak (cms)=	0.29	0.02

PEAK FLOW (cms)=	0.58	0.11	0.613 (iii)
TIME TO PEAK (hrs)=	12.00	12.92	12.00
RUNOFF VOLUME (mm)=	107.80	75.68	91.73
TOTAL RAINFALL (mm)=	108.80	108.80	108.80
RUNOFF COEFFICIENT =	0.99	0.70	0.84

TOTALS

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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				
NASHYD (1103)	Area (ha)=	2.00	Curve Number (CN)=	69.4
ID= 1 DT= 5.0 min	Ia (mm)=	4.40	# of Linear Res.(N)=	3.00
-----	U.H. Tp(hrs)=	0.49		

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30

3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.134 (i)

TIME TO PEAK (hrs)= 12.333

RUNOFF VOLUME (mm)= 50.365

TOTAL RAINFALL (mm)= 108.800

RUNOFF COEFFICIENT = 0.463

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

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
AREA   QPEAK   TPEAK   R.V.
(ha)   (cms)   (hrs)   (mm)

```

```

ID1= 1 ( 1103):    2.00  0.134  12.33  50.37
+ ID2= 2 ( 2101):    1.52  0.197  12.00  47.25
=====
ID = 3 ( 0013):    3.52  0.285  12.08  49.02

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
AREA   QPEAK   TPEAK   R.V.
(ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):    3.52  0.285  12.08  49.02
+ ID2= 2 ( 2102):    3.87  0.445  12.08  47.38
=====
ID = 1 ( 0013):    7.39  0.730  12.08  48.16

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
AREA   QPEAK   TPEAK   R.V.
(ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):    7.39  0.730  12.08  48.16
+ ID2= 2 ( 2103):    3.55  0.408  12.08  47.38
=====
ID = 3 ( 0013):   10.94  1.138  12.08  47.91

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
AREA   QPEAK   TPEAK   R.V.
(ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):   10.94  1.138  12.08  47.91
+ ID2= 2 ( 2104):    3.47  0.327  12.08  47.44
=====
ID = 1 ( 0013):   14.41  1.465  12.08  47.79

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
AREA   QPEAK   TPEAK   R.V.
(ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):   14.41  1.465  12.08  47.79
+ ID2= 2 ( 2105):    5.95  0.457  12.25  47.46

```

=====

ID = 3 (0013):	20.36	1.869	12.08	47.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	20.36	1.869	12.08	47.70
+ ID2= 2 (2106):	1.50	0.309	12.00	91.73
=====				
ID = 1 (0013):	21.86	1.999	12.08	50.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	21.86	1.999	12.08	50.72
+ ID2= 2 (2107):	3.47	0.613	12.00	91.73
=====				
ID = 3 (0013):	25.33	2.593	12.00	56.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	25.33	2.593	12.00	56.34
+ ID2= 2 (2108):	1.46	0.061	12.58	39.96
=====				
ID = 1 (0013):	26.79	2.618	12.00	55.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0001)			
IN= 2---> OUT= 1			
DT= 5.0 min			

OVERFLOW IS OFF			
OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	1.1450	0.1930
0.3370	0.0770	1.3850	0.2270
0.6240	0.1200	1.6330	0.2640
0.8460	0.1510	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	2.618	12.00	55.44
OUTFLOW: ID= 1 (0001)	26.790	1.587	12.33	55.44

PEAK FLOW REDUCTION [Qout/Qin](%)= 60.64
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.2582

CALIB			
NASHYD (1100)			
ID= 1 DT= 5.0 min			

Area (ha)=	24.78	Curve Number (CN)=	75.7
Ia (mm)=	6.20	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.70		

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30

2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30
3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 1.493 (i)
TIME TO PEAK (hrs)= 12.583

RUNOFF VOLUME (mm)= 57.168
TOTAL RAINFALL (mm)= 108.800
RUNOFF COEFFICIENT = 0.525

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

| CALIB |
| NASHYD (1101) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.49

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30

2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30
3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.134 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 50.365
TOTAL RAINFALL (mm)= 108.800
RUNOFF COEFFICIENT = 0.463

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

ADD HYD (0061)				
1	2	3	AREA (ha)	QPEAK (cms)
ID1= 1	(1100):	24.78	1.493	12.58
+ ID2= 2	(1101):	2.00	0.134	12.33
=====				
ID = 3	(0061):	26.78	1.615	12.58
				56.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (2100)			
ID= 1	DT= 5.0 min	Area (ha)= 24.78	Total Imp(%)= 45.00
		Dir. Conn.(%)= 45.00	
IMPERVIOUS			
PERVIOUS (i)			
Surface Area	(ha)=	11.15	13.63
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	406.45	800.00
Mannings n	=	0.013	0.250

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00
1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00

1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30
3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30
5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30

5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Max.Eff.Inten.(mm/hr)=	120.00	38.31
over (min)	5.00	70.00
Storage Coeff. (min)=	4.47 (ii)	66.99 (ii)
Unit Hyd. Tpeak (min)=	5.00	70.00
Unit Hyd. peak (cms)=	0.23	0.02

TOTALS

PEAK FLOW (cms)=	3.63	0.83	3.886 (iii)
TIME TO PEAK (hrs)=	12.00	13.00	12.00
RUNOFF VOLUME (mm)=	107.80	75.68	90.13
TOTAL RAINFALL (mm)=	108.80	108.80	108.80
RUNOFF COEFFICIENT =	0.99	0.70	0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 85.0 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			
NASHYD (1102)			
Area (ha)=	2.00	Curve Number (CN)=	69.4
Ia (mm)=	4.40	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)= 0.49			

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	6.083	2.20	12.083	15.71	18.08	2.00
0.167	1.20	6.167	2.20	12.167	15.70	18.17	2.00
0.250	1.20	6.250	2.20	12.250	15.70	18.25	2.00
0.333	1.20	6.333	2.20	12.333	15.70	18.33	2.00
0.417	1.20	6.417	2.20	12.417	15.70	18.42	2.00
0.500	1.20	6.500	2.20	12.500	15.70	18.50	2.00
0.583	1.20	6.583	2.20	12.583	8.00	18.58	2.00
0.667	1.20	6.667	2.20	12.667	8.00	18.67	2.00
0.750	1.20	6.750	2.20	12.750	8.00	18.75	2.00
0.833	1.20	6.833	2.20	12.833	8.00	18.83	2.00
0.917	1.20	6.917	2.20	12.917	8.00	18.92	2.00

1.000	1.20	7.000	2.20	13.000	8.00	19.00	2.00
1.083	1.20	7.083	2.20	13.083	1.50	19.08	2.00
1.167	1.20	7.167	2.20	13.167	1.50	19.17	2.00
1.250	1.20	7.250	2.20	13.250	1.50	19.25	2.00
1.333	1.20	7.333	2.20	13.333	1.50	19.33	2.00
1.417	1.20	7.417	2.20	13.417	1.50	19.42	2.00
1.500	1.20	7.500	2.20	13.500	1.50	19.50	2.00
1.583	1.20	7.583	2.20	13.583	8.90	19.58	2.00
1.667	1.20	7.667	2.20	13.667	8.90	19.67	2.00
1.750	1.20	7.750	2.20	13.750	8.90	19.75	2.00
1.833	1.20	7.833	2.20	13.833	8.90	19.83	2.00
1.917	1.20	7.917	2.20	13.917	8.90	19.92	2.00
2.000	1.20	8.000	2.20	14.000	8.90	20.00	2.00
2.083	1.40	8.083	2.90	14.083	3.30	20.08	1.30
2.167	1.40	8.167	2.90	14.167	3.30	20.17	1.30
2.250	1.40	8.250	2.90	14.250	3.30	20.25	1.30
2.333	1.40	8.333	2.90	14.333	3.30	20.33	1.30
2.417	1.40	8.417	2.90	14.417	3.30	20.42	1.30
2.500	1.40	8.500	2.90	14.500	3.30	20.50	1.30
2.583	1.40	8.583	2.90	14.583	3.30	20.58	1.30
2.667	1.40	8.667	2.90	14.667	3.30	20.67	1.30
2.750	1.40	8.750	2.90	14.750	3.30	20.75	1.30
2.833	1.40	8.833	2.90	14.833	3.30	20.83	1.30
2.917	1.40	8.917	2.90	14.917	3.30	20.92	1.30
3.000	1.40	9.000	2.90	15.000	3.30	21.00	1.30
3.083	1.40	9.083	3.50	15.083	3.30	21.08	1.30
3.167	1.40	9.167	3.50	15.167	3.30	21.17	1.30
3.250	1.40	9.250	3.50	15.250	3.30	21.25	1.30
3.333	1.40	9.333	3.50	15.333	3.30	21.33	1.30
3.417	1.40	9.417	3.50	15.417	3.30	21.42	1.30
3.500	1.40	9.500	3.50	15.500	3.30	21.50	1.30
3.583	1.40	9.583	3.90	15.583	3.30	21.58	1.30
3.667	1.40	9.667	3.90	15.667	3.30	21.67	1.30
3.750	1.40	9.750	3.90	15.750	3.30	21.75	1.30
3.833	1.40	9.833	3.90	15.833	3.30	21.83	1.30
3.917	1.40	9.917	3.90	15.917	3.30	21.92	1.30
4.000	1.40	10.000	3.90	16.000	3.30	22.00	1.30
4.083	1.70	10.083	5.00	16.083	2.00	22.08	1.30
4.167	1.70	10.167	5.00	16.167	2.00	22.17	1.30
4.250	1.70	10.250	5.00	16.250	2.00	22.25	1.30
4.333	1.70	10.333	5.00	16.333	2.00	22.33	1.30
4.417	1.70	10.417	5.00	16.417	2.00	22.42	1.30
4.500	1.70	10.500	5.00	16.500	2.00	22.50	1.30
4.583	1.70	10.583	6.70	16.583	2.00	22.58	1.30
4.667	1.70	10.667	6.70	16.667	2.00	22.67	1.30
4.750	1.70	10.750	6.70	16.750	2.00	22.75	1.30
4.833	1.70	10.833	6.70	16.833	2.00	22.83	1.30
4.917	1.70	10.917	6.70	16.917	2.00	22.92	1.30
5.000	1.70	11.000	6.70	17.000	2.00	23.00	1.30
5.083	1.70	11.083	10.40	17.083	2.00	23.08	1.30

5.167	1.70	11.167	10.40	17.167	2.00	23.17	1.30
5.250	1.70	11.250	10.40	17.250	2.00	23.25	1.30
5.333	1.70	11.333	10.40	17.333	2.00	23.33	1.30
5.417	1.70	11.417	10.40	17.417	2.00	23.42	1.30
5.500	1.70	11.500	10.40	17.500	2.00	23.50	1.30
5.583	1.70	11.583	45.20	17.583	2.00	23.58	1.30
5.667	1.70	11.667	45.20	17.667	2.00	23.67	1.30
5.750	1.70	11.750	45.20	17.750	2.00	23.75	1.30
5.833	1.70	11.833	119.99	17.833	2.00	23.83	1.30
5.917	1.70	11.917	120.00	17.917	2.00	23.92	1.30
6.000	1.70	12.000	120.00	18.000	2.00	24.00	1.30

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.134 (i)

TIME TO PEAK (hrs)= 12.333

RUNOFF VOLUME (mm)= 50.365

TOTAL RAINFALL (mm)= 108.800

RUNOFF COEFFICIENT = 0.463

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

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-----
| ADD HYD ( 0063)|
| 1 + 2 = 3 |
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	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1102):	2.00	0.134	12.33	50.37
+ ID2= 2 (2100):	24.78	3.886	12.00	90.13
=====				
ID = 3 (0063):	26.78	3.962	12.00	87.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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=====
V V I SSSS U U A L (v 6.2.2008)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
VV I SSSS UUUU A A LLLLL

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

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***** DETAILED OUTPUT *****
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Output filename:

Summary filename:

TIME: 11:32:31

COMMENTS: _____

READ STORM	Filename: C:\Users\nnapper\AppData ata\Local\Temp\ aa485c45-5c41-4f04-b9f7-20c929bcd42e\de38487e
Ptotal= 68.60 mm	Comments: 10-Year 12 hour AES

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	8.90	3.00	10.30	6.00	2.10	9.00	0.00
0.17	8.90	3.17	10.30	6.17	2.10	9.17	0.00
0.33	8.90	3.33	10.30	6.33	2.10	9.33	0.00
0.50	8.90	3.50	10.30	6.50	2.10	9.50	0.00
0.67	8.90	3.67	10.30	6.67	2.10	9.67	0.00
0.83	8.90	3.83	10.30	6.83	2.10	9.83	0.00
1.00	17.80	4.00	9.60	7.00	0.70	10.00	0.00
1.17	17.80	4.17	9.60	7.17	0.70	10.17	0.00
1.33	17.80	4.33	9.60	7.33	0.70	10.33	0.00
1.50	17.80	4.50	9.60	7.50	0.70	10.50	0.00

1.67	17.80	4.67	9.60	7.67	0.70	10.67	0.00
1.83	17.80	4.83	9.60	7.83	0.70	10.83	0.00
2.00	13.70	5.00	5.50	8.00	0.00	11.00	0.00
2.17	13.70	5.17	5.50	8.17	0.00	11.17	0.00
2.33	13.70	5.33	5.50	8.33	0.00	11.33	0.00
2.50	13.70	5.50	5.50	8.50	0.00	11.50	0.00
2.67	13.70	5.67	5.50	8.67	0.00	11.67	0.00
2.83	13.70	5.83	5.50	8.83	0.00	11.83	0.00

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	8.90	3.083	10.30	6.083	2.10	9.08	0.00
0.167	8.90	3.167	10.30	6.167	2.10	9.17	0.00
0.250	8.90	3.250	10.30	6.250	2.10	9.25	0.00
0.333	8.90	3.333	10.30	6.333	2.10	9.33	0.00
0.417	8.90	3.417	10.30	6.417	2.10	9.42	0.00
0.500	8.90	3.500	10.30	6.500	2.10	9.50	0.00
0.583	8.90	3.583	10.30	6.583	2.10	9.58	0.00
0.667	8.90	3.667	10.30	6.667	2.10	9.67	0.00
0.750	8.90	3.750	10.30	6.750	2.10	9.75	0.00
0.833	8.90	3.833	10.30	6.833	2.10	9.83	0.00
0.917	8.90	3.917	10.30	6.917	2.10	9.92	0.00
1.000	8.90	4.000	10.30	7.000	2.10	10.00	0.00
1.083	17.80	4.083	9.60	7.083	0.70	10.08	0.00
1.167	17.80	4.167	9.60	7.167	0.70	10.17	0.00
1.250	17.80	4.250	9.60	7.250	0.70	10.25	0.00
1.333	17.80	4.333	9.60	7.333	0.70	10.33	0.00
1.417	17.80	4.417	9.60	7.417	0.70	10.42	0.00
1.500	17.80	4.500	9.60	7.500	0.70	10.50	0.00
1.583	17.80	4.583	9.60	7.583	0.70	10.58	0.00
1.667	17.80	4.667	9.60	7.667	0.70	10.67	0.00
1.750	17.80	4.750	9.60	7.750	0.70	10.75	0.00
1.833	17.80	4.833	9.60	7.833	0.70	10.83	0.00
1.917	17.80	4.917	9.60	7.917	0.70	10.92	0.00
2.000	17.80	5.000	9.60	8.000	0.70	11.00	0.00
2.083	13.70	5.083	5.50	8.083	0.00	11.08	0.00
2.167	13.70	5.167	5.50	8.167	0.00	11.17	0.00
2.250	13.70	5.250	5.50	8.250	0.00	11.25	0.00

2.333	13.70	5.333	5.50	8.333	0.00	11.33	0.00
2.417	13.70	5.417	5.50	8.417	0.00	11.42	0.00
2.500	13.70	5.500	5.50	8.500	0.00	11.50	0.00
2.583	13.70	5.583	5.50	8.583	0.00	11.58	0.00
2.667	13.70	5.667	5.50	8.667	0.00	11.67	0.00
2.750	13.70	5.750	5.50	8.750	0.00	11.75	0.00
2.833	13.70	5.833	5.50	8.833	0.00	11.83	0.00
2.917	13.70	5.917	5.50	8.917	0.00	11.92	0.00
3.000	13.70	6.000	5.50	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.016 (i)
TIME TO PEAK (hrs)= 5.083
RUNOFF VOLUME (mm)= 17.629
TOTAL RAINFALL (mm)= 68.600
RUNOFF COEFFICIENT = 0.257

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

| CALIB |
| NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.16

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	8.90	3.083	10.30	6.083	2.10	9.08	0.00
0.167	8.90	3.167	10.30	6.167	2.10	9.17	0.00
0.250	8.90	3.250	10.30	6.250	2.10	9.25	0.00
0.333	8.90	3.333	10.30	6.333	2.10	9.33	0.00
0.417	8.90	3.417	10.30	6.417	2.10	9.42	0.00
0.500	8.90	3.500	10.30	6.500	2.10	9.50	0.00
0.583	8.90	3.583	10.30	6.583	2.10	9.58	0.00
0.667	8.90	3.667	10.30	6.667	2.10	9.67	0.00
0.750	8.90	3.750	10.30	6.750	2.10	9.75	0.00
0.833	8.90	3.833	10.30	6.833	2.10	9.83	0.00
0.917	8.90	3.917	10.30	6.917	2.10	9.92	0.00
1.000	8.90	4.000	10.30	7.000	2.10	10.00	0.00
1.083	17.80	4.083	9.60	7.083	0.70	10.08	0.00
1.167	17.80	4.167	9.60	7.167	0.70	10.17	0.00
1.250	17.80	4.250	9.60	7.250	0.70	10.25	0.00
1.333	17.80	4.333	9.60	7.333	0.70	10.33	0.00
1.417	17.80	4.417	9.60	7.417	0.70	10.42	0.00

1.500	17.80	4.500	9.60	7.500	0.70	10.50	0.00
1.583	17.80	4.583	9.60	7.583	0.70	10.58	0.00
1.667	17.80	4.667	9.60	7.667	0.70	10.67	0.00
1.750	17.80	4.750	9.60	7.750	0.70	10.75	0.00
1.833	17.80	4.833	9.60	7.833	0.70	10.83	0.00
1.917	17.80	4.917	9.60	7.917	0.70	10.92	0.00
2.000	17.80	5.000	9.60	8.000	0.70	11.00	0.00
2.083	13.70	5.083	5.50	8.083	0.00	11.08	0.00
2.167	13.70	5.167	5.50	8.167	0.00	11.17	0.00
2.250	13.70	5.250	5.50	8.250	0.00	11.25	0.00
2.333	13.70	5.333	5.50	8.333	0.00	11.33	0.00
2.417	13.70	5.417	5.50	8.417	0.00	11.42	0.00
2.500	13.70	5.500	5.50	8.500	0.00	11.50	0.00
2.583	13.70	5.583	5.50	8.583	0.00	11.58	0.00
2.667	13.70	5.667	5.50	8.667	0.00	11.67	0.00
2.750	13.70	5.750	5.50	8.750	0.00	11.75	0.00
2.833	13.70	5.833	5.50	8.833	0.00	11.83	0.00
2.917	13.70	5.917	5.50	8.917	0.00	11.92	0.00
3.000	13.70	6.000	5.50	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.022 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 21.627
TOTAL RAINFALL (mm)= 68.600
RUNOFF COEFFICIENT = 0.315

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

| CALIB |
| NASHYD (2102) | Area (ha)= 3.87 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.20

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	8.90	3.083	10.30	6.083	2.10	9.08	0.00
0.167	8.90	3.167	10.30	6.167	2.10	9.17	0.00
0.250	8.90	3.250	10.30	6.250	2.10	9.25	0.00
0.333	8.90	3.333	10.30	6.333	2.10	9.33	0.00
0.417	8.90	3.417	10.30	6.417	2.10	9.42	0.00
0.500	8.90	3.500	10.30	6.500	2.10	9.50	0.00
0.583	8.90	3.583	10.30	6.583	2.10	9.58	0.00

0.667	8.90	3.667	10.30	6.667	2.10	9.67	0.00
0.750	8.90	3.750	10.30	6.750	2.10	9.75	0.00
0.833	8.90	3.833	10.30	6.833	2.10	9.83	0.00
0.917	8.90	3.917	10.30	6.917	2.10	9.92	0.00
1.000	8.90	4.000	10.30	7.000	2.10	10.00	0.00
1.083	17.80	4.083	9.60	7.083	0.70	10.08	0.00
1.167	17.80	4.167	9.60	7.167	0.70	10.17	0.00
1.250	17.80	4.250	9.60	7.250	0.70	10.25	0.00
1.333	17.80	4.333	9.60	7.333	0.70	10.33	0.00
1.417	17.80	4.417	9.60	7.417	0.70	10.42	0.00
1.500	17.80	4.500	9.60	7.500	0.70	10.50	0.00
1.583	17.80	4.583	9.60	7.583	0.70	10.58	0.00
1.667	17.80	4.667	9.60	7.667	0.70	10.67	0.00
1.750	17.80	4.750	9.60	7.750	0.70	10.75	0.00
1.833	17.80	4.833	9.60	7.833	0.70	10.83	0.00
1.917	17.80	4.917	9.60	7.917	0.70	10.92	0.00
2.000	17.80	5.000	9.60	8.000	0.70	11.00	0.00
2.083	13.70	5.083	5.50	8.083	0.00	11.08	0.00
2.167	13.70	5.167	5.50	8.167	0.00	11.17	0.00
2.250	13.70	5.250	5.50	8.250	0.00	11.25	0.00
2.333	13.70	5.333	5.50	8.333	0.00	11.33	0.00
2.417	13.70	5.417	5.50	8.417	0.00	11.42	0.00
2.500	13.70	5.500	5.50	8.500	0.00	11.50	0.00
2.583	13.70	5.583	5.50	8.583	0.00	11.58	0.00
2.667	13.70	5.667	5.50	8.667	0.00	11.67	0.00
2.750	13.70	5.750	5.50	8.750	0.00	11.75	0.00
2.833	13.70	5.833	5.50	8.833	0.00	11.83	0.00
2.917	13.70	5.917	5.50	8.917	0.00	11.92	0.00
3.000	13.70	6.000	5.50	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.054 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 21.683
TOTAL RAINFALL (mm)= 68.600
RUNOFF COEFFICIENT = 0.316

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

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| CALIB |
| NASHYD ( 2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.20

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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	8.90	3.083	10.30	6.083	2.10	9.08	0.00
0.167	8.90	3.167	10.30	6.167	2.10	9.17	0.00
0.250	8.90	3.250	10.30	6.250	2.10	9.25	0.00
0.333	8.90	3.333	10.30	6.333	2.10	9.33	0.00
0.417	8.90	3.417	10.30	6.417	2.10	9.42	0.00
0.500	8.90	3.500	10.30	6.500	2.10	9.50	0.00
0.583	8.90	3.583	10.30	6.583	2.10	9.58	0.00
0.667	8.90	3.667	10.30	6.667	2.10	9.67	0.00
0.750	8.90	3.750	10.30	6.750	2.10	9.75	0.00
0.833	8.90	3.833	10.30	6.833	2.10	9.83	0.00
0.917	8.90	3.917	10.30	6.917	2.10	9.92	0.00
1.000	8.90	4.000	10.30	7.000	2.10	10.00	0.00
1.083	17.80	4.083	9.60	7.083	0.70	10.08	0.00
1.167	17.80	4.167	9.60	7.167	0.70	10.17	0.00
1.250	17.80	4.250	9.60	7.250	0.70	10.25	0.00
1.333	17.80	4.333	9.60	7.333	0.70	10.33	0.00
1.417	17.80	4.417	9.60	7.417	0.70	10.42	0.00
1.500	17.80	4.500	9.60	7.500	0.70	10.50	0.00
1.583	17.80	4.583	9.60	7.583	0.70	10.58	0.00
1.667	17.80	4.667	9.60	7.667	0.70	10.67	0.00
1.750	17.80	4.750	9.60	7.750	0.70	10.75	0.00
1.833	17.80	4.833	9.60	7.833	0.70	10.83	0.00
1.917	17.80	4.917	9.60	7.917	0.70	10.92	0.00
2.000	17.80	5.000	9.60	8.000	0.70	11.00	0.00
2.083	13.70	5.083	5.50	8.083	0.00	11.08	0.00
2.167	13.70	5.167	5.50	8.167	0.00	11.17	0.00
2.250	13.70	5.250	5.50	8.250	0.00	11.25	0.00
2.333	13.70	5.333	5.50	8.333	0.00	11.33	0.00
2.417	13.70	5.417	5.50	8.417	0.00	11.42	0.00
2.500	13.70	5.500	5.50	8.500	0.00	11.50	0.00
2.583	13.70	5.583	5.50	8.583	0.00	11.58	0.00
2.667	13.70	5.667	5.50	8.667	0.00	11.67	0.00
2.750	13.70	5.750	5.50	8.750	0.00	11.75	0.00
2.833	13.70	5.833	5.50	8.833	0.00	11.83	0.00
2.917	13.70	5.917	5.50	8.917	0.00	11.92	0.00
3.000	13.70	6.000	5.50	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.050 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 21.683
TOTAL RAINFALL (mm)= 68.600
RUNOFF COEFFICIENT = 0.316

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

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| CALIB                                     |
| NASHYD ( 2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.27

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

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----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 8.90 3.083 10.30 6.083 2.10 9.08 0.00
0.167 8.90 3.167 10.30 6.167 2.10 9.17 0.00
0.250 8.90 3.250 10.30 6.250 2.10 9.25 0.00
0.333 8.90 3.333 10.30 6.333 2.10 9.33 0.00
0.417 8.90 3.417 10.30 6.417 2.10 9.42 0.00
0.500 8.90 3.500 10.30 6.500 2.10 9.50 0.00
0.583 8.90 3.583 10.30 6.583 2.10 9.58 0.00
0.667 8.90 3.667 10.30 6.667 2.10 9.67 0.00
0.750 8.90 3.750 10.30 6.750 2.10 9.75 0.00
0.833 8.90 3.833 10.30 6.833 2.10 9.83 0.00
0.917 8.90 3.917 10.30 6.917 2.10 9.92 0.00
1.000 8.90 4.000 10.30 7.000 2.10 10.00 0.00
1.083 17.80 4.083 9.60 7.083 0.70 10.08 0.00
1.167 17.80 4.167 9.60 7.167 0.70 10.17 0.00
1.250 17.80 4.250 9.60 7.250 0.70 10.25 0.00
1.333 17.80 4.333 9.60 7.333 0.70 10.33 0.00
1.417 17.80 4.417 9.60 7.417 0.70 10.42 0.00
1.500 17.80 4.500 9.60 7.500 0.70 10.50 0.00
1.583 17.80 4.583 9.60 7.583 0.70 10.58 0.00
1.667 17.80 4.667 9.60 7.667 0.70 10.67 0.00
1.750 17.80 4.750 9.60 7.750 0.70 10.75 0.00
1.833 17.80 4.833 9.60 7.833 0.70 10.83 0.00
1.917 17.80 4.917 9.60 7.917 0.70 10.92 0.00
2.000 17.80 5.000 9.60 8.000 0.70 11.00 0.00
2.083 13.70 5.083 5.50 8.083 0.00 11.08 0.00
2.167 13.70 5.167 5.50 8.167 0.00 11.17 0.00
2.250 13.70 5.250 5.50 8.250 0.00 11.25 0.00
2.333 13.70 5.333 5.50 8.333 0.00 11.33 0.00
2.417 13.70 5.417 5.50 8.417 0.00 11.42 0.00
2.500 13.70 5.500 5.50 8.500 0.00 11.50 0.00
2.583 13.70 5.583 5.50 8.583 0.00 11.58 0.00
2.667 13.70 5.667 5.50 8.667 0.00 11.67 0.00
2.750 13.70 5.750 5.50 8.750 0.00 11.75 0.00
2.833 13.70 5.833 5.50 8.833 0.00 11.83 0.00
2.917 13.70 5.917 5.50 8.917 0.00 11.92 0.00
3.000 13.70 6.000 5.50 9.000 0.00 12.00 0.00

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Unit Hyd Qpeak (cms)= 0.491

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PEAK FLOW (cms)= 0.048 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 21.712
TOTAL RAINFALL (mm)= 68.600
RUNOFF COEFFICIENT = 0.317

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

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-----
| CALIB                                     |
| NASHYD ( 2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.37

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

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----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 8.90 3.083 10.30 6.083 2.10 9.08 0.00
0.167 8.90 3.167 10.30 6.167 2.10 9.17 0.00
0.250 8.90 3.250 10.30 6.250 2.10 9.25 0.00
0.333 8.90 3.333 10.30 6.333 2.10 9.33 0.00
0.417 8.90 3.417 10.30 6.417 2.10 9.42 0.00
0.500 8.90 3.500 10.30 6.500 2.10 9.50 0.00
0.583 8.90 3.583 10.30 6.583 2.10 9.58 0.00
0.667 8.90 3.667 10.30 6.667 2.10 9.67 0.00
0.750 8.90 3.750 10.30 6.750 2.10 9.75 0.00
0.833 8.90 3.833 10.30 6.833 2.10 9.83 0.00
0.917 8.90 3.917 10.30 6.917 2.10 9.92 0.00
1.000 8.90 4.000 10.30 7.000 2.10 10.00 0.00
1.083 17.80 4.083 9.60 7.083 0.70 10.08 0.00
1.167 17.80 4.167 9.60 7.167 0.70 10.17 0.00
1.250 17.80 4.250 9.60 7.250 0.70 10.25 0.00
1.333 17.80 4.333 9.60 7.333 0.70 10.33 0.00
1.417 17.80 4.417 9.60 7.417 0.70 10.42 0.00
1.500 17.80 4.500 9.60 7.500 0.70 10.50 0.00
1.583 17.80 4.583 9.60 7.583 0.70 10.58 0.00
1.667 17.80 4.667 9.60 7.667 0.70 10.67 0.00
1.750 17.80 4.750 9.60 7.750 0.70 10.75 0.00
1.833 17.80 4.833 9.60 7.833 0.70 10.83 0.00
1.917 17.80 4.917 9.60 7.917 0.70 10.92 0.00
2.000 17.80 5.000 9.60 8.000 0.70 11.00 0.00
2.083 13.70 5.083 5.50 8.083 0.00 11.08 0.00
2.167 13.70 5.167 5.50 8.167 0.00 11.17 0.00
2.250 13.70 5.250 5.50 8.250 0.00 11.25 0.00

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2.333	13.70	5.333	5.50	8.333	0.00	11.33	0.00
2.417	13.70	5.417	5.50	8.417	0.00	11.42	0.00
2.500	13.70	5.500	5.50	8.500	0.00	11.50	0.00
2.583	13.70	5.583	5.50	8.583	0.00	11.58	0.00
2.667	13.70	5.667	5.50	8.667	0.00	11.67	0.00
2.750	13.70	5.750	5.50	8.750	0.00	11.75	0.00
2.833	13.70	5.833	5.50	8.833	0.00	11.83	0.00
2.917	13.70	5.917	5.50	8.917	0.00	11.92	0.00
3.000	13.70	6.000	5.50	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.079 (i)
TIME TO PEAK (hrs)= 3.167
RUNOFF VOLUME (mm)= 21.721
TOTAL RAINFALL (mm)= 68.600
RUNOFF COEFFICIENT = 0.317

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

| CALIB |
| STANDHYD (2106) | Area (ha)= 1.50
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	8.90	3.083	10.30	6.083	2.10	9.08	0.00
0.167	8.90	3.167	10.30	6.167	2.10	9.17	0.00
0.250	8.90	3.250	10.30	6.250	2.10	9.25	0.00
0.333	8.90	3.333	10.30	6.333	2.10	9.33	0.00
0.417	8.90	3.417	10.30	6.417	2.10	9.42	0.00
0.500	8.90	3.500	10.30	6.500	2.10	9.50	0.00
0.583	8.90	3.583	10.30	6.583	2.10	9.58	0.00
0.667	8.90	3.667	10.30	6.667	2.10	9.67	0.00
0.750	8.90	3.750	10.30	6.750	2.10	9.75	0.00
0.833	8.90	3.833	10.30	6.833	2.10	9.83	0.00
0.917	8.90	3.917	10.30	6.917	2.10	9.92	0.00

1.000	8.90	4.000	10.30	7.000	2.10	10.00	0.00
1.083	17.80	4.083	9.60	7.083	0.70	10.08	0.00
1.167	17.80	4.167	9.60	7.167	0.70	10.17	0.00
1.250	17.80	4.250	9.60	7.250	0.70	10.25	0.00
1.333	17.80	4.333	9.60	7.333	0.70	10.33	0.00
1.417	17.80	4.417	9.60	7.417	0.70	10.42	0.00
1.500	17.80	4.500	9.60	7.500	0.70	10.50	0.00
1.583	17.80	4.583	9.60	7.583	0.70	10.58	0.00
1.667	17.80	4.667	9.60	7.667	0.70	10.67	0.00
1.750	17.80	4.750	9.60	7.750	0.70	10.75	0.00
1.833	17.80	4.833	9.60	7.833	0.70	10.83	0.00
1.917	17.80	4.917	9.60	7.917	0.70	10.92	0.00
2.000	17.80	5.000	9.60	8.000	0.70	11.00	0.00
2.083	13.70	5.083	5.50	8.083	0.00	11.08	0.00
2.167	13.70	5.167	5.50	8.167	0.00	11.17	0.00
2.250	13.70	5.250	5.50	8.250	0.00	11.25	0.00
2.333	13.70	5.333	5.50	8.333	0.00	11.33	0.00
2.417	13.70	5.417	5.50	8.417	0.00	11.42	0.00
2.500	13.70	5.500	5.50	8.500	0.00	11.50	0.00
2.583	13.70	5.583	5.50	8.583	0.00	11.58	0.00
2.667	13.70	5.667	5.50	8.667	0.00	11.67	0.00
2.750	13.70	5.750	5.50	8.750	0.00	11.75	0.00
2.833	13.70	5.833	5.50	8.833	0.00	11.83	0.00
2.917	13.70	5.917	5.50	8.917	0.00	11.92	0.00
3.000	13.70	6.000	5.50	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 17.80 9.09
over (min) 5.00 60.00
Storage Coeff. (min)= 4.82 (ii) 55.38 (ii)
Unit Hyd. Tpeak (min)= 5.00 60.00
Unit Hyd. peak (cms)= 0.22 0.02

TOTALS

PEAK FLOW (cms)=	0.04	0.02	0.044 (iii)
TIME TO PEAK (hrs)=	2.00	3.83	2.00
RUNOFF VOLUME (mm)=	67.60	40.23	53.89
TOTAL RAINFALL (mm)=	68.60	68.60	68.60
RUNOFF COEFFICIENT =	0.99	0.59	0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107) | Area (ha)= 3.47

|ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	8.90	3.083	10.30	6.083	2.10	9.08	0.00
0.167	8.90	3.167	10.30	6.167	2.10	9.17	0.00
0.250	8.90	3.250	10.30	6.250	2.10	9.25	0.00
0.333	8.90	3.333	10.30	6.333	2.10	9.33	0.00
0.417	8.90	3.417	10.30	6.417	2.10	9.42	0.00
0.500	8.90	3.500	10.30	6.500	2.10	9.50	0.00
0.583	8.90	3.583	10.30	6.583	2.10	9.58	0.00
0.667	8.90	3.667	10.30	6.667	2.10	9.67	0.00
0.750	8.90	3.750	10.30	6.750	2.10	9.75	0.00
0.833	8.90	3.833	10.30	6.833	2.10	9.83	0.00
0.917	8.90	3.917	10.30	6.917	2.10	9.92	0.00
1.000	8.90	4.000	10.30	7.000	2.10	10.00	0.00
1.083	17.80	4.083	9.60	7.083	0.70	10.08	0.00
1.167	17.80	4.167	9.60	7.167	0.70	10.17	0.00
1.250	17.80	4.250	9.60	7.250	0.70	10.25	0.00
1.333	17.80	4.333	9.60	7.333	0.70	10.33	0.00
1.417	17.80	4.417	9.60	7.417	0.70	10.42	0.00
1.500	17.80	4.500	9.60	7.500	0.70	10.50	0.00
1.583	17.80	4.583	9.60	7.583	0.70	10.58	0.00
1.667	17.80	4.667	9.60	7.667	0.70	10.67	0.00
1.750	17.80	4.750	9.60	7.750	0.70	10.75	0.00
1.833	17.80	4.833	9.60	7.833	0.70	10.83	0.00
1.917	17.80	4.917	9.60	7.917	0.70	10.92	0.00
2.000	17.80	5.000	9.60	8.000	0.70	11.00	0.00
2.083	13.70	5.083	5.50	8.083	0.00	11.08	0.00
2.167	13.70	5.167	5.50	8.167	0.00	11.17	0.00
2.250	13.70	5.250	5.50	8.250	0.00	11.25	0.00
2.333	13.70	5.333	5.50	8.333	0.00	11.33	0.00
2.417	13.70	5.417	5.50	8.417	0.00	11.42	0.00
2.500	13.70	5.500	5.50	8.500	0.00	11.50	0.00
2.583	13.70	5.583	5.50	8.583	0.00	11.58	0.00
2.667	13.70	5.667	5.50	8.667	0.00	11.67	0.00
2.750	13.70	5.750	5.50	8.750	0.00	11.75	0.00
2.833	13.70	5.833	5.50	8.833	0.00	11.83	0.00
2.917	13.70	5.917	5.50	8.917	0.00	11.92	0.00

3.000 13.70 | 6.000 5.50 | 9.000 0.00 | 12.00 0.00

Max.Eff.Inten.(mm/hr)=	17.80	9.11
over (min)	5.00	110.00
Storage Coeff. (min)=	5.48 (ii)	109.56 (ii)
Unit Hyd. Tpeak (min)=	5.00	110.00
Unit Hyd. peak (cms)=	0.20	0.01

TOTALS

PEAK FLOW (cms)=	0.09	0.03	0.091 (iii)
TIME TO PEAK (hrs)=	2.00	5.58	2.00
RUNOFF VOLUME (mm)=	67.60	40.23	53.90
TOTAL RAINFALL (mm)=	68.60	68.60	68.60
RUNOFF COEFFICIENT =	0.99	0.59	0.79

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 85.0 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	
NASHYD (1103)	Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min	Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)=	0.49

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	8.90	3.083	10.30	6.083	2.10	9.08	0.00
0.167	8.90	3.167	10.30	6.167	2.10	9.17	0.00
0.250	8.90	3.250	10.30	6.250	2.10	9.25	0.00
0.333	8.90	3.333	10.30	6.333	2.10	9.33	0.00
0.417	8.90	3.417	10.30	6.417	2.10	9.42	0.00
0.500	8.90	3.500	10.30	6.500	2.10	9.50	0.00
0.583	8.90	3.583	10.30	6.583	2.10	9.58	0.00
0.667	8.90	3.667	10.30	6.667	2.10	9.67	0.00
0.750	8.90	3.750	10.30	6.750	2.10	9.75	0.00
0.833	8.90	3.833	10.30	6.833	2.10	9.83	0.00
0.917	8.90	3.917	10.30	6.917	2.10	9.92	0.00
1.000	8.90	4.000	10.30	7.000	2.10	10.00	0.00
1.083	17.80	4.083	9.60	7.083	0.70	10.08	0.00
1.167	17.80	4.167	9.60	7.167	0.70	10.17	0.00
1.250	17.80	4.250	9.60	7.250	0.70	10.25	0.00
1.333	17.80	4.333	9.60	7.333	0.70	10.33	0.00

1.417	17.80	4.417	9.60	7.417	0.70	10.42	0.00
1.500	17.80	4.500	9.60	7.500	0.70	10.50	0.00
1.583	17.80	4.583	9.60	7.583	0.70	10.58	0.00
1.667	17.80	4.667	9.60	7.667	0.70	10.67	0.00
1.750	17.80	4.750	9.60	7.750	0.70	10.75	0.00
1.833	17.80	4.833	9.60	7.833	0.70	10.83	0.00
1.917	17.80	4.917	9.60	7.917	0.70	10.92	0.00
2.000	17.80	5.000	9.60	8.000	0.70	11.00	0.00
2.083	13.70	5.083	5.50	8.083	0.00	11.08	0.00
2.167	13.70	5.167	5.50	8.167	0.00	11.17	0.00
2.250	13.70	5.250	5.50	8.250	0.00	11.25	0.00
2.333	13.70	5.333	5.50	8.333	0.00	11.33	0.00
2.417	13.70	5.417	5.50	8.417	0.00	11.42	0.00
2.500	13.70	5.500	5.50	8.500	0.00	11.50	0.00
2.583	13.70	5.583	5.50	8.583	0.00	11.58	0.00
2.667	13.70	5.667	5.50	8.667	0.00	11.67	0.00
2.750	13.70	5.750	5.50	8.750	0.00	11.75	0.00
2.833	13.70	5.833	5.50	8.833	0.00	11.83	0.00
2.917	13.70	5.917	5.50	8.917	0.00	11.92	0.00
3.000	13.70	6.000	5.50	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.028 (i)
TIME TO PEAK (hrs)= 5.000
RUNOFF VOLUME (mm)= 23.391
TOTAL RAINFALL (mm)= 68.600
RUNOFF COEFFICIENT = 0.341

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

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1103):	2.00	0.028	5.00	23.39
+ ID2= 2 (2101):	1.52	0.022	3.00	21.63
=====				
ID = 3 (0013):	3.52	0.049	5.00	22.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	3.52	0.049	5.00	22.63

+ ID2= 2 (2102):	3.87	0.054	3.00	21.68
=====				
ID = 1 (0013):	7.39	0.103	3.00	22.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	7.39	0.103	3.00	22.13
+ ID2= 2 (2103):	3.55	0.050	3.00	21.68
=====				
ID = 3 (0013):	10.94	0.152	3.00	21.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	10.94	0.152	3.00	21.99
+ ID2= 2 (2104):	3.47	0.048	3.00	21.71
=====				
ID = 1 (0013):	14.41	0.200	3.00	21.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	14.41	0.200	3.00	21.92
+ ID2= 2 (2105):	5.95	0.079	3.17	21.72
=====				
ID = 3 (0013):	20.36	0.278	3.08	21.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	20.36	0.278	3.08	21.86
+ ID2= 2 (2106):	1.50	0.044	2.00	53.89
=====				

ID = 1 (0013): 21.86 0.320 3.00 24.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013): 21.86 0.320 3.00 24.06
+ ID2= 2 ( 2107): 3.47 0.091 2.00 53.90
=====
ID = 3 ( 0013): 25.33 0.404 3.00 28.15
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013): 25.33 0.404 3.00 28.15
+ ID2= 2 ( 2108): 1.46 0.016 5.08 17.63
=====
ID = 1 ( 0013): 26.79 0.416 3.00 27.57
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| RESERVOIR( 0001)|
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
-----
          OVERFLOW IS OFF
          OUTFLOW   STORAGE   OUTFLOW   STORAGE
          (cms)     (ha.m.)   (cms)     (ha.m.)
0.0000  0.0000 | 1.1450  0.1930
0.3370  0.0770 | 1.3850  0.2270
0.6240  0.1200 | 1.6330  0.2640
0.8460  0.1510 | 0.0000  0.0000

          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
INFLOW : ID= 2 ( 0013) 26.790 0.416 3.00 27.57
OUTFLOW: ID= 1 ( 0001) 26.790 0.396 5.00 27.57

          PEAK FLOW REDUCTION [Qout/Qin](%)= 95.08
          TIME SHIFT OF PEAK FLOW (min)=120.00
          MAXIMUM STORAGE USED (ha.m.)= 0.0859
-----
```

| CALIB |

| NASHYD (1100)| Area (ha)= 24.78 Curve Number (CN)= 75.7
| ID= 1 DT= 5.0 min | Ia (mm)= 6.20 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.70

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 8.90 3.083 10.30 6.083 2.10 9.08 0.00
0.167 8.90 3.167 10.30 6.167 2.10 9.17 0.00
0.250 8.90 3.250 10.30 6.250 2.10 9.25 0.00
0.333 8.90 3.333 10.30 6.333 2.10 9.33 0.00
0.417 8.90 3.417 10.30 6.417 2.10 9.42 0.00
0.500 8.90 3.500 10.30 6.500 2.10 9.50 0.00
0.583 8.90 3.583 10.30 6.583 2.10 9.58 0.00
0.667 8.90 3.667 10.30 6.667 2.10 9.67 0.00
0.750 8.90 3.750 10.30 6.750 2.10 9.75 0.00
0.833 8.90 3.833 10.30 6.833 2.10 9.83 0.00
0.917 8.90 3.917 10.30 6.917 2.10 9.92 0.00
1.000 8.90 4.000 10.30 7.000 2.10 10.00 0.00
1.083 17.80 4.083 9.60 7.083 0.70 10.08 0.00
1.167 17.80 4.167 9.60 7.167 0.70 10.17 0.00
1.250 17.80 4.250 9.60 7.250 0.70 10.25 0.00
1.333 17.80 4.333 9.60 7.333 0.70 10.33 0.00
1.417 17.80 4.417 9.60 7.417 0.70 10.42 0.00
1.500 17.80 4.500 9.60 7.500 0.70 10.50 0.00
1.583 17.80 4.583 9.60 7.583 0.70 10.58 0.00
1.667 17.80 4.667 9.60 7.667 0.70 10.67 0.00
1.750 17.80 4.750 9.60 7.750 0.70 10.75 0.00
1.833 17.80 4.833 9.60 7.833 0.70 10.83 0.00
1.917 17.80 4.917 9.60 7.917 0.70 10.92 0.00
2.000 17.80 5.000 9.60 8.000 0.70 11.00 0.00
2.083 13.70 5.083 5.50 8.083 0.00 11.08 0.00
2.167 13.70 5.167 5.50 8.167 0.00 11.17 0.00
2.250 13.70 5.250 5.50 8.250 0.00 11.25 0.00
2.333 13.70 5.333 5.50 8.333 0.00 11.33 0.00
2.417 13.70 5.417 5.50 8.417 0.00 11.42 0.00
2.500 13.70 5.500 5.50 8.500 0.00 11.50 0.00
2.583 13.70 5.583 5.50 8.583 0.00 11.58 0.00
2.667 13.70 5.667 5.50 8.667 0.00 11.67 0.00
2.750 13.70 5.750 5.50 8.750 0.00 11.75 0.00
2.833 13.70 5.833 5.50 8.833 0.00 11.83 0.00
2.917 13.70 5.917 5.50 8.917 0.00 11.92 0.00
3.000 13.70 6.000 5.50 9.000 0.00 12.00 0.00
```

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.399 (i)

TIME TO PEAK (hrs)= 5.083
RUNOFF VOLUME (mm)= 27.052
TOTAL RAINFALL (mm)= 68.600
RUNOFF COEFFICIENT = 0.394

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

CALIB
NASHYD (1101) | Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	8.90	3.083	10.30	6.083	2.10	9.08	0.00
0.167	8.90	3.167	10.30	6.167	2.10	9.17	0.00
0.250	8.90	3.250	10.30	6.250	2.10	9.25	0.00
0.333	8.90	3.333	10.30	6.333	2.10	9.33	0.00
0.417	8.90	3.417	10.30	6.417	2.10	9.42	0.00
0.500	8.90	3.500	10.30	6.500	2.10	9.50	0.00
0.583	8.90	3.583	10.30	6.583	2.10	9.58	0.00
0.667	8.90	3.667	10.30	6.667	2.10	9.67	0.00
0.750	8.90	3.750	10.30	6.750	2.10	9.75	0.00
0.833	8.90	3.833	10.30	6.833	2.10	9.83	0.00
0.917	8.90	3.917	10.30	6.917	2.10	9.92	0.00
1.000	8.90	4.000	10.30	7.000	2.10	10.00	0.00
1.083	17.80	4.083	9.60	7.083	0.70	10.08	0.00
1.167	17.80	4.167	9.60	7.167	0.70	10.17	0.00
1.250	17.80	4.250	9.60	7.250	0.70	10.25	0.00
1.333	17.80	4.333	9.60	7.333	0.70	10.33	0.00
1.417	17.80	4.417	9.60	7.417	0.70	10.42	0.00
1.500	17.80	4.500	9.60	7.500	0.70	10.50	0.00
1.583	17.80	4.583	9.60	7.583	0.70	10.58	0.00
1.667	17.80	4.667	9.60	7.667	0.70	10.67	0.00
1.750	17.80	4.750	9.60	7.750	0.70	10.75	0.00
1.833	17.80	4.833	9.60	7.833	0.70	10.83	0.00
1.917	17.80	4.917	9.60	7.917	0.70	10.92	0.00
2.000	17.80	5.000	9.60	8.000	0.70	11.00	0.00
2.083	13.70	5.083	5.50	8.083	0.00	11.08	0.00
2.167	13.70	5.167	5.50	8.167	0.00	11.17	0.00
2.250	13.70	5.250	5.50	8.250	0.00	11.25	0.00
2.333	13.70	5.333	5.50	8.333	0.00	11.33	0.00
2.417	13.70	5.417	5.50	8.417	0.00	11.42	0.00
2.500	13.70	5.500	5.50	8.500	0.00	11.50	0.00

2.583	13.70	5.583	5.50	8.583	0.00	11.58	0.00
2.667	13.70	5.667	5.50	8.667	0.00	11.67	0.00
2.750	13.70	5.750	5.50	8.750	0.00	11.75	0.00
2.833	13.70	5.833	5.50	8.833	0.00	11.83	0.00
2.917	13.70	5.917	5.50	8.917	0.00	11.92	0.00
3.000	13.70	6.000	5.50	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.028 (i)
TIME TO PEAK (hrs)= 5.000
RUNOFF VOLUME (mm)= 23.391
TOTAL RAINFALL (mm)= 68.600
RUNOFF COEFFICIENT = 0.341

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

ADD HYD (0061) |
1 + 2 = 3 |
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (1100): 24.78 0.399 5.08 27.05
+ ID2= 2 (1101): 2.00 0.028 5.00 23.39
===== ID = 3 (0061): 26.78 0.427 5.08 26.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (2100) | Area (ha)= 24.78
ID= 1 DT= 5.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.15	13.63
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	406.45	800.00
Mannings n =	0.013	0.250

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	8.90	3.083	10.30	6.083	2.10	9.08	0.00
0.167	8.90	3.167	10.30	6.167	2.10	9.17	0.00

0.250	8.90	3.250	10.30	6.250	2.10	9.25	0.00
0.333	8.90	3.333	10.30	6.333	2.10	9.33	0.00
0.417	8.90	3.417	10.30	6.417	2.10	9.42	0.00
0.500	8.90	3.500	10.30	6.500	2.10	9.50	0.00
0.583	8.90	3.583	10.30	6.583	2.10	9.58	0.00
0.667	8.90	3.667	10.30	6.667	2.10	9.67	0.00
0.750	8.90	3.750	10.30	6.750	2.10	9.75	0.00
0.833	8.90	3.833	10.30	6.833	2.10	9.83	0.00
0.917	8.90	3.917	10.30	6.917	2.10	9.92	0.00
1.000	8.90	4.000	10.30	7.000	2.10	10.00	0.00
1.083	17.80	4.083	9.60	7.083	0.70	10.08	0.00
1.167	17.80	4.167	9.60	7.167	0.70	10.17	0.00
1.250	17.80	4.250	9.60	7.250	0.70	10.25	0.00
1.333	17.80	4.333	9.60	7.333	0.70	10.33	0.00
1.417	17.80	4.417	9.60	7.417	0.70	10.42	0.00
1.500	17.80	4.500	9.60	7.500	0.70	10.50	0.00
1.583	17.80	4.583	9.60	7.583	0.70	10.58	0.00
1.667	17.80	4.667	9.60	7.667	0.70	10.67	0.00
1.750	17.80	4.750	9.60	7.750	0.70	10.75	0.00
1.833	17.80	4.833	9.60	7.833	0.70	10.83	0.00
1.917	17.80	4.917	9.60	7.917	0.70	10.92	0.00
2.000	17.80	5.000	9.60	8.000	0.70	11.00	0.00
2.083	13.70	5.083	5.50	8.083	0.00	11.08	0.00
2.167	13.70	5.167	5.50	8.167	0.00	11.17	0.00
2.250	13.70	5.250	5.50	8.250	0.00	11.25	0.00
2.333	13.70	5.333	5.50	8.333	0.00	11.33	0.00
2.417	13.70	5.417	5.50	8.417	0.00	11.42	0.00
2.500	13.70	5.500	5.50	8.500	0.00	11.50	0.00
2.583	13.70	5.583	5.50	8.583	0.00	11.58	0.00
2.667	13.70	5.667	5.50	8.667	0.00	11.67	0.00
2.750	13.70	5.750	5.50	8.750	0.00	11.75	0.00
2.833	13.70	5.833	5.50	8.833	0.00	11.83	0.00
2.917	13.70	5.917	5.50	8.917	0.00	11.92	0.00
3.000	13.70	6.000	5.50	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 17.80 9.11
over (min) 10.00 125.00
Storage Coeff. (min)= 9.60 (ii) 120.66 (ii)
Unit Hyd. Tpeak (min)= 10.00 125.00
Unit Hyd. peak (cms)= 0.11 0.01

TOTALS

PEAK FLOW (cms)= 0.55 0.25 0.582 (iii)
TIME TO PEAK (hrs)= 2.00 5.83 2.00
RUNOFF VOLUME (mm)= 67.60 40.23 52.54
TOTAL RAINFALL (mm)= 68.60 68.60 68.60
RUNOFF COEFFICIENT = 0.99 0.59 0.77

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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
NASHYD (1102) | Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	8.90	3.083	10.30	6.083	2.10	9.08	0.00
0.167	8.90	3.167	10.30	6.167	2.10	9.17	0.00
0.250	8.90	3.250	10.30	6.250	2.10	9.25	0.00
0.333	8.90	3.333	10.30	6.333	2.10	9.33	0.00
0.417	8.90	3.417	10.30	6.417	2.10	9.42	0.00
0.500	8.90	3.500	10.30	6.500	2.10	9.50	0.00
0.583	8.90	3.583	10.30	6.583	2.10	9.58	0.00
0.667	8.90	3.667	10.30	6.667	2.10	9.67	0.00
0.750	8.90	3.750	10.30	6.750	2.10	9.75	0.00
0.833	8.90	3.833	10.30	6.833	2.10	9.83	0.00
0.917	8.90	3.917	10.30	6.917	2.10	9.92	0.00
1.000	8.90	4.000	10.30	7.000	2.10	10.00	0.00
1.083	17.80	4.083	9.60	7.083	0.70	10.08	0.00
1.167	17.80	4.167	9.60	7.167	0.70	10.17	0.00
1.250	17.80	4.250	9.60	7.250	0.70	10.25	0.00
1.333	17.80	4.333	9.60	7.333	0.70	10.33	0.00
1.417	17.80	4.417	9.60	7.417	0.70	10.42	0.00
1.500	17.80	4.500	9.60	7.500	0.70	10.50	0.00
1.583	17.80	4.583	9.60	7.583	0.70	10.58	0.00
1.667	17.80	4.667	9.60	7.667	0.70	10.67	0.00
1.750	17.80	4.750	9.60	7.750	0.70	10.75	0.00
1.833	17.80	4.833	9.60	7.833	0.70	10.83	0.00
1.917	17.80	4.917	9.60	7.917	0.70	10.92	0.00
2.000	17.80	5.000	9.60	8.000	0.70	11.00	0.00
2.083	13.70	5.083	5.50	8.083	0.00	11.08	0.00
2.167	13.70	5.167	5.50	8.167	0.00	11.17	0.00
2.250	13.70	5.250	5.50	8.250	0.00	11.25	0.00
2.333	13.70	5.333	5.50	8.333	0.00	11.33	0.00
2.417	13.70	5.417	5.50	8.417	0.00	11.42	0.00
2.500	13.70	5.500	5.50	8.500	0.00	11.50	0.00
2.583	13.70	5.583	5.50	8.583	0.00	11.58	0.00
2.667	13.70	5.667	5.50	8.667	0.00	11.67	0.00
2.750	13.70	5.750	5.50	8.750	0.00	11.75	0.00

2.833	13.70	5.833	5.50	8.833	0.00	11.83	0.00
2.917	13.70	5.917	5.50	8.917	0.00	11.92	0.00
3.000	13.70	6.000	5.50	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.028 (i)
TIME TO PEAK (hrs)= 5.000
RUNOFF VOLUME (mm)= 23.391
TOTAL RAINFALL (mm)= 68.600
RUNOFF COEFFICIENT = 0.341

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

ADD HYD (0063)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1102):	2.00	0.028	5.00	23.39
+ ID2= 2 (2100):	24.78	0.582	2.00	52.54
=====				
ID = 3 (0063):	26.78	0.598	2.00	50.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V	V	I	SSSS	U	U	A	L	(v 6.2.2008)
V	V	I	SS	U	U	A	A	L
V	V	I	SS	U	U	AAAA	L	
V	V	I	SS	U	U	A	A	L
VV	I	SSSS	UUUU	A	A	LLLL		
000	TTTT	TTTT	H	H	Y	Y	M	M
O	O	T	T	H	H	Y	MM	MM
O	O	T	T	H	H	Y	M	M
000	T	T	H	H	Y	M	M	000

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\5bf1
38ac-a3fb-4bf6-9e8d-0c2b1c0f2c66\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\5bf1
38ac-a3fb-4bf6-9e8d-0c2b1c0f2c66\scen

DATE: 04/05/2023

TIME: 11:32:33

USER:

COMMENTS: _____

** SIMULATION : 10-Year_12 hour SCS **

READ STORM	Filename: C:\Users\nnapper\AppData\Local\Temp\aa485c45-5c41-4f04-b9f7-20c929bcd42e\4add98b9
Ptotal= 68.53 mm	Comments: 10-Year_12 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	1.70	3.00	2.70	6.00	12.30	9.00	2.40
0.25	1.70	3.25	2.70	6.25	12.30	9.25	2.40
0.50	1.70	3.50	2.70	6.50	5.50	9.50	2.40
0.75	1.70	3.75	2.70	6.75	5.50	9.75	2.40
1.00	1.70	4.00	4.10	7.00	4.10	10.00	1.40
1.25	1.70	4.25	4.10	7.25	4.10	10.25	1.40
1.50	1.70	4.50	5.50	7.50	4.10	10.50	1.40
1.75	1.70	4.75	5.50	7.75	4.10	10.75	1.40
2.00	2.10	5.00	8.20	8.00	2.40	11.00	1.40
2.25	2.10	5.25	8.20	8.25	2.40	11.25	1.40
2.50	2.10	5.50	32.90	8.50	2.40	11.50	1.40
2.75	2.10	5.75	90.40	8.75	2.40	11.75	1.40

CALIB	
NASHYD (2108)	Area (ha)= 1.46 Curve Number (CN)= 60.5

|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.67

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	1.70	3.083	2.70	6.083	12.30	9.08	2.40
0.167	1.70	3.167	2.70	6.167	12.30	9.17	2.40
0.250	1.70	3.250	2.70	6.250	12.30	9.25	2.40
0.333	1.70	3.333	2.70	6.333	12.30	9.33	2.40
0.417	1.70	3.417	2.70	6.417	12.30	9.42	2.40
0.500	1.70	3.500	2.70	6.500	12.30	9.50	2.40
0.583	1.70	3.583	2.70	6.583	5.50	9.58	2.40
0.667	1.70	3.667	2.70	6.667	5.50	9.67	2.40
0.750	1.70	3.750	2.70	6.750	5.50	9.75	2.40
0.833	1.70	3.833	2.70	6.833	5.50	9.83	2.40
0.917	1.70	3.917	2.70	6.917	5.50	9.92	2.40
1.000	1.70	4.000	2.70	7.000	5.50	10.00	2.40
1.083	1.70	4.083	4.10	7.083	4.10	10.08	1.40
1.167	1.70	4.167	4.10	7.167	4.10	10.17	1.40
1.250	1.70	4.250	4.10	7.250	4.10	10.25	1.40
1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40
1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40
2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.031 (i)
TIME TO PEAK (hrs)= 6.583

RUNOFF VOLUME (mm)= 17.593
TOTAL RAINFALL (mm)= 68.525
RUNOFF COEFFICIENT = 0.257

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

| CALIB |
| NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
|ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.16

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	1.70	3.083	2.70	6.083	12.30	9.08	2.40
0.167	1.70	3.167	2.70	6.167	12.30	9.17	2.40
0.250	1.70	3.250	2.70	6.250	12.30	9.25	2.40
0.333	1.70	3.333	2.70	6.333	12.30	9.33	2.40
0.417	1.70	3.417	2.70	6.417	12.30	9.42	2.40
0.500	1.70	3.500	2.70	6.500	12.30	9.50	2.40
0.583	1.70	3.583	2.70	6.583	5.50	9.58	2.40
0.667	1.70	3.667	2.70	6.667	5.50	9.67	2.40
0.750	1.70	3.750	2.70	6.750	5.50	9.75	2.40
0.833	1.70	3.833	2.70	6.833	5.50	9.83	2.40
0.917	1.70	3.917	2.70	6.917	5.50	9.92	2.40
1.000	1.70	4.000	2.70	7.000	5.50	10.00	2.40
1.083	1.70	4.083	4.10	7.083	4.10	10.08	1.40
1.167	1.70	4.167	4.10	7.167	4.10	10.17	1.40
1.250	1.70	4.250	4.10	7.250	4.10	10.25	1.40
1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40
1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40
2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40

2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.106 (i)
TIME TO PEAK (hrs)= 6.000
RUNOFF VOLUME (mm)= 21.585
TOTAL RAINFALL (mm)= 68.525
RUNOFF COEFFICIENT = 0.315

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

CALIB							
NASHYD (2102)	Area (ha)=	3.87	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	1.70	3.083	2.70	6.083	12.30	9.08	2.40
0.167	1.70	3.167	2.70	6.167	12.30	9.17	2.40
0.250	1.70	3.250	2.70	6.250	12.30	9.25	2.40
0.333	1.70	3.333	2.70	6.333	12.30	9.33	2.40
0.417	1.70	3.417	2.70	6.417	12.30	9.42	2.40
0.500	1.70	3.500	2.70	6.500	12.30	9.50	2.40
0.583	1.70	3.583	2.70	6.583	5.50	9.58	2.40
0.667	1.70	3.667	2.70	6.667	5.50	9.67	2.40
0.750	1.70	3.750	2.70	6.750	5.50	9.75	2.40
0.833	1.70	3.833	2.70	6.833	5.50	9.83	2.40
0.917	1.70	3.917	2.70	6.917	5.50	9.92	2.40
1.000	1.70	4.000	2.70	7.000	5.50	10.00	2.40
1.083	1.70	4.083	4.10	7.083	4.10	10.08	1.40
1.167	1.70	4.167	4.10	7.167	4.10	10.17	1.40
1.250	1.70	4.250	4.10	7.250	4.10	10.25	1.40
1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40

1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40
2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.241 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 21.641
TOTAL RAINFALL (mm)= 68.525
RUNOFF COEFFICIENT = 0.316

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

CALIB							
NASHYD (2103)	Area (ha)=	3.55	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	1.70	3.083	2.70	6.083	12.30	9.08	2.40
0.167	1.70	3.167	2.70	6.167	12.30	9.17	2.40
0.250	1.70	3.250	2.70	6.250	12.30	9.25	2.40
0.333	1.70	3.333	2.70	6.333	12.30	9.33	2.40
0.417	1.70	3.417	2.70	6.417	12.30	9.42	2.40
0.500	1.70	3.500	2.70	6.500	12.30	9.50	2.40
0.583	1.70	3.583	2.70	6.583	5.50	9.58	2.40
0.667	1.70	3.667	2.70	6.667	5.50	9.67	2.40
0.750	1.70	3.750	2.70	6.750	5.50	9.75	2.40
0.833	1.70	3.833	2.70	6.833	5.50	9.83	2.40
0.917	1.70	3.917	2.70	6.917	5.50	9.92	2.40

1.000	1.70	4.000	2.70	7.000	5.50	10.00	2.40
1.083	1.70	4.083	4.10	7.083	4.10	10.08	1.40
1.167	1.70	4.167	4.10	7.167	4.10	10.17	1.40
1.250	1.70	4.250	4.10	7.250	4.10	10.25	1.40
1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40
1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40
2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.221 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 21.641
TOTAL RAINFALL (mm)= 68.525
RUNOFF COEFFICIENT = 0.316

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

| CALIB |
| NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.27

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	1.70	3.083	2.70	6.083	12.30	9.08	2.40

0.167	1.70	3.167	2.70	6.167	12.30	9.17	2.40
0.250	1.70	3.250	2.70	6.250	12.30	9.25	2.40
0.333	1.70	3.333	2.70	6.333	12.30	9.33	2.40
0.417	1.70	3.417	2.70	6.417	12.30	9.42	2.40
0.500	1.70	3.500	2.70	6.500	12.30	9.50	2.40
0.583	1.70	3.583	2.70	6.583	5.50	9.58	2.40
0.667	1.70	3.667	2.70	6.667	5.50	9.67	2.40
0.750	1.70	3.750	2.70	6.750	5.50	9.75	2.40
0.833	1.70	3.833	2.70	6.833	5.50	9.83	2.40
0.917	1.70	3.917	2.70	6.917	5.50	9.92	2.40
1.000	1.70	4.000	2.70	7.000	5.50	10.00	2.40
1.083	1.70	4.083	4.10	7.083	4.10	10.08	1.40
1.167	1.70	4.167	4.10	7.167	4.10	10.17	1.40
1.250	1.70	4.250	4.10	7.250	4.10	10.25	1.40
1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40
1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40
2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.177 (i)
TIME TO PEAK (hrs)= 6.167
RUNOFF VOLUME (mm)= 21.670
TOTAL RAINFALL (mm)= 68.525
RUNOFF COEFFICIENT = 0.316

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

| CALIB |
| NASHYD (2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1

|ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.37

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	1.70	3.083	2.70	6.083	12.30	9.08	2.40
0.167	1.70	3.167	2.70	6.167	12.30	9.17	2.40
0.250	1.70	3.250	2.70	6.250	12.30	9.25	2.40
0.333	1.70	3.333	2.70	6.333	12.30	9.33	2.40
0.417	1.70	3.417	2.70	6.417	12.30	9.42	2.40
0.500	1.70	3.500	2.70	6.500	12.30	9.50	2.40
0.583	1.70	3.583	2.70	6.583	5.50	9.58	2.40
0.667	1.70	3.667	2.70	6.667	5.50	9.67	2.40
0.750	1.70	3.750	2.70	6.750	5.50	9.75	2.40
0.833	1.70	3.833	2.70	6.833	5.50	9.83	2.40
0.917	1.70	3.917	2.70	6.917	5.50	9.92	2.40
1.000	1.70	4.000	2.70	7.000	5.50	10.00	2.40
1.083	1.70	4.083	4.10	7.083	4.10	10.08	1.40
1.167	1.70	4.167	4.10	7.167	4.10	10.17	1.40
1.250	1.70	4.250	4.10	7.250	4.10	10.25	1.40
1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40
1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40
2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.245 (i)
TIME TO PEAK (hrs)= 6.250

RUNOFF VOLUME (mm)= 21.679
TOTAL RAINFALL (mm)= 68.525
RUNOFF COEFFICIENT = 0.316

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

| CALIB |
| STANDHYD (2106) | Area (ha)= 1.50
|ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	1.70	3.083	2.70	6.083	12.30	9.08	2.40
0.167	1.70	3.167	2.70	6.167	12.30	9.17	2.40
0.250	1.70	3.250	2.70	6.250	12.30	9.25	2.40
0.333	1.70	3.333	2.70	6.333	12.30	9.33	2.40
0.417	1.70	3.417	2.70	6.417	12.30	9.42	2.40
0.500	1.70	3.500	2.70	6.500	12.30	9.50	2.40
0.583	1.70	3.583	2.70	6.583	5.50	9.58	2.40
0.667	1.70	3.667	2.70	6.667	5.50	9.67	2.40
0.750	1.70	3.750	2.70	6.750	5.50	9.75	2.40
0.833	1.70	3.833	2.70	6.833	5.50	9.83	2.40
0.917	1.70	3.917	2.70	6.917	5.50	9.92	2.40
1.000	1.70	4.000	2.70	7.000	5.50	10.00	2.40
1.083	1.70	4.083	4.10	7.083	4.10	10.08	1.40
1.167	1.70	4.167	4.10	7.167	4.10	10.17	1.40
1.250	1.70	4.250	4.10	7.250	4.10	10.25	1.40
1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40
1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40

2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Max.Eff.Inten.(mm/hr)= 90.40 39.18
over (min) 5.00 35.00
Storage Coeff. (min)= 2.52 (ii) 30.70 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.29 0.04

TOTALS

PEAK FLOW (cms)= 0.19 0.05 0.211 (iii)
TIME TO PEAK (hrs)= 6.00 6.42 6.00
RUNOFF VOLUME (mm)= 67.52 40.16 53.83
TOTAL RAINFALL (mm)= 68.52 68.52 68.52
RUNOFF COEFFICIENT = 0.99 0.59 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107) | Area (ha)= 3.47
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00
|-----|

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	1.70	3.083	2.70	6.083	12.30	9.08	2.40	
0.167	1.70	3.167	2.70	6.167	12.30	9.17	2.40	
0.250	1.70	3.250	2.70	6.250	12.30	9.25	2.40	
0.333	1.70	3.333	2.70	6.333	12.30	9.33	2.40	
0.417	1.70	3.417	2.70	6.417	12.30	9.42	2.40	
0.500	1.70	3.500	2.70	6.500	12.30	9.50	2.40	
0.583	1.70	3.583	2.70	6.583	5.50	9.58	2.40	
0.667	1.70	3.667	2.70	6.667	5.50	9.67	2.40	
0.750	1.70	3.750	2.70	6.750	5.50	9.75	2.40	
0.833	1.70	3.833	2.70	6.833	5.50	9.83	2.40	
0.917	1.70	3.917	2.70	6.917	5.50	9.92	2.40	
1.000	1.70	4.000	2.70	7.000	5.50	10.00	2.40	
1.083	1.70	4.083	4.10	7.083	4.10	10.08	1.40	
1.167	1.70	4.167	4.10	7.167	4.10	10.17	1.40	
1.250	1.70	4.250	4.10	7.250	4.10	10.25	1.40	
1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40	
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40	
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40	
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40	
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40	
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40	
1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40	
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40	
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40	
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40	
2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40	
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40	
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40	
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40	
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40	
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40	
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40	
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40	
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40	
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40	
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40	

Max.Eff.Inten.(mm/hr)= 90.40 24.35
over (min) 5.00 75.00
Storage Coeff. (min)= 2.86 (ii) 73.09 (ii)
Unit Hyd. Tpeak (min)= 5.00 75.00
Unit Hyd. peak (cms)= 0.28 0.02

TOTALS

PEAK FLOW (cms)= 0.43 0.06 0.450 (iii)
TIME TO PEAK (hrs)= 6.00 7.08 6.00
RUNOFF VOLUME (mm)= 67.52 40.16 53.83
TOTAL RAINFALL (mm)= 68.52 68.52 68.52
RUNOFF COEFFICIENT = 0.99 0.59 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD ( 1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
|-----|
| U.H. Tp(hrs)= 0.49
```

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 1.70 3.083 2.70 6.083 12.30 9.08 2.40
0.167 1.70 3.167 2.70 6.167 12.30 9.17 2.40
0.250 1.70 3.250 2.70 6.250 12.30 9.25 2.40
0.333 1.70 3.333 2.70 6.333 12.30 9.33 2.40
0.417 1.70 3.417 2.70 6.417 12.30 9.42 2.40
0.500 1.70 3.500 2.70 6.500 12.30 9.50 2.40
0.583 1.70 3.583 2.70 6.583 5.50 9.58 2.40
0.667 1.70 3.667 2.70 6.667 5.50 9.67 2.40
0.750 1.70 3.750 2.70 6.750 5.50 9.75 2.40
0.833 1.70 3.833 2.70 6.833 5.50 9.83 2.40
0.917 1.70 3.917 2.70 6.917 5.50 9.92 2.40
1.000 1.70 4.000 2.70 7.000 5.50 10.00 2.40
1.083 1.70 4.083 4.10 7.083 4.10 10.08 1.40
1.167 1.70 4.167 4.10 7.167 4.10 10.17 1.40
1.250 1.70 4.250 4.10 7.250 4.10 10.25 1.40
1.333 1.70 4.333 4.10 7.333 4.10 10.33 1.40
1.417 1.70 4.417 4.10 7.417 4.10 10.42 1.40
1.500 1.70 4.500 4.10 7.500 4.10 10.50 1.40
1.583 1.70 4.583 5.50 7.583 4.10 10.58 1.40
1.667 1.70 4.667 5.50 7.667 4.10 10.67 1.40
1.750 1.70 4.750 5.50 7.750 4.10 10.75 1.40
1.833 1.70 4.833 5.50 7.833 4.10 10.83 1.40
1.917 1.70 4.917 5.50 7.917 4.10 10.92 1.40
2.000 1.70 5.000 5.50 8.000 4.10 11.00 1.40
2.083 2.10 5.083 8.20 8.083 2.40 11.08 1.40
2.167 2.10 5.167 8.20 8.167 2.40 11.17 1.40
2.250 2.10 5.250 8.20 8.250 2.40 11.25 1.40
2.333 2.10 5.333 8.20 8.333 2.40 11.33 1.40
2.417 2.10 5.417 8.20 8.417 2.40 11.42 1.40
```

2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.073 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 23.346
TOTAL RAINFALL (mm)= 68.525
RUNOFF COEFFICIENT = 0.341

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

```
-----
| ADD HYD ( 0013) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
|-----| (ha) (cms) (hrs) (mm)
ID1= 1 ( 1103): 2.00 0.073 6.42 23.35
+ ID2= 2 ( 2101): 1.52 0.106 6.00 21.58
=====
ID = 3 ( 0013): 3.52 0.153 6.08 22.59
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013) |
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
|-----| (ha) (cms) (hrs) (mm)
ID1= 3 ( 0013): 3.52 0.153 6.08 22.59
+ ID2= 2 ( 2102): 3.87 0.241 6.08 21.64
=====
ID = 1 ( 0013): 7.39 0.394 6.08 22.09
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
|-----| (ha) (cms) (hrs) (mm)
ID1= 1 ( 0013): 7.39 0.394 6.08 22.09
+ ID2= 2 ( 2103): 3.55 0.221 6.08 21.64
```

=====

ID = 3 (0013):	10.94	0.615	6.08	21.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	10.94	0.615	6.08	21.94
+ ID2= 2 (2104):	3.47	0.177	6.17	21.67
=====				
ID = 1 (0013):	14.41	0.789	6.08	21.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	14.41	0.789	6.08	21.88
+ ID2= 2 (2105):	5.95	0.245	6.25	21.68
=====				
ID = 3 (0013):	20.36	0.997	6.08	21.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	20.36	0.997	6.08	21.82
+ ID2= 2 (2106):	1.50	0.211	6.00	53.83
=====				
ID = 1 (0013):	21.86	1.078	6.00	24.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	21.86	1.078	6.00	24.02
+ ID2= 2 (2107):	3.47	0.450	6.00	53.83
=====				
ID = 3 (0013):	25.33	1.528	6.00	28.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	25.33	1.528	6.00	28.10
+ ID2= 2 (2108):	1.46	0.031	6.58	17.59
=====				
ID = 1 (0013):	26.79	1.539	6.00	27.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0001)		OVERFLOW IS OFF	
IN= 2---> OUT= 1			
DT= 5.0 min			
	OUTFLOW	STORAGE	OUTFLOW
	(cms)	(ha.m.)	(cms)
	0.0000	0.0000	1.1450
	0.3370	0.0770	1.3850
	0.6240	0.1200	1.6330
	0.8460	0.1510	0.0000
	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
INFLOW : ID= 2 (0013)	26.790	1.539	6.00
OUTFLOW: ID= 1 (0001)	26.790	0.871	6.42
			27.53

PEAK FLOW REDUCTION [Qout/Qin](%)= 56.59
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.1549

CALIB			
NASHYD (1100)		Area (ha)= 24.78	Curve Number (CN)= 75.7
ID= 1 DT= 5.0 min		Ia (mm)= 6.20	# of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.70			

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	1.70	3.083	2.70	6.083	12.30	9.08	2.40
0.167	1.70	3.167	2.70	6.167	12.30	9.17	2.40
0.250	1.70	3.250	2.70	6.250	12.30	9.25	2.40

0.333	1.70	3.333	2.70	6.333	12.30	9.33	2.40
0.417	1.70	3.417	2.70	6.417	12.30	9.42	2.40
0.500	1.70	3.500	2.70	6.500	12.30	9.50	2.40
0.583	1.70	3.583	2.70	6.583	5.50	9.58	2.40
0.667	1.70	3.667	2.70	6.667	5.50	9.67	2.40
0.750	1.70	3.750	2.70	6.750	5.50	9.75	2.40
0.833	1.70	3.833	2.70	6.833	5.50	9.83	2.40
0.917	1.70	3.917	2.70	6.917	5.50	9.92	2.40
1.000	1.70	4.000	2.70	7.000	5.50	10.00	2.40
1.083	1.70	4.083	4.10	7.083	4.10	10.08	1.40
1.167	1.70	4.167	4.10	7.167	4.10	10.17	1.40
1.250	1.70	4.250	4.10	7.250	4.10	10.25	1.40
1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40
1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40
2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.822 (i)

TIME TO PEAK (hrs)= 6.667

RUNOFF VOLUME (mm)= 27.001

TOTAL RAINFALL (mm)= 68.525

RUNOFF COEFFICIENT = 0.394

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

CALIB	Area (ha)= 2.00	Curve Number (CN)= 69.4
NASHYD (1101)	Ia (mm)= 4.40	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)= 0.49	

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	1.70	3.083	2.70	6.083	12.30	9.08	2.40
0.167	1.70	3.167	2.70	6.167	12.30	9.17	2.40
0.250	1.70	3.250	2.70	6.250	12.30	9.25	2.40
0.333	1.70	3.333	2.70	6.333	12.30	9.33	2.40
0.417	1.70	3.417	2.70	6.417	12.30	9.42	2.40
0.500	1.70	3.500	2.70	6.500	12.30	9.50	2.40
0.583	1.70	3.583	2.70	6.583	5.50	9.58	2.40
0.667	1.70	3.667	2.70	6.667	5.50	9.67	2.40
0.750	1.70	3.750	2.70	6.750	5.50	9.75	2.40
0.833	1.70	3.833	2.70	6.833	5.50	9.83	2.40
0.917	1.70	3.917	2.70	6.917	5.50	9.92	2.40
1.000	1.70	4.000	2.70	7.000	5.50	10.00	2.40
1.083	1.70	4.083	4.10	7.083	4.10	10.08	1.40
1.167	1.70	4.167	4.10	7.167	4.10	10.17	1.40
1.250	1.70	4.250	4.10	7.250	4.10	10.25	1.40
1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40
1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40
2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.073 (i)

TIME TO PEAK (hrs)= 6.417

RUNOFF VOLUME (mm)= 23.346

TOTAL RAINFALL (mm)= 68.525

RUNOFF COEFFICIENT = 0.341

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

```
-----
| ADD HYD ( 0061) |
| 1 + 2 = 3       |
|-----|
| ID1= 1 ( 1100): | AREA   QPEAK   TPEAK   R.V.
|                   | (ha)   (cms)   (hrs)   (mm)
| + ID2= 2 ( 1101): | 24.78  0.822   6.67   27.00
|                   | 2.00   0.073   6.42   23.35
|=====|
| ID = 3 ( 0061): | 26.78  0.886   6.58   26.73
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| CALIB           |
| STANDHYD ( 2100) | Area   (ha)= 24.78
| ID= 1 DT= 5.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00
|-----|
```

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.15	13.63
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	406.45	800.00
Mannings n =	0.013	0.250

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 1.70 | 3.083 2.70 | 6.083 12.30 | 9.08 2.40 |
| 0.167 1.70 | 3.167 2.70 | 6.167 12.30 | 9.17 2.40 |
| 0.250 1.70 | 3.250 2.70 | 6.250 12.30 | 9.25 2.40 |
| 0.333 1.70 | 3.333 2.70 | 6.333 12.30 | 9.33 2.40 |
| 0.417 1.70 | 3.417 2.70 | 6.417 12.30 | 9.42 2.40 |
| 0.500 1.70 | 3.500 2.70 | 6.500 12.30 | 9.50 2.40 |
| 0.583 1.70 | 3.583 2.70 | 6.583 5.50 | 9.58 2.40 |
| 0.667 1.70 | 3.667 2.70 | 6.667 5.50 | 9.67 2.40 |
| 0.750 1.70 | 3.750 2.70 | 6.750 5.50 | 9.75 2.40 |
| 0.833 1.70 | 3.833 2.70 | 6.833 5.50 | 9.83 2.40 |
| 0.917 1.70 | 3.917 2.70 | 6.917 5.50 | 9.92 2.40 |
| 1.000 1.70 | 4.000 2.70 | 7.000 5.50 | 10.00 2.40 |
| 1.083 1.70 | 4.083 4.10 | 7.083 4.10 | 10.08 1.40 |
| 1.167 1.70 | 4.167 4.10 | 7.167 4.10 | 10.17 1.40 |
| 1.250 1.70 | 4.250 4.10 | 7.250 4.10 | 10.25 1.40 |
```

1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40
1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40
2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Max.Eff.Inten.(mm/hr)=	90.40	24.35
over (min)	5.00	80.00
Storage Coeff. (min)=	5.01 (ii)	79.94 (ii)
Unit Hyd. Tpeak (min)=	5.00	80.00
Unit Hyd. peak (cms)=	0.21	0.01

TOTALS		
PEAK FLOW (cms)=	2.71	0.46
TIME TO PEAK (hrs)=	6.00	7.17
RUNOFF VOLUME (mm)=	67.52	40.16
TOTAL RAINFALL (mm)=	68.52	68.52
RUNOFF COEFFICIENT =	0.99	0.59
		0.77

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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           |
| NASHYD ( 1102) | Area   (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia     (mm)= 4.40 # of Linear Res.(N)= 3.00
|-----|
| U.H. Tp(hrs)= 0.49
```

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	1.70	3.083	2.70	6.083	12.30	9.08	2.40
0.167	1.70	3.167	2.70	6.167	12.30	9.17	2.40
0.250	1.70	3.250	2.70	6.250	12.30	9.25	2.40
0.333	1.70	3.333	2.70	6.333	12.30	9.33	2.40
0.417	1.70	3.417	2.70	6.417	12.30	9.42	2.40
0.500	1.70	3.500	2.70	6.500	12.30	9.50	2.40
0.583	1.70	3.583	2.70	6.583	5.50	9.58	2.40
0.667	1.70	3.667	2.70	6.667	5.50	9.67	2.40
0.750	1.70	3.750	2.70	6.750	5.50	9.75	2.40
0.833	1.70	3.833	2.70	6.833	5.50	9.83	2.40
0.917	1.70	3.917	2.70	6.917	5.50	9.92	2.40
1.000	1.70	4.000	2.70	7.000	5.50	10.00	2.40
1.083	1.70	4.083	4.10	7.083	4.10	10.08	1.40
1.167	1.70	4.167	4.10	7.167	4.10	10.17	1.40
1.250	1.70	4.250	4.10	7.250	4.10	10.25	1.40
1.333	1.70	4.333	4.10	7.333	4.10	10.33	1.40
1.417	1.70	4.417	4.10	7.417	4.10	10.42	1.40
1.500	1.70	4.500	4.10	7.500	4.10	10.50	1.40
1.583	1.70	4.583	5.50	7.583	4.10	10.58	1.40
1.667	1.70	4.667	5.50	7.667	4.10	10.67	1.40
1.750	1.70	4.750	5.50	7.750	4.10	10.75	1.40
1.833	1.70	4.833	5.50	7.833	4.10	10.83	1.40
1.917	1.70	4.917	5.50	7.917	4.10	10.92	1.40
2.000	1.70	5.000	5.50	8.000	4.10	11.00	1.40
2.083	2.10	5.083	8.20	8.083	2.40	11.08	1.40
2.167	2.10	5.167	8.20	8.167	2.40	11.17	1.40
2.250	2.10	5.250	8.20	8.250	2.40	11.25	1.40
2.333	2.10	5.333	8.20	8.333	2.40	11.33	1.40
2.417	2.10	5.417	8.20	8.417	2.40	11.42	1.40
2.500	2.10	5.500	8.20	8.500	2.40	11.50	1.40
2.583	2.10	5.583	32.90	8.583	2.40	11.58	1.40
2.667	2.10	5.667	32.90	8.667	2.40	11.67	1.40
2.750	2.10	5.750	32.90	8.750	2.40	11.75	1.40
2.833	2.10	5.833	90.40	8.833	2.40	11.83	1.40
2.917	2.10	5.917	90.40	8.917	2.40	11.92	1.40
3.000	2.10	6.000	90.40	9.000	2.40	12.00	1.40

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.073 (i)

TIME TO PEAK (hrs)= 6.417

RUNOFF VOLUME (mm)= 23.346

TOTAL RAINFALL (mm)= 68.525

RUNOFF COEFFICIENT = 0.341

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

```

-----
| ADD HYD ( 0063)|
| 1 + 2 = 3 |
-----
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 1 ( 1102):    2.00    0.073    6.42    23.35
+ ID2= 2 ( 2100):   24.78    2.817    6.00    52.47
=====
ID = 3 ( 0063):   26.78    2.854    6.00    50.30

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
V  V  I  SSSSS  U  U  A  L          (v 6.2.2008)
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

```

```

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

```

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\9e38f9d9-b632-4494-9b0a-4ba373b8542b\scen

Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\9e38f9d9-b632-4494-9b0a-4ba373b8542b\scen

DATE: 04/05/2023

TIME: 11:32:35

USER:

COMMENTS: _____

** SIMULATION : 10-Year_24 hour SCS **

| READ STORM | | Filename: C:\Users\nnapper\AppData
| | | ata\Local\Temp\
| Ptotal= 75.73 mm | | aa485c45-5c41-4f04-b9f7-20c929bcd42e\fcc569fa
| | | Comments: 10-Year_24 hour SCS
| | |

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.00	0.80	6.00	1.50	12.00	10.90	18.00	1.40	
0.25	0.80	6.25	1.50	12.25	10.90	18.25	1.40	
0.50	0.80	6.50	1.50	12.50	5.60	18.50	1.40	
0.75	0.80	6.75	1.50	12.75	5.60	18.75	1.40	
1.00	0.80	7.00	1.50	13.00	1.10	19.00	1.40	
1.25	0.80	7.25	1.50	13.25	1.10	19.25	1.40	
1.50	0.80	7.50	1.50	13.50	6.20	19.50	1.40	
1.75	0.80	7.75	1.50	13.75	6.20	19.75	1.40	
2.00	1.00	8.00	2.00	14.00	2.30	20.00	0.90	
2.25	1.00	8.25	2.00	14.25	2.30	20.25	0.90	
2.50	1.00	8.50	2.00	14.50	2.30	20.50	0.90	
2.75	1.00	8.75	2.00	14.75	2.30	20.75	0.90	
3.00	1.00	9.00	2.40	15.00	2.30	21.00	0.90	
3.25	1.00	9.25	2.40	15.25	2.30	21.25	0.90	
3.50	1.00	9.50	2.70	15.50	2.30	21.50	0.90	
3.75	1.00	9.75	2.70	15.75	2.30	21.75	0.90	
4.00	1.20	10.00	3.50	16.00	1.40	22.00	0.90	
4.25	1.20	10.25	3.50	16.25	1.40	22.25	0.90	
4.50	1.20	10.50	4.70	16.50	1.40	22.50	0.90	
4.75	1.20	10.75	4.70	16.75	1.40	22.75	0.90	
5.00	1.20	11.00	7.30	17.00	1.40	23.00	0.90	
5.25	1.20	11.25	7.30	17.25	1.40	23.25	0.90	
5.50	1.20	11.50	31.40	17.50	1.40	23.50	0.90	
5.75	1.20	11.75	83.50	17.75	1.40	23.75	0.90	

| CALIB |
| NASHYD (2108) | | Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

----- U.H. Tp(hrs)= 0.67

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	0.80	6.083	1.50	12.083	10.91	18.08	1.40	
0.167	0.80	6.167	1.50	12.167	10.90	18.17	1.40	
0.250	0.80	6.250	1.50	12.250	10.90	18.25	1.40	
0.333	0.80	6.333	1.50	12.333	10.90	18.33	1.40	
0.417	0.80	6.417	1.50	12.417	10.90	18.42	1.40	
0.500	0.80	6.500	1.50	12.500	10.90	18.50	1.40	
0.583	0.80	6.583	1.50	12.583	5.60	18.58	1.40	
0.667	0.80	6.667	1.50	12.667	5.60	18.67	1.40	
0.750	0.80	6.750	1.50	12.750	5.60	18.75	1.40	
0.833	0.80	6.833	1.50	12.833	5.60	18.83	1.40	
0.917	0.80	6.917	1.50	12.917	5.60	18.92	1.40	
1.000	0.80	7.000	1.50	13.000	5.60	19.00	1.40	
1.083	0.80	7.083	1.50	13.083	1.10	19.08	1.40	
1.167	0.80	7.167	1.50	13.167	1.10	19.17	1.40	
1.250	0.80	7.250	1.50	13.250	1.10	19.25	1.40	
1.333	0.80	7.333	1.50	13.333	1.10	19.33	1.40	
1.417	0.80	7.417	1.50	13.417	1.10	19.42	1.40	
1.500	0.80	7.500	1.50	13.500	1.10	19.50	1.40	
1.583	0.80	7.583	1.50	13.583	6.20	19.58	1.40	
1.667	0.80	7.667	1.50	13.667	6.20	19.67	1.40	
1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40	
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40	
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40	
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40	
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90	
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90	
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90	
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90	
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90	
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90	
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90	
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90	
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90	
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90	
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90	
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90	
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90	
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90	
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90	
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90	
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90	
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90	

3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.032 (i)

TIME TO PEAK (hrs)= 12.583

RUNOFF VOLUME (mm)= 21.144

TOTAL RAINFALL (mm)= 75.725

RUNOFF COEFFICIENT = 0.279

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

CALIB	Area (ha)=	1.52	Curve Number (CN)=	67.1
NASHYD (2101)	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.16		

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	0.80	6.083	1.50	12.083	10.91	18.08	1.40
0.167	0.80	6.167	1.50	12.167	10.90	18.17	1.40
0.250	0.80	6.250	1.50	12.250	10.90	18.25	1.40
0.333	0.80	6.333	1.50	12.333	10.90	18.33	1.40
0.417	0.80	6.417	1.50	12.417	10.90	18.42	1.40
0.500	0.80	6.500	1.50	12.500	10.90	18.50	1.40
0.583	0.80	6.583	1.50	12.583	5.60	18.58	1.40
0.667	0.80	6.667	1.50	12.667	5.60	18.67	1.40
0.750	0.80	6.750	1.50	12.750	5.60	18.75	1.40
0.833	0.80	6.833	1.50	12.833	5.60	18.83	1.40
0.917	0.80	6.917	1.50	12.917	5.60	18.92	1.40
1.000	0.80	7.000	1.50	13.000	5.60	19.00	1.40
1.083	0.80	7.083	1.50	13.083	1.10	19.08	1.40
1.167	0.80	7.167	1.50	13.167	1.10	19.17	1.40
1.250	0.80	7.250	1.50	13.250	1.10	19.25	1.40
1.333	0.80	7.333	1.50	13.333	1.10	19.33	1.40
1.417	0.80	7.417	1.50	13.417	1.10	19.42	1.40
1.500	0.80	7.500	1.50	13.500	1.10	19.50	1.40
1.583	0.80	7.583	1.50	13.583	6.20	19.58	1.40
1.667	0.80	7.667	1.50	13.667	6.20	19.67	1.40
1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90
3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90

3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.105 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 25.738
TOTAL RAINFALL (mm)= 75.725
RUNOFF COEFFICIENT = 0.340

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

CALIB			
NASHYD (2102)	Area (ha)=	3.87	Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)= 3.00

	U.H. Tp(hrs)=	0.20	

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	0.80	6.083	1.50	12.083	10.91	18.08	1.40
0.167	0.80	6.167	1.50	12.167	10.90	18.17	1.40
0.250	0.80	6.250	1.50	12.250	10.90	18.25	1.40
0.333	0.80	6.333	1.50	12.333	10.90	18.33	1.40
0.417	0.80	6.417	1.50	12.417	10.90	18.42	1.40
0.500	0.80	6.500	1.50	12.500	10.90	18.50	1.40
0.583	0.80	6.583	1.50	12.583	5.60	18.58	1.40
0.667	0.80	6.667	1.50	12.667	5.60	18.67	1.40
0.750	0.80	6.750	1.50	12.750	5.60	18.75	1.40
0.833	0.80	6.833	1.50	12.833	5.60	18.83	1.40
0.917	0.80	6.917	1.50	12.917	5.60	18.92	1.40
1.000	0.80	7.000	1.50	13.000	5.60	19.00	1.40
1.083	0.80	7.083	1.50	13.083	1.10	19.08	1.40
1.167	0.80	7.167	1.50	13.167	1.10	19.17	1.40
1.250	0.80	7.250	1.50	13.250	1.10	19.25	1.40
1.333	0.80	7.333	1.50	13.333	1.10	19.33	1.40
1.417	0.80	7.417	1.50	13.417	1.10	19.42	1.40
1.500	0.80	7.500	1.50	13.500	1.10	19.50	1.40
1.583	0.80	7.583	1.50	13.583	6.20	19.58	1.40
1.667	0.80	7.667	1.50	13.667	6.20	19.67	1.40
1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90
3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90

4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.239 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 25.805
TOTAL RAINFALL (mm)= 75.725
RUNOFF COEFFICIENT = 0.341

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

| CALIB |
| NASHYD (2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.20

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	0.80	6.083	1.50	12.083	10.91	18.08	1.40
0.167	0.80	6.167	1.50	12.167	10.90	18.17	1.40
0.250	0.80	6.250	1.50	12.250	10.90	18.25	1.40
0.333	0.80	6.333	1.50	12.333	10.90	18.33	1.40

0.417	0.80	6.417	1.50	12.417	10.90	18.42	1.40
0.500	0.80	6.500	1.50	12.500	10.90	18.50	1.40
0.583	0.80	6.583	1.50	12.583	5.60	18.58	1.40
0.667	0.80	6.667	1.50	12.667	5.60	18.67	1.40
0.750	0.80	6.750	1.50	12.750	5.60	18.75	1.40
0.833	0.80	6.833	1.50	12.833	5.60	18.83	1.40
0.917	0.80	6.917	1.50	12.917	5.60	18.92	1.40
1.000	0.80	7.000	1.50	13.000	5.60	19.00	1.40
1.083	0.80	7.083	1.50	13.083	1.10	19.08	1.40
1.167	0.80	7.167	1.50	13.167	1.10	19.17	1.40
1.250	0.80	7.250	1.50	13.250	1.10	19.25	1.40
1.333	0.80	7.333	1.50	13.333	1.10	19.33	1.40
1.417	0.80	7.417	1.50	13.417	1.10	19.42	1.40
1.500	0.80	7.500	1.50	13.500	1.10	19.50	1.40
1.583	0.80	7.583	1.50	13.583	6.20	19.58	1.40
1.667	0.80	7.667	1.50	13.667	6.20	19.67	1.40
1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90
3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90

4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.219 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 25.805
TOTAL RAINFALL (mm)= 75.725
RUNOFF COEFFICIENT = 0.341

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

| CALIB |
| NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.27

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	0.80	6.083	1.50	12.083	10.91	18.08	1.40
0.167	0.80	6.167	1.50	12.167	10.90	18.17	1.40
0.250	0.80	6.250	1.50	12.250	10.90	18.25	1.40
0.333	0.80	6.333	1.50	12.333	10.90	18.33	1.40
0.417	0.80	6.417	1.50	12.417	10.90	18.42	1.40
0.500	0.80	6.500	1.50	12.500	10.90	18.50	1.40
0.583	0.80	6.583	1.50	12.583	5.60	18.58	1.40
0.667	0.80	6.667	1.50	12.667	5.60	18.67	1.40

0.750	0.80	6.750	1.50	12.750	5.60	18.75	1.40
0.833	0.80	6.833	1.50	12.833	5.60	18.83	1.40
0.917	0.80	6.917	1.50	12.917	5.60	18.92	1.40
1.000	0.80	7.000	1.50	13.000	5.60	19.00	1.40
1.083	0.80	7.083	1.50	13.083	1.10	19.08	1.40
1.167	0.80	7.167	1.50	13.167	1.10	19.17	1.40
1.250	0.80	7.250	1.50	13.250	1.10	19.25	1.40
1.333	0.80	7.333	1.50	13.333	1.10	19.33	1.40
1.417	0.80	7.417	1.50	13.417	1.10	19.42	1.40
1.500	0.80	7.500	1.50	13.500	1.10	19.50	1.40
1.583	0.80	7.583	1.50	13.583	6.20	19.58	1.40
1.667	0.80	7.667	1.50	13.667	6.20	19.67	1.40
1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90
3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90

4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.175 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 25.839
TOTAL RAINFALL (mm)= 75.725
RUNOFF COEFFICIENT = 0.341

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

CALIB					
NASHYD (2105)	Area (ha)=	5.95	Curve Number (CN)=	67.1	
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.37			

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	0.80	6.083	1.50	12.083	10.91	18.08	1.40
0.167	0.80	6.167	1.50	12.167	10.90	18.17	1.40
0.250	0.80	6.250	1.50	12.250	10.90	18.25	1.40
0.333	0.80	6.333	1.50	12.333	10.90	18.33	1.40
0.417	0.80	6.417	1.50	12.417	10.90	18.42	1.40
0.500	0.80	6.500	1.50	12.500	10.90	18.50	1.40
0.583	0.80	6.583	1.50	12.583	5.60	18.58	1.40
0.667	0.80	6.667	1.50	12.667	5.60	18.67	1.40
0.750	0.80	6.750	1.50	12.750	5.60	18.75	1.40
0.833	0.80	6.833	1.50	12.833	5.60	18.83	1.40
0.917	0.80	6.917	1.50	12.917	5.60	18.92	1.40
1.000	0.80	7.000	1.50	13.000	5.60	19.00	1.40

1.083	0.80	7.083	1.50	13.083	1.10	19.08	1.40
1.167	0.80	7.167	1.50	13.167	1.10	19.17	1.40
1.250	0.80	7.250	1.50	13.250	1.10	19.25	1.40
1.333	0.80	7.333	1.50	13.333	1.10	19.33	1.40
1.417	0.80	7.417	1.50	13.417	1.10	19.42	1.40
1.500	0.80	7.500	1.50	13.500	1.10	19.50	1.40
1.583	0.80	7.583	1.50	13.583	6.20	19.58	1.40
1.667	0.80	7.667	1.50	13.667	6.20	19.67	1.40
1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90
3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90

5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.244 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 25.850
TOTAL RAINFALL (mm)= 75.725
RUNOFF COEFFICIENT = 0.341

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

| CALIB |
| STANHYD (2106) | Area (ha)= 1.50
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.75	0.75
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.20	1.20
Length	(m)=	100.00	166.70
Mannings n	=	0.013	0.250

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	0.80	6.083	1.50	12.083	10.91	18.08	1.40
0.167	0.80	6.167	1.50	12.167	10.90	18.17	1.40
0.250	0.80	6.250	1.50	12.250	10.90	18.25	1.40
0.333	0.80	6.333	1.50	12.333	10.90	18.33	1.40
0.417	0.80	6.417	1.50	12.417	10.90	18.42	1.40
0.500	0.80	6.500	1.50	12.500	10.90	18.50	1.40
0.583	0.80	6.583	1.50	12.583	5.60	18.58	1.40
0.667	0.80	6.667	1.50	12.667	5.60	18.67	1.40
0.750	0.80	6.750	1.50	12.750	5.60	18.75	1.40
0.833	0.80	6.833	1.50	12.833	5.60	18.83	1.40

0.917	0.80	6.917	1.50	12.917	5.60	18.92	1.40
1.000	0.80	7.000	1.50	13.000	5.60	19.00	1.40
1.083	0.80	7.083	1.50	13.083	1.10	19.08	1.40
1.167	0.80	7.167	1.50	13.167	1.10	19.17	1.40
1.250	0.80	7.250	1.50	13.250	1.10	19.25	1.40
1.333	0.80	7.333	1.50	13.333	1.10	19.33	1.40
1.417	0.80	7.417	1.50	13.417	1.10	19.42	1.40
1.500	0.80	7.500	1.50	13.500	1.10	19.50	1.40
1.583	0.80	7.583	1.50	13.583	6.20	19.58	1.40
1.667	0.80	7.667	1.50	13.667	6.20	19.67	1.40
1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90
3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90

5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Max.Eff.Inten.(mm/hr)= 83.50 38.32
over (min) 5.00 35.00
Storage Coeff. (min)= 2.60 (ii) 31.03 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.29 0.03

TOTALS

PEAK FLOW (cms)= 0.17 0.05 0.197 (iii)
TIME TO PEAK (hrs)= 12.00 12.42 12.00
RUNOFF VOLUME (mm)= 74.72 46.28 60.49
TOTAL RAINFALL (mm)= 75.73 75.73 75.73
RUNOFF COEFFICIENT = 0.99 0.61 0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107) | Area (ha)= 3.47
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	0.80	6.083	1.50	12.083	10.91	18.08	1.40
0.167	0.80	6.167	1.50	12.167	10.90	18.17	1.40
0.250	0.80	6.250	1.50	12.250	10.90	18.25	1.40
0.333	0.80	6.333	1.50	12.333	10.90	18.33	1.40
0.417	0.80	6.417	1.50	12.417	10.90	18.42	1.40
0.500	0.80	6.500	1.50	12.500	10.90	18.50	1.40
0.583	0.80	6.583	1.50	12.583	5.60	18.58	1.40
0.667	0.80	6.667	1.50	12.667	5.60	18.67	1.40
0.750	0.80	6.750	1.50	12.750	5.60	18.75	1.40
0.833	0.80	6.833	1.50	12.833	5.60	18.83	1.40
0.917	0.80	6.917	1.50	12.917	5.60	18.92	1.40
1.000	0.80	7.000	1.50	13.000	5.60	19.00	1.40
1.083	0.80	7.083	1.50	13.083	1.10	19.08	1.40
1.167	0.80	7.167	1.50	13.167	1.10	19.17	1.40
1.250	0.80	7.250	1.50	13.250	1.10	19.25	1.40
1.333	0.80	7.333	1.50	13.333	1.10	19.33	1.40
1.417	0.80	7.417	1.50	13.417	1.10	19.42	1.40
1.500	0.80	7.500	1.50	13.500	1.10	19.50	1.40
1.583	0.80	7.583	1.50	13.583	6.20	19.58	1.40
1.667	0.80	7.667	1.50	13.667	6.20	19.67	1.40
1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90
3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90

4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Max.Eff.Inten.(mm/hr)=	83.50	23.42
over (min)	5.00	75.00
Storage Coeff. (min)=	2.95 (ii)	74.28 (ii)
Unit Hyd. Tpeak (min)=	5.00	75.00
Unit Hyd. peak (cms)=	0.28	0.02

TOTALS

PEAK FLOW (cms)=	0.40	0.06	0.417 (iii)
TIME TO PEAK (hrs)=	12.00	13.08	12.00
RUNOFF VOLUME (mm)=	74.72	46.28	60.49
TOTAL RAINFALL (mm)=	75.73	75.73	75.73
RUNOFF COEFFICIENT =	0.99	0.61	0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 85.0 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	
NASHYD (1103)	Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min	Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

----- U.H. Tp(hrs)= 0.49

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	0.80	6.083	1.50	12.083	10.91	18.08	1.40
0.167	0.80	6.167	1.50	12.167	10.90	18.17	1.40
0.250	0.80	6.250	1.50	12.250	10.90	18.25	1.40
0.333	0.80	6.333	1.50	12.333	10.90	18.33	1.40
0.417	0.80	6.417	1.50	12.417	10.90	18.42	1.40
0.500	0.80	6.500	1.50	12.500	10.90	18.50	1.40
0.583	0.80	6.583	1.50	12.583	5.60	18.58	1.40
0.667	0.80	6.667	1.50	12.667	5.60	18.67	1.40
0.750	0.80	6.750	1.50	12.750	5.60	18.75	1.40
0.833	0.80	6.833	1.50	12.833	5.60	18.83	1.40
0.917	0.80	6.917	1.50	12.917	5.60	18.92	1.40
1.000	0.80	7.000	1.50	13.000	5.60	19.00	1.40
1.083	0.80	7.083	1.50	13.083	1.10	19.08	1.40
1.167	0.80	7.167	1.50	13.167	1.10	19.17	1.40
1.250	0.80	7.250	1.50	13.250	1.10	19.25	1.40
1.333	0.80	7.333	1.50	13.333	1.10	19.33	1.40
1.417	0.80	7.417	1.50	13.417	1.10	19.42	1.40
1.500	0.80	7.500	1.50	13.500	1.10	19.50	1.40
1.583	0.80	7.583	1.50	13.583	6.20	19.58	1.40
1.667	0.80	7.667	1.50	13.667	6.20	19.67	1.40
1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90

3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.072 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 27.749
TOTAL RAINFALL (mm)= 75.725
RUNOFF COEFFICIENT = 0.366

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

ADD HYD (0013)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1103):	2.00	0.072	12.33	27.75
+ ID2= 2 (2101):	1.52	0.105	12.00	25.74
=====				

ID = 3 (0013): 3.52 0.153 12.08 26.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	3.52	0.153	12.08	26.88
+ ID2= 2 (2102):	3.87	0.239	12.08	25.81
=====				
ID = 1 (0013):	7.39	0.392	12.08	26.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	7.39	0.392	12.08	26.32
+ ID2= 2 (2103):	3.55	0.219	12.08	25.81
=====				
ID = 3 (0013):	10.94	0.611	12.08	26.15

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	10.94	0.611	12.08	26.15
+ ID2= 2 (2104):	3.47	0.175	12.17	25.84
=====				
ID = 1 (0013):	14.41	0.786	12.08	26.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	14.41	0.786	12.08	26.08
+ ID2= 2 (2105):	5.95	0.244	12.25	25.85
=====				
ID = 3 (0013):	20.36	0.999	12.08	26.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
-----
ID1= 3 ( 0013): 20.36 0.999 12.08 26.01
+ ID2= 2 ( 2106): 1.50 0.197 12.00 60.49
=====
ID = 1 ( 0013): 21.86 1.080 12.00 28.38
-----
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013) |
| 1 + 2 = 3 |
-----
ID1= 1 ( 0013): 21.86 1.080 12.00 28.38
+ ID2= 2 ( 2107): 3.47 0.417 12.00 60.49
=====
ID = 3 ( 0013): 25.33 1.498 12.00 32.77
-----
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
-----
ID1= 3 ( 0013): 25.33 1.498 12.00 32.77
+ ID2= 2 ( 2108): 1.46 0.032 12.58 21.14
=====
ID = 1 ( 0013): 26.79 1.510 12.00 32.14
-----
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| RESERVOIR( 0001) |
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
-----
OVERFLOW IS OFF
-----
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 1.1450 0.1930
0.3370 0.0770 | 1.3850 0.2270
0.6240 0.1200 | 1.6330 0.2640
0.8460 0.1510 | 0.0000 0.0000
-----
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
-----
```

```
INFLOW : ID= 2 ( 0013) 26.790 1.510 12.00 32.14
OUTFLOW: ID= 1 ( 0001) 26.790 0.859 12.33 32.14
```

```
PEAK FLOW REDUCTION [Qout/Qin](%)= 56.86
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.1534
```

```
-----
| CALIB |
| NASHYD ( 1100) |
| ID= 1 DT= 5.0 min |
-----
Area (ha)= 24.78 Curve Number (CN)= 75.7
Ia (mm)= 6.20 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.70
-----
```

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 0.80 6.083 1.50 12.083 10.91 18.08 1.40
0.167 0.80 6.167 1.50 12.167 10.90 18.17 1.40
0.250 0.80 6.250 1.50 12.250 10.90 18.25 1.40
0.333 0.80 6.333 1.50 12.333 10.90 18.33 1.40
0.417 0.80 6.417 1.50 12.417 10.90 18.42 1.40
0.500 0.80 6.500 1.50 12.500 10.90 18.50 1.40
0.583 0.80 6.583 1.50 12.583 5.60 18.58 1.40
0.667 0.80 6.667 1.50 12.667 5.60 18.67 1.40
0.750 0.80 6.750 1.50 12.750 5.60 18.75 1.40
0.833 0.80 6.833 1.50 12.833 5.60 18.83 1.40
0.917 0.80 6.917 1.50 12.917 5.60 18.92 1.40
1.000 0.80 7.000 1.50 13.000 5.60 19.00 1.40
1.083 0.80 7.083 1.50 13.083 1.10 19.08 1.40
1.167 0.80 7.167 1.50 13.167 1.10 19.17 1.40
1.250 0.80 7.250 1.50 13.250 1.10 19.25 1.40
1.333 0.80 7.333 1.50 13.333 1.10 19.33 1.40
1.417 0.80 7.417 1.50 13.417 1.10 19.42 1.40
1.500 0.80 7.500 1.50 13.500 1.10 19.50 1.40
1.583 0.80 7.583 1.50 13.583 6.20 19.58 1.40
1.667 0.80 7.667 1.50 13.667 6.20 19.67 1.40
1.750 0.80 7.750 1.50 13.750 6.20 19.75 1.40
1.833 0.80 7.833 1.50 13.833 6.20 19.83 1.40
1.917 0.80 7.917 1.50 13.917 6.20 19.92 1.40
2.000 0.80 8.000 1.50 14.000 6.20 20.00 1.40
2.083 1.00 8.083 2.00 14.083 2.30 20.08 0.90
2.167 1.00 8.167 2.00 14.167 2.30 20.17 0.90
2.250 1.00 8.250 2.00 14.250 2.30 20.25 0.90
2.333 1.00 8.333 2.00 14.333 2.30 20.33 0.90
2.417 1.00 8.417 2.00 14.417 2.30 20.42 0.90
2.500 1.00 8.500 2.00 14.500 2.30 20.50 0.90
```

2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90
3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.819 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 31.998
TOTAL RAINFALL (mm)= 75.725
RUNOFF COEFFICIENT = 0.423

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

| CALIB |
| NASHYD (1101) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.49

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	0.80	6.083	1.50	12.083	10.91	18.08	1.40
0.167	0.80	6.167	1.50	12.167	10.90	18.17	1.40
0.250	0.80	6.250	1.50	12.250	10.90	18.25	1.40
0.333	0.80	6.333	1.50	12.333	10.90	18.33	1.40
0.417	0.80	6.417	1.50	12.417	10.90	18.42	1.40
0.500	0.80	6.500	1.50	12.500	10.90	18.50	1.40
0.583	0.80	6.583	1.50	12.583	5.60	18.58	1.40
0.667	0.80	6.667	1.50	12.667	5.60	18.67	1.40
0.750	0.80	6.750	1.50	12.750	5.60	18.75	1.40
0.833	0.80	6.833	1.50	12.833	5.60	18.83	1.40
0.917	0.80	6.917	1.50	12.917	5.60	18.92	1.40
1.000	0.80	7.000	1.50	13.000	5.60	19.00	1.40
1.083	0.80	7.083	1.50	13.083	1.10	19.08	1.40
1.167	0.80	7.167	1.50	13.167	1.10	19.17	1.40
1.250	0.80	7.250	1.50	13.250	1.10	19.25	1.40
1.333	0.80	7.333	1.50	13.333	1.10	19.33	1.40
1.417	0.80	7.417	1.50	13.417	1.10	19.42	1.40
1.500	0.80	7.500	1.50	13.500	1.10	19.50	1.40
1.583	0.80	7.583	1.50	13.583	6.20	19.58	1.40
1.667	0.80	7.667	1.50	13.667	6.20	19.67	1.40
1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90

2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90
3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.072 (i)
 TIME TO PEAK (hrs)= 12.333
 RUNOFF VOLUME (mm)= 27.749
 TOTAL RAINFALL (mm)= 75.725
 RUNOFF COEFFICIENT = 0.366

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

```

-----
| ADD HYD ( 0061) |
| 1 + 2 = 3 |
-----
                AREA      QPEAK      TPEAK      R.V.
                (ha)      (cms)      (hrs)      (mm)
      ID1= 1 ( 1100):  24.78  0.819  12.58  32.00
+ ID2= 2 ( 1101):    2.00  0.072  12.33  27.75
=====
      ID = 3 ( 0061):  26.78  0.886  12.58  31.68
  
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| CALIB |
| STANDHYD ( 2100) |
| ID= 1 DT= 5.0 min |
-----
                Area (ha)= 24.78
                Total Imp(%)= 45.00  Dir. Conn.(%)= 45.00

                IMPERVIOUS      PERVIOUS (i)
Surface Area (ha)= 11.15      13.63
Dep. Storage (mm)= 1.00      1.50
Average Slope (%)= 2.00      2.00
Length (m)= 406.45      800.00
Mannings n = 0.013      0.250
  
```

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      0.80      6.083      1.50      12.083      10.91      18.08      1.40
0.167      0.80      6.167      1.50      12.167      10.90      18.17      1.40
0.250      0.80      6.250      1.50      12.250      10.90      18.25      1.40
0.333      0.80      6.333      1.50      12.333      10.90      18.33      1.40
0.417      0.80      6.417      1.50      12.417      10.90      18.42      1.40
0.500      0.80      6.500      1.50      12.500      10.90      18.50      1.40
0.583      0.80      6.583      1.50      12.583      5.60      18.58      1.40
0.667      0.80      6.667      1.50      12.667      5.60      18.67      1.40
0.750      0.80      6.750      1.50      12.750      5.60      18.75      1.40
0.833      0.80      6.833      1.50      12.833      5.60      18.83      1.40
0.917      0.80      6.917      1.50      12.917      5.60      18.92      1.40
1.000      0.80      7.000      1.50      13.000      5.60      19.00      1.40
1.083      0.80      7.083      1.50      13.083      1.10      19.08      1.40
1.167      0.80      7.167      1.50      13.167      1.10      19.17      1.40
1.250      0.80      7.250      1.50      13.250      1.10      19.25      1.40
1.333      0.80      7.333      1.50      13.333      1.10      19.33      1.40
1.417      0.80      7.417      1.50      13.417      1.10      19.42      1.40
1.500      0.80      7.500      1.50      13.500      1.10      19.50      1.40
1.583      0.80      7.583      1.50      13.583      6.20      19.58      1.40
1.667      0.80      7.667      1.50      13.667      6.20      19.67      1.40
  
```

1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90
3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90
5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90

5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Max.Eff.Inten.(mm/hr)=	83.50	23.42
over (min)	5.00	85.00
Storage Coeff. (min)=	5.17 (ii)	81.28 (ii)
Unit Hyd. Tpeak (min)=	5.00	85.00
Unit Hyd. peak (cms)=	0.21	0.01

TOTALS

PEAK FLOW (cms)=	2.50	0.44	2.606 (iii)
TIME TO PEAK (hrs)=	12.00	13.25	12.00
RUNOFF VOLUME (mm)=	74.73	46.28	59.08
TOTAL RAINFALL (mm)=	75.73	75.73	75.73
RUNOFF COEFFICIENT =	0.99	0.61	0.78

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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			
NASHYD (1102)	Area (ha)=	2.00	Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min	Ia (mm)=	4.40	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.49	

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	0.80	6.083	1.50	12.083	10.91	18.08	1.40
0.167	0.80	6.167	1.50	12.167	10.90	18.17	1.40
0.250	0.80	6.250	1.50	12.250	10.90	18.25	1.40
0.333	0.80	6.333	1.50	12.333	10.90	18.33	1.40
0.417	0.80	6.417	1.50	12.417	10.90	18.42	1.40
0.500	0.80	6.500	1.50	12.500	10.90	18.50	1.40
0.583	0.80	6.583	1.50	12.583	5.60	18.58	1.40
0.667	0.80	6.667	1.50	12.667	5.60	18.67	1.40
0.750	0.80	6.750	1.50	12.750	5.60	18.75	1.40
0.833	0.80	6.833	1.50	12.833	5.60	18.83	1.40
0.917	0.80	6.917	1.50	12.917	5.60	18.92	1.40
1.000	0.80	7.000	1.50	13.000	5.60	19.00	1.40
1.083	0.80	7.083	1.50	13.083	1.10	19.08	1.40
1.167	0.80	7.167	1.50	13.167	1.10	19.17	1.40
1.250	0.80	7.250	1.50	13.250	1.10	19.25	1.40

1.333	0.80	7.333	1.50	13.333	1.10	19.33	1.40
1.417	0.80	7.417	1.50	13.417	1.10	19.42	1.40
1.500	0.80	7.500	1.50	13.500	1.10	19.50	1.40
1.583	0.80	7.583	1.50	13.583	6.20	19.58	1.40
1.667	0.80	7.667	1.50	13.667	6.20	19.67	1.40
1.750	0.80	7.750	1.50	13.750	6.20	19.75	1.40
1.833	0.80	7.833	1.50	13.833	6.20	19.83	1.40
1.917	0.80	7.917	1.50	13.917	6.20	19.92	1.40
2.000	0.80	8.000	1.50	14.000	6.20	20.00	1.40
2.083	1.00	8.083	2.00	14.083	2.30	20.08	0.90
2.167	1.00	8.167	2.00	14.167	2.30	20.17	0.90
2.250	1.00	8.250	2.00	14.250	2.30	20.25	0.90
2.333	1.00	8.333	2.00	14.333	2.30	20.33	0.90
2.417	1.00	8.417	2.00	14.417	2.30	20.42	0.90
2.500	1.00	8.500	2.00	14.500	2.30	20.50	0.90
2.583	1.00	8.583	2.00	14.583	2.30	20.58	0.90
2.667	1.00	8.667	2.00	14.667	2.30	20.67	0.90
2.750	1.00	8.750	2.00	14.750	2.30	20.75	0.90
2.833	1.00	8.833	2.00	14.833	2.30	20.83	0.90
2.917	1.00	8.917	2.00	14.917	2.30	20.92	0.90
3.000	1.00	9.000	2.00	15.000	2.30	21.00	0.90
3.083	1.00	9.083	2.40	15.083	2.30	21.08	0.90
3.167	1.00	9.167	2.40	15.167	2.30	21.17	0.90
3.250	1.00	9.250	2.40	15.250	2.30	21.25	0.90
3.333	1.00	9.333	2.40	15.333	2.30	21.33	0.90
3.417	1.00	9.417	2.40	15.417	2.30	21.42	0.90
3.500	1.00	9.500	2.40	15.500	2.30	21.50	0.90
3.583	1.00	9.583	2.70	15.583	2.30	21.58	0.90
3.667	1.00	9.667	2.70	15.667	2.30	21.67	0.90
3.750	1.00	9.750	2.70	15.750	2.30	21.75	0.90
3.833	1.00	9.833	2.70	15.833	2.30	21.83	0.90
3.917	1.00	9.917	2.70	15.917	2.30	21.92	0.90
4.000	1.00	10.000	2.70	16.000	2.30	22.00	0.90
4.083	1.20	10.083	3.50	16.083	1.40	22.08	0.90
4.167	1.20	10.167	3.50	16.167	1.40	22.17	0.90
4.250	1.20	10.250	3.50	16.250	1.40	22.25	0.90
4.333	1.20	10.333	3.50	16.333	1.40	22.33	0.90
4.417	1.20	10.417	3.50	16.417	1.40	22.42	0.90
4.500	1.20	10.500	3.50	16.500	1.40	22.50	0.90
4.583	1.20	10.583	4.70	16.583	1.40	22.58	0.90
4.667	1.20	10.667	4.70	16.667	1.40	22.67	0.90
4.750	1.20	10.750	4.70	16.750	1.40	22.75	0.90
4.833	1.20	10.833	4.70	16.833	1.40	22.83	0.90
4.917	1.20	10.917	4.70	16.917	1.40	22.92	0.90
5.000	1.20	11.000	4.70	17.000	1.40	23.00	0.90
5.083	1.20	11.083	7.30	17.083	1.40	23.08	0.90
5.167	1.20	11.167	7.30	17.167	1.40	23.17	0.90
5.250	1.20	11.250	7.30	17.250	1.40	23.25	0.90
5.333	1.20	11.333	7.30	17.333	1.40	23.33	0.90
5.417	1.20	11.417	7.30	17.417	1.40	23.42	0.90

5.500	1.20	11.500	7.30	17.500	1.40	23.50	0.90
5.583	1.20	11.583	31.40	17.583	1.40	23.58	0.90
5.667	1.20	11.667	31.40	17.667	1.40	23.67	0.90
5.750	1.20	11.750	31.40	17.750	1.40	23.75	0.90
5.833	1.20	11.833	83.49	17.833	1.40	23.83	0.90
5.917	1.20	11.917	83.50	17.917	1.40	23.92	0.90
6.000	1.20	12.000	83.50	18.000	1.40	24.00	0.90

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.072 (i)
 TIME TO PEAK (hrs)= 12.333
 RUNOFF VOLUME (mm)= 27.749
 TOTAL RAINFALL (mm)= 75.725
 RUNOFF COEFFICIENT = 0.366

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

```

-----
| ADD HYD ( 0063)|
| 1 + 2 = 3 |
-----
              AREA   QPEAK   TPEAK   R.V.
              (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 1102):   2.00   0.072   12.33   27.75
+ ID2= 2 ( 2100):  24.78   2.606   12.00   59.08
=====
ID = 3 ( 0063):  26.78   2.645   12.00   56.74

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
=====
V  V  I  SSSSS  U  U  A  L          (v 6.2.2008)
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

```

```

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

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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\V02\voin.dat

Output filename:

C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\edbb43b4-6707-4fa8-9f31-ebb104abb83c\scen

Summary filename:

C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\edbb43b4-6707-4fa8-9f31-ebb104abb83c\scen

DATE: 04/05/2023

TIME: 11:32:36

USER:

COMMENTS: _____

** SIMULATION : 12 hour Timmins **

READ STORM	Filename: C:\Users\nnapper\AppData\Local\Temp\aa485c45-5c41-4f04-b9f7-20c929bcd42e\d42768b5
Ptotal=193.00 mm	Comments: 12 hour Timmins

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	15.00	3.00	3.00	6.00	43.00	9.00	13.00
0.25	15.00	3.25	3.00	6.25	43.00	9.25	13.00
0.50	15.00	3.50	3.00	6.50	43.00	9.50	13.00
0.75	15.00	3.75	3.00	6.75	43.00	9.75	13.00
1.00	20.00	4.00	5.00	7.00	20.00	10.00	13.00
1.25	20.00	4.25	5.00	7.25	20.00	10.25	13.00
1.50	20.00	4.50	5.00	7.50	20.00	10.50	13.00
1.75	20.00	4.75	5.00	7.75	20.00	10.75	13.00
2.00	10.00	5.00	20.00	8.00	23.00	11.00	8.00
2.25	10.00	5.25	20.00	8.25	23.00	11.25	8.00
2.50	10.00	5.50	20.00	8.50	23.00	11.50	8.00
2.75	10.00	5.75	20.00	8.75	23.00	11.75	8.00

CALIB	Area (ha)=	1.46	Curve Number (CN)=	60.5
NASHYD (2108)	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.67		

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.081 (i)
TIME TO PEAK (hrs)= 7.333
RUNOFF VOLUME (mm)= 99.886
TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.518

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

| CALIB |
| NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.16

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00

2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.126 (i)
TIME TO PEAK (hrs)= 7.000
RUNOFF VOLUME (mm)= 112.912
TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.585

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

| CALIB |
| NASHYD (2102) | Area (ha)= 3.87 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.20

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00

1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.319 (i)
TIME TO PEAK (hrs)= 7.000
RUNOFF VOLUME (mm)= 113.207
TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.587

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

CALIB					
NASHYD (2103)	Area (ha)=	3.55	Curve Number (CN)=	67.1	
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.20			

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00

0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.293 (i)
TIME TO PEAK (hrs)= 7.000
RUNOFF VOLUME (mm)= 113.207
TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.587

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

CALIB					
NASHYD (2104)	Area (ha)=	3.47	Curve Number (CN)=	67.1	
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.27			

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.279 (i)

TIME TO PEAK (hrs)= 7.000

RUNOFF VOLUME (mm)= 113.356

TOTAL RAINFALL (mm)= 193.000

RUNOFF COEFFICIENT = 0.587

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

 CALIB
 NASHYD (2105)
 ID= 1 DT= 5.0 min

Area (ha)= 5.95 Curve Number (CN)= 67.1
 Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
 U.H. Tp(hrs)= 0.37

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.455 (i)
TIME TO PEAK (hrs)= 7.083
RUNOFF VOLUME (mm)= 113.404
TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.588

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

CALIB
STANDHYD (2106)
ID= 1 DT= 5.0 min

Area (ha)= 1.50
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.75 0.75
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.20 1.20
Length (m)= 100.00 166.70
Mannings n = 0.013 0.250

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00

1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Max.Eff.Inten.(mm/hr)= 43.00 39.07
over (min)= 5.00 35.00
Storage Coeff. (min)= 3.39 (ii) 31.60 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.26 0.03

TOTALS
PEAK FLOW (cms)= 0.09 0.07 0.156 (iii)
TIME TO PEAK (hrs)= 6.75 7.17 7.00
RUNOFF VOLUME (mm)= 192.00 155.18 173.58
TOTAL RAINFALL (mm)= 193.00 193.00 193.00
RUNOFF COEFFICIENT = 0.99 0.80 0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107)
ID= 1 DT= 5.0 min

Area (ha)= 3.47
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.74 1.74
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.82 1.82
Length (m)= 152.10 685.00
Mannings n = 0.013 0.250

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Max.Eff.Inten.(mm/hr)= 43.00 38.34
over (min) 5.00 65.00
Storage Coeff. (min)= 3.85 (ii) 62.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 65.00
Unit Hyd. peak (cms)= 0.25 0.02

TOTALS

PEAK FLOW (cms)= 0.21 0.13 0.304 (iii)
TIME TO PEAK (hrs)= 6.92 7.75 7.00

RUNOFF VOLUME (mm)= 192.00 155.18 173.58
TOTAL RAINFALL (mm)= 193.00 193.00 193.00
RUNOFF COEFFICIENT = 0.99 0.80 0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.49

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00

2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.149 (i)
TIME TO PEAK (hrs)= 7.167
RUNOFF VOLUME (mm)= 118.325
TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.613

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

ADD HYD (0013)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1103):		2.00	0.149	7.17	118.32
+ ID2= 2 (2101):		1.52	0.126	7.00	112.91
=====					
ID = 3 (0013):		3.52	0.270	7.00	115.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)					
3 + 2 = 1					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):		3.52	0.270	7.00	115.99
+ ID2= 2 (2102):		3.87	0.319	7.00	113.21
=====					
ID = 1 (0013):		7.39	0.589	7.00	114.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0013)|

1 + 2 = 3		AREA	QPEAK	TPEAK	R.V.
-----		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):		7.39	0.589	7.00	114.53
+ ID2= 2 (2103):		3.55	0.293	7.00	113.21
=====					
ID = 3 (0013):		10.94	0.882	7.00	114.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				

ID1= 3 (0013):	10.94	0.882	7.00	114.10
+ ID2= 2 (2104):	3.47	0.279	7.00	113.36
=====				
ID = 1 (0013):	14.41	1.160	7.00	113.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):		14.41	1.160	7.00	113.92
+ ID2= 2 (2105):		5.95	0.455	7.00	113.40
=====					
ID = 3 (0013):		20.36	1.611	7.00	113.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	20.36	1.611	7.00	113.77
+ ID2= 2 (2106):	1.50	0.156	7.00	173.58
=====				
ID = 1 (0013):	21.86	1.767	7.00	117.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)							
1 + 2 = 3							
		AREA	QPEAK	TPEAK	R.V.		
		(ha)	(cms)	(hrs)	(mm)		

```
ID1= 1 ( 0013): 21.86 1.767 7.00 117.87
+ ID2= 2 ( 2107): 3.47 0.304 7.00 173.58
=====
ID = 3 ( 0013): 25.33 2.071 7.00 125.51
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013): 25.33 2.071 7.00 125.51
+ ID2= 2 ( 2108): 1.46 0.081 7.33 99.89
=====
ID = 1 ( 0013): 26.79 2.143 7.00 124.11
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| RESERVOIR( 0001) | OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
-----
          OUTFLOW   STORAGE   OUTFLOW   STORAGE
          (cms)   (ha.m.)   (cms)   (ha.m.)
          0.0000   0.0000   1.1450   0.1930
          0.3370   0.0770   1.3850   0.2270
          0.6240   0.1200   1.6330   0.2640
          0.8460   0.1510   0.0000   0.0000
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
INFLOW : ID= 2 ( 0013) 26.790 2.143 7.00 124.11
OUTFLOW: ID= 1 ( 0001) 26.790 1.842 7.17 124.11
```

PEAK FLOW REDUCTION [Qout/Qin](%)= 85.95
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.2954

```
-----
| CALIB |
| NASHYD ( 1100) | Area (ha)= 24.78 Curve Number (CN)= 75.7
| ID= 1 DT= 5.0 min | Ia (mm)= 6.20 # of Linear Res.(N)= 3.00
-----
          U.H. Tp(hrs)= 0.70
```

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00	
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00	
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00	
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00	
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00	
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00	
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00	
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00	
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00	
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00	
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00	
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00	
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00	
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00	
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00	
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00	
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00	
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00	
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00	
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00	
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00	
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00	
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00	
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00	
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00	
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00	
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00	
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00	
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00	
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00	
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00	
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00	
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00	
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00	
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00	
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00	

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 1.807 (i)
TIME TO PEAK (hrs)= 7.333
RUNOFF VOLUME (mm)= 130.038
TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.674

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

CALIB					
NASHYD (1101)	Area (ha)=	2.00	Curve Number (CN)=	69.4	
ID= 1 DT= 5.0 min	Ia (mm)=	4.40	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.49			

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)=	0.149 (i)
TIME TO PEAK (hrs)=	7.167
RUNOFF VOLUME (mm)=	118.325
TOTAL RAINFALL (mm)=	193.000
RUNOFF COEFFICIENT	= 0.613

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

ADD HYD (0061)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.78	1.807	7.33	130.04
+ ID2= 2 (1101):	2.00	0.149	7.17	118.32
=====				
ID = 3 (0061):	26.78	1.950	7.33	129.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (2100)	Area (ha)=	24.78	
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	11.15	13.63	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	2.00	2.00	
Length (m)=	406.45	800.00	
Mannings n =	0.013	0.250	

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00

1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Max.Eff.Inten.(mm/hr)= 43.00 38.34
over (min) 5.00 70.00
Storage Coeff. (min)= 6.75 (ii) 69.24 (ii)
Unit Hyd. Tpeak (min)= 5.00 70.00
Unit Hyd. peak (cms)= 0.18 0.02

TOTALS

PEAK FLOW (cms)= 1.33 0.94 2.027 (iii)
TIME TO PEAK (hrs)= 7.00 7.83 7.00
RUNOFF VOLUME (mm)= 192.00 155.17 171.75
TOTAL RAINFALL (mm)= 193.00 193.00 193.00
RUNOFF COEFFICIENT = 0.99 0.80 0.89

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1102) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

----- U.H. Tp(hrs)= 0.49

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	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
1.000	15.00	4.000	3.00	7.000	43.00	10.00	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
2.000	20.00	5.000	5.00	8.000	20.00	11.00	13.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
3.000	10.00	6.000	20.00	9.000	23.00	12.00	8.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.149 (i)
TIME TO PEAK (hrs)= 7.167
RUNOFF VOLUME (mm)= 118.325

TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.613

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

```
-----  
| ADD HYD ( 0063)|  
| 1 + 2 = 3 |  
-----  
          AREA    QPEAK    TPEAK    R.V.  
          (ha)    (cms)    (hrs)    (mm)  
ID1= 1 ( 1102):    2.00    0.149    7.17    118.32  
+ ID2= 2 ( 2100):    24.78    2.027    7.00    171.75  
=====
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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

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V	V	I	SSSS	U	U	A	L	(v 6.2.2008)
V	V	I	SS	U	U	AA	L	
V	V	I	SS	U	U	AAAA	L	
V	V	I	SS	U	U	AA	L	
VV	I	SSSS	UUUU	A	A	LLLL		

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

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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\V02\voin.dat

Output filename:

C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\d898
5a4f-b53a-488e-ade3-b5babb6d5d60\scen

Summary filename:

C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\d898
5a4f-b53a-488e-ade3-b5babb6d5d60\scen

DATE: 04/05/2023

TIME: 11:32:32

USER:

COMMENTS: _____

```
-----  
*****  
** SIMULATION : 25-Year_12 hour AES **  
*****
```

READ STORM	Filename: C:\Users\nnapper\AppData\Local\Temp\aa485c45-5c41-4f04-b9f7-20c929bcd42e\46a2a2bb
Ptotal= 80.60 mm	Comments: 25-Year_12 hour AES

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	10.50	3.00	12.10	6.00	2.40	9.00	0.00
0.17	10.50	3.17	12.10	6.17	2.40	9.17	0.00
0.33	10.50	3.33	12.10	6.33	2.40	9.33	0.00
0.50	10.50	3.50	12.10	6.50	2.40	9.50	0.00
0.67	10.50	3.67	12.10	6.67	2.40	9.67	0.00
0.83	10.50	3.83	12.10	6.83	2.40	9.83	0.00
1.00	21.00	4.00	11.30	7.00	0.80	10.00	0.00
1.17	21.00	4.17	11.30	7.17	0.80	10.17	0.00
1.33	21.00	4.33	11.30	7.33	0.80	10.33	0.00
1.50	21.00	4.50	11.30	7.50	0.80	10.50	0.00
1.67	21.00	4.67	11.30	7.67	0.80	10.67	0.00
1.83	21.00	4.83	11.30	7.83	0.80	10.83	0.00
2.00	16.10	5.00	6.40	8.00	0.00	11.00	0.00
2.17	16.10	5.17	6.40	8.17	0.00	11.17	0.00
2.33	16.10	5.33	6.40	8.33	0.00	11.33	0.00
2.50	16.10	5.50	6.40	8.50	0.00	11.50	0.00
2.67	16.10	5.67	6.40	8.67	0.00	11.67	0.00
2.83	16.10	5.83	6.40	8.83	0.00	11.83	0.00

CALIB					
NASHYD (2108)	Area (ha)=	1.46	Curve Number (CN)=	60.5	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
-----	U.H. Tp(hrs)=	0.67			

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	10.50	3.083	12.10	6.083	2.40	9.08	0.00
0.167	10.50	3.167	12.10	6.167	2.40	9.17	0.00
0.250	10.50	3.250	12.10	6.250	2.40	9.25	0.00
0.333	10.50	3.333	12.10	6.333	2.40	9.33	0.00
0.417	10.50	3.417	12.10	6.417	2.40	9.42	0.00
0.500	10.50	3.500	12.10	6.500	2.40	9.50	0.00
0.583	10.50	3.583	12.10	6.583	2.40	9.58	0.00
0.667	10.50	3.667	12.10	6.667	2.40	9.67	0.00
0.750	10.50	3.750	12.10	6.750	2.40	9.75	0.00
0.833	10.50	3.833	12.10	6.833	2.40	9.83	0.00
0.917	10.50	3.917	12.10	6.917	2.40	9.92	0.00
1.000	10.50	4.000	12.10	7.000	2.40	10.00	0.00
1.083	21.00	4.083	11.30	7.083	0.80	10.08	0.00
1.167	21.00	4.167	11.30	7.167	0.80	10.17	0.00
1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00
1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00
2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)=	0.021 (i)
TIME TO PEAK (hrs)=	5.083
RUNOFF VOLUME (mm)=	23.671
TOTAL RAINFALL (mm)=	80.600
RUNOFF COEFFICIENT	= 0.294

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

CALIB					
NASHYD (2101)	Area (ha)=	1.52	Curve Number (CN)=	67.1	
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00	
-----	U.H. Tp(hrs)=	0.16			

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	10.50	3.083	12.10	6.083	2.40	9.08	0.00
0.167	10.50	3.167	12.10	6.167	2.40	9.17	0.00
0.250	10.50	3.250	12.10	6.250	2.40	9.25	0.00
0.333	10.50	3.333	12.10	6.333	2.40	9.33	0.00
0.417	10.50	3.417	12.10	6.417	2.40	9.42	0.00
0.500	10.50	3.500	12.10	6.500	2.40	9.50	0.00
0.583	10.50	3.583	12.10	6.583	2.40	9.58	0.00
0.667	10.50	3.667	12.10	6.667	2.40	9.67	0.00
0.750	10.50	3.750	12.10	6.750	2.40	9.75	0.00
0.833	10.50	3.833	12.10	6.833	2.40	9.83	0.00
0.917	10.50	3.917	12.10	6.917	2.40	9.92	0.00
1.000	10.50	4.000	12.10	7.000	2.40	10.00	0.00
1.083	21.00	4.083	11.30	7.083	0.80	10.08	0.00
1.167	21.00	4.167	11.30	7.167	0.80	10.17	0.00
1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00
1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00
2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00

2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.029 (i)
 TIME TO PEAK (hrs)= 3.000
 RUNOFF VOLUME (mm)= 28.672
 TOTAL RAINFALL (mm)= 80.600
 RUNOFF COEFFICIENT = 0.356

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

CALIB							
NASHYD (2102)	Area (ha)=	3.87	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	10.50	3.083	12.10	6.083	2.40	9.08	0.00
0.167	10.50	3.167	12.10	6.167	2.40	9.17	0.00
0.250	10.50	3.250	12.10	6.250	2.40	9.25	0.00
0.333	10.50	3.333	12.10	6.333	2.40	9.33	0.00
0.417	10.50	3.417	12.10	6.417	2.40	9.42	0.00
0.500	10.50	3.500	12.10	6.500	2.40	9.50	0.00
0.583	10.50	3.583	12.10	6.583	2.40	9.58	0.00
0.667	10.50	3.667	12.10	6.667	2.40	9.67	0.00
0.750	10.50	3.750	12.10	6.750	2.40	9.75	0.00
0.833	10.50	3.833	12.10	6.833	2.40	9.83	0.00
0.917	10.50	3.917	12.10	6.917	2.40	9.92	0.00
1.000	10.50	4.000	12.10	7.000	2.40	10.00	0.00
1.083	21.00	4.083	11.30	7.083	0.80	10.08	0.00
1.167	21.00	4.167	11.30	7.167	0.80	10.17	0.00
1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00

1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00
2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.072 (i)
 TIME TO PEAK (hrs)= 3.000
 RUNOFF VOLUME (mm)= 28.747
 TOTAL RAINFALL (mm)= 80.600
 RUNOFF COEFFICIENT = 0.357

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

CALIB							
NASHYD (2103)	Area (ha)=	3.55	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	10.50	3.083	12.10	6.083	2.40	9.08	0.00
0.167	10.50	3.167	12.10	6.167	2.40	9.17	0.00
0.250	10.50	3.250	12.10	6.250	2.40	9.25	0.00
0.333	10.50	3.333	12.10	6.333	2.40	9.33	0.00
0.417	10.50	3.417	12.10	6.417	2.40	9.42	0.00
0.500	10.50	3.500	12.10	6.500	2.40	9.50	0.00
0.583	10.50	3.583	12.10	6.583	2.40	9.58	0.00
0.667	10.50	3.667	12.10	6.667	2.40	9.67	0.00
0.750	10.50	3.750	12.10	6.750	2.40	9.75	0.00

0.833	10.50	3.833	12.10	6.833	2.40	9.83	0.00
0.917	10.50	3.917	12.10	6.917	2.40	9.92	0.00
1.000	10.50	4.000	12.10	7.000	2.40	10.00	0.00
1.083	21.00	4.083	11.30	7.083	0.80	10.08	0.00
1.167	21.00	4.167	11.30	7.167	0.80	10.17	0.00
1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00
1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00
2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.066 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 28.747
TOTAL RAINFALL (mm)= 80.600
RUNOFF COEFFICIENT = 0.357

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

CALIB			
NASHYD (2104)	Area (ha)=	3.47	Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.27	

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	10.50	3.083	12.10	6.083	2.40	9.08	0.00
0.167	10.50	3.167	12.10	6.167	2.40	9.17	0.00
0.250	10.50	3.250	12.10	6.250	2.40	9.25	0.00
0.333	10.50	3.333	12.10	6.333	2.40	9.33	0.00
0.417	10.50	3.417	12.10	6.417	2.40	9.42	0.00
0.500	10.50	3.500	12.10	6.500	2.40	9.50	0.00
0.583	10.50	3.583	12.10	6.583	2.40	9.58	0.00
0.667	10.50	3.667	12.10	6.667	2.40	9.67	0.00
0.750	10.50	3.750	12.10	6.750	2.40	9.75	0.00
0.833	10.50	3.833	12.10	6.833	2.40	9.83	0.00
0.917	10.50	3.917	12.10	6.917	2.40	9.92	0.00
1.000	10.50	4.000	12.10	7.000	2.40	10.00	0.00
1.083	21.00	4.083	11.30	7.083	0.80	10.08	0.00
1.167	21.00	4.167	11.30	7.167	0.80	10.17	0.00
1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00
1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00
2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.063 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 28.785
TOTAL RAINFALL (mm)= 80.600
RUNOFF COEFFICIENT = 0.357

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

CALIB
NASHYD (2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.37

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	10.50	3.083	12.10	6.083	2.40	9.08	0.00
0.167	10.50	3.167	12.10	6.167	2.40	9.17	0.00
0.250	10.50	3.250	12.10	6.250	2.40	9.25	0.00
0.333	10.50	3.333	12.10	6.333	2.40	9.33	0.00
0.417	10.50	3.417	12.10	6.417	2.40	9.42	0.00
0.500	10.50	3.500	12.10	6.500	2.40	9.50	0.00
0.583	10.50	3.583	12.10	6.583	2.40	9.58	0.00
0.667	10.50	3.667	12.10	6.667	2.40	9.67	0.00
0.750	10.50	3.750	12.10	6.750	2.40	9.75	0.00
0.833	10.50	3.833	12.10	6.833	2.40	9.83	0.00
0.917	10.50	3.917	12.10	6.917	2.40	9.92	0.00
1.000	10.50	4.000	12.10	7.000	2.40	10.00	0.00
1.083	21.00	4.083	11.30	7.083	0.80	10.08	0.00
1.167	21.00	4.167	11.30	7.167	0.80	10.17	0.00
1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00
1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00
2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.106 (i)
TIME TO PEAK (hrs)= 3.167
RUNOFF VOLUME (mm)= 28.797
TOTAL RAINFALL (mm)= 80.600
RUNOFF COEFFICIENT = 0.357

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

CALIB
STANDHYD (2106) | Area (ha)= 1.50
ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	10.50	3.083	12.10	6.083	2.40	9.08	0.00
0.167	10.50	3.167	12.10	6.167	2.40	9.17	0.00
0.250	10.50	3.250	12.10	6.250	2.40	9.25	0.00
0.333	10.50	3.333	12.10	6.333	2.40	9.33	0.00
0.417	10.50	3.417	12.10	6.417	2.40	9.42	0.00
0.500	10.50	3.500	12.10	6.500	2.40	9.50	0.00
0.583	10.50	3.583	12.10	6.583	2.40	9.58	0.00
0.667	10.50	3.667	12.10	6.667	2.40	9.67	0.00
0.750	10.50	3.750	12.10	6.750	2.40	9.75	0.00
0.833	10.50	3.833	12.10	6.833	2.40	9.83	0.00
0.917	10.50	3.917	12.10	6.917	2.40	9.92	0.00
1.000	10.50	4.000	12.10	7.000	2.40	10.00	0.00
1.083	21.00	4.083	11.30	7.083	0.80	10.08	0.00
1.167	21.00	4.167	11.30	7.167	0.80	10.17	0.00
1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00
1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00

2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 21.00 11.63
over (min) 5.00 55.00
Storage Coeff. (min)= 4.52 (ii) 50.32 (ii)
Unit Hyd. Tpeak (min)= 5.00 55.00
Unit Hyd. peak (cms)= 0.23 0.02

TOTALS

PEAK FLOW (cms)= 0.04 0.02 0.054 (iii)
TIME TO PEAK (hrs)= 2.00 3.67 2.00
RUNOFF VOLUME (mm)= 79.60 50.49 65.02
TOTAL RAINFALL (mm)= 80.60 80.60 80.60
RUNOFF COEFFICIENT = 0.99 0.63 0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107) | Area (ha)= 3.47
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	10.50	3.083	12.10	6.083	2.40	9.08	0.00
0.167	10.50	3.167	12.10	6.167	2.40	9.17	0.00
0.250	10.50	3.250	12.10	6.250	2.40	9.25	0.00
0.333	10.50	3.333	12.10	6.333	2.40	9.33	0.00
0.417	10.50	3.417	12.10	6.417	2.40	9.42	0.00
0.500	10.50	3.500	12.10	6.500	2.40	9.50	0.00
0.583	10.50	3.583	12.10	6.583	2.40	9.58	0.00
0.667	10.50	3.667	12.10	6.667	2.40	9.67	0.00
0.750	10.50	3.750	12.10	6.750	2.40	9.75	0.00
0.833	10.50	3.833	12.10	6.833	2.40	9.83	0.00
0.917	10.50	3.917	12.10	6.917	2.40	9.92	0.00
1.000	10.50	4.000	12.10	7.000	2.40	10.00	0.00
1.083	21.00	4.083	11.30	7.083	0.80	10.08	0.00
1.167	21.00	4.167	11.30	7.167	0.80	10.17	0.00
1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00
1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00
2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 21.00 11.59
over (min) 5.00 100.00
Storage Coeff. (min)= 5.13 (ii) 99.63 (ii)
Unit Hyd. Tpeak (min)= 5.00 100.00
Unit Hyd. peak (cms)= 0.21 0.01

TOTALS

PEAK FLOW (cms)= 0.10 0.04 0.109 (iii)
TIME TO PEAK (hrs)= 2.00 5.33 2.00
RUNOFF VOLUME (mm)= 79.60 50.49 65.03
TOTAL RAINFALL (mm)= 80.60 80.60 80.60

RUNOFF COEFFICIENT = 0.99 0.63 0.81

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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 10.50 3.083 12.10 6.083 2.40 9.08 0.00
0.167 10.50 3.167 12.10 6.167 2.40 9.17 0.00
0.250 10.50 3.250 12.10 6.250 2.40 9.25 0.00
0.333 10.50 3.333 12.10 6.333 2.40 9.33 0.00
0.417 10.50 3.417 12.10 6.417 2.40 9.42 0.00
0.500 10.50 3.500 12.10 6.500 2.40 9.50 0.00
0.583 10.50 3.583 12.10 6.583 2.40 9.58 0.00
0.667 10.50 3.667 12.10 6.667 2.40 9.67 0.00
0.750 10.50 3.750 12.10 6.750 2.40 9.75 0.00
0.833 10.50 3.833 12.10 6.833 2.40 9.83 0.00
0.917 10.50 3.917 12.10 6.917 2.40 9.92 0.00
1.000 10.50 4.000 12.10 7.000 2.40 10.00 0.00
1.083 21.00 4.083 11.30 7.083 0.80 10.08 0.00
1.167 21.00 4.167 11.30 7.167 0.80 10.17 0.00
1.250 21.00 4.250 11.30 7.250 0.80 10.25 0.00
1.333 21.00 4.333 11.30 7.333 0.80 10.33 0.00
1.417 21.00 4.417 11.30 7.417 0.80 10.42 0.00
1.500 21.00 4.500 11.30 7.500 0.80 10.50 0.00
1.583 21.00 4.583 11.30 7.583 0.80 10.58 0.00
1.667 21.00 4.667 11.30 7.667 0.80 10.67 0.00
1.750 21.00 4.750 11.30 7.750 0.80 10.75 0.00
1.833 21.00 4.833 11.30 7.833 0.80 10.83 0.00
1.917 21.00 4.917 11.30 7.917 0.80 10.92 0.00
2.000 21.00 5.000 11.30 8.000 0.80 11.00 0.00
2.083 16.10 5.083 6.40 8.083 0.00 11.08 0.00
2.167 16.10 5.167 6.40 8.167 0.00 11.17 0.00
2.250 16.10 5.250 6.40 8.250 0.00 11.25 0.00
2.333 16.10 5.333 6.40 8.333 0.00 11.33 0.00

2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.037 (i)
TIME TO PEAK (hrs)= 3.250
RUNOFF VOLUME (mm)= 30.851
TOTAL RAINFALL (mm)= 80.600
RUNOFF COEFFICIENT = 0.383

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

| ADD HYD (0013) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (1103): 2.00 0.037 3.25 30.85
+ ID2= 2 (2101): 1.52 0.029 3.00 28.67
===== ID = 3 (0013): 3.52 0.065 3.00 29.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0013) |
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0013): 3.52 0.065 3.00 29.91
+ ID2= 2 (2102): 3.87 0.072 3.00 28.75
===== ID = 1 (0013): 7.39 0.137 3.00 29.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0013) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0013): 7.39 0.137 3.00 29.30

+ ID2= 2 (2103): 3.55 0.066 3.00 28.75
=====

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID = 3 (0013):	10.94	0.203	3.00	29.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0013):	10.94	0.203	3.00	29.12
+ ID2= 2 (2104):	3.47	0.063	3.08	28.79
=====				
ID = 1 (0013):	14.41	0.267	3.00	29.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0013):	14.41	0.267	3.00	29.04
+ ID2= 2 (2105):	5.95	0.106	3.17	28.80
=====				
ID = 3 (0013):	20.36	0.371	3.00	28.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0013):	20.36	0.371	3.00	28.97
+ ID2= 2 (2106):	1.50	0.054	2.00	65.02
=====				
ID = 1 (0013):	21.86	0.424	3.00	31.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0013):	21.86	0.424	3.00	31.44
+ ID2= 2 (2107):	3.47	0.109	2.00	65.03
=====				

ID = 3 (0013): 25.33 0.528 3.00 36.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0013):	25.33	0.528	3.00	36.04
+ ID2= 2 (2108):	1.46	0.021	5.08	23.67
=====				
ID = 1 (0013):	26.79	0.545	3.00	35.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	1.1450	0.1930
	0.3370	0.0770	1.3850	0.2270
	0.6240	0.1200	1.6330	0.2640
	0.8460	0.1510	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	0.545	3.00	35.37
OUTFLOW: ID= 1 (0001)	26.790	0.508	5.00	35.37

PEAK FLOW REDUCTION [Qout/Qin](%)= 93.24
TIME SHIFT OF PEAK FLOW (min)=120.00
MAXIMUM STORAGE USED (ha.m.)= 0.1029

	Area (ha)	Curve Number (CN)
CALIB	24.78	75.7
NASHYD (1100)	6.20	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min	0.70	

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	10.50	3.083	12.10	6.083	2.40	9.08	0.00
0.167	10.50	3.167	12.10	6.167	2.40	9.17	0.00

0.250	10.50	3.250	12.10	6.250	2.40	9.25	0.00
0.333	10.50	3.333	12.10	6.333	2.40	9.33	0.00
0.417	10.50	3.417	12.10	6.417	2.40	9.42	0.00
0.500	10.50	3.500	12.10	6.500	2.40	9.50	0.00
0.583	10.50	3.583	12.10	6.583	2.40	9.58	0.00
0.667	10.50	3.667	12.10	6.667	2.40	9.67	0.00
0.750	10.50	3.750	12.10	6.750	2.40	9.75	0.00
0.833	10.50	3.833	12.10	6.833	2.40	9.83	0.00
0.917	10.50	3.917	12.10	6.917	2.40	9.92	0.00
1.000	10.50	4.000	12.10	7.000	2.40	10.00	0.00
1.083	21.00	4.083	11.30	7.083	0.80	10.08	0.00
1.167	21.00	4.167	11.30	7.167	0.80	10.17	0.00
1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00
1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00
2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.515 (i)

TIME TO PEAK (hrs)= 3.667

RUNOFF VOLUME (mm)= 35.497

TOTAL RAINFALL (mm)= 80.600

RUNOFF COEFFICIENT = 0.440

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

 | CALIB |
 | NASHYD (1101) | Area (ha)= 2.00 Curve Number (CN)= 69.4
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

----- U.H. Tp(hrs)= 0.49

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	10.50	3.083	12.10	6.083	2.40	9.08	0.00
0.167	10.50	3.167	12.10	6.167	2.40	9.17	0.00
0.250	10.50	3.250	12.10	6.250	2.40	9.25	0.00
0.333	10.50	3.333	12.10	6.333	2.40	9.33	0.00
0.417	10.50	3.417	12.10	6.417	2.40	9.42	0.00
0.500	10.50	3.500	12.10	6.500	2.40	9.50	0.00
0.583	10.50	3.583	12.10	6.583	2.40	9.58	0.00
0.667	10.50	3.667	12.10	6.667	2.40	9.67	0.00
0.750	10.50	3.750	12.10	6.750	2.40	9.75	0.00
0.833	10.50	3.833	12.10	6.833	2.40	9.83	0.00
0.917	10.50	3.917	12.10	6.917	2.40	9.92	0.00
1.000	10.50	4.000	12.10	7.000	2.40	10.00	0.00
1.083	21.00	4.083	11.30	7.083	0.80	10.08	0.00
1.167	21.00	4.167	11.30	7.167	0.80	10.17	0.00
1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00
1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00
2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.037 (i)

TIME TO PEAK (hrs)= 3.250

RUNOFF VOLUME (mm)= 30.851

TOTAL RAINFALL (mm)= 80.600
RUNOFF COEFFICIENT = 0.383

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

```
-----
| ADD HYD ( 0061) |
| 1 + 2 = 3       |
|-----|
| ID1= 1 ( 1100): | AREA   QPEAK   TPEAK   R.V.
|                   | (ha)   (cms)   (hrs)   (mm)
| + ID2= 2 ( 1101): | 24.78  0.515   3.67   35.50
|                   | 2.00   0.037   3.25   30.85
|=====|
| ID = 3 ( 0061):  | 26.78  0.551   3.67   35.15
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
| CALIB          |
| STANDHYD ( 2100) | Area   (ha)= 24.78
| ID= 1 DT= 5.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00
|-----|
```

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.15	13.63
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	406.45	800.00
Mannings n =	0.013	0.250

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 10.50 | 3.083 12.10 | 6.083 2.40 | 9.08  0.00
0.167 10.50 | 3.167 12.10 | 6.167 2.40 | 9.17  0.00
0.250 10.50 | 3.250 12.10 | 6.250 2.40 | 9.25  0.00
0.333 10.50 | 3.333 12.10 | 6.333 2.40 | 9.33  0.00
0.417 10.50 | 3.417 12.10 | 6.417 2.40 | 9.42  0.00
0.500 10.50 | 3.500 12.10 | 6.500 2.40 | 9.50  0.00
0.583 10.50 | 3.583 12.10 | 6.583 2.40 | 9.58  0.00
0.667 10.50 | 3.667 12.10 | 6.667 2.40 | 9.67  0.00
0.750 10.50 | 3.750 12.10 | 6.750 2.40 | 9.75  0.00
0.833 10.50 | 3.833 12.10 | 6.833 2.40 | 9.83  0.00
0.917 10.50 | 3.917 12.10 | 6.917 2.40 | 9.92  0.00
1.000 10.50 | 4.000 12.10 | 7.000 2.40 | 10.00 0.00
1.083 21.00 | 4.083 11.30 | 7.083 0.80 | 10.08 0.00
1.167 21.00 | 4.167 11.30 | 7.167 0.80 | 10.17 0.00
```

1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00
1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00
2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)=	21.00	11.59
over (min)	10.00	110.00
Storage Coeff. (min)=	8.99	109.82 (ii)
Unit Hyd. Tpeak (min)=	10.00	110.00
Unit Hyd. peak (cms)=	0.12	0.01

TOTALS

PEAK FLOW (cms)=	0.65	0.32	0.704 (iii)
TIME TO PEAK (hrs)=	2.00	5.50	2.00
RUNOFF VOLUME (mm)=	79.60	50.49	63.59
TOTAL RAINFALL (mm)=	80.60	80.60	80.60
RUNOFF COEFFICIENT =	0.99	0.63	0.79

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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          |
| NASHYD ( 1102) | Area   (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia     (mm)= 4.40 # of Linear Res.(N)= 3.00
|-----|
|                   | U.H. Tp(hrs)= 0.49
```

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	10.50	3.083	12.10	6.083	2.40	9.08	0.00
0.167	10.50	3.167	12.10	6.167	2.40	9.17	0.00
0.250	10.50	3.250	12.10	6.250	2.40	9.25	0.00
0.333	10.50	3.333	12.10	6.333	2.40	9.33	0.00
0.417	10.50	3.417	12.10	6.417	2.40	9.42	0.00
0.500	10.50	3.500	12.10	6.500	2.40	9.50	0.00
0.583	10.50	3.583	12.10	6.583	2.40	9.58	0.00
0.667	10.50	3.667	12.10	6.667	2.40	9.67	0.00
0.750	10.50	3.750	12.10	6.750	2.40	9.75	0.00
0.833	10.50	3.833	12.10	6.833	2.40	9.83	0.00
0.917	10.50	3.917	12.10	6.917	2.40	9.92	0.00
1.000	10.50	4.000	12.10	7.000	2.40	10.00	0.00
1.083	21.00	4.083	11.30	7.083	0.80	10.08	0.00
1.167	21.00	4.167	11.30	7.167	0.80	10.17	0.00
1.250	21.00	4.250	11.30	7.250	0.80	10.25	0.00
1.333	21.00	4.333	11.30	7.333	0.80	10.33	0.00
1.417	21.00	4.417	11.30	7.417	0.80	10.42	0.00
1.500	21.00	4.500	11.30	7.500	0.80	10.50	0.00
1.583	21.00	4.583	11.30	7.583	0.80	10.58	0.00
1.667	21.00	4.667	11.30	7.667	0.80	10.67	0.00
1.750	21.00	4.750	11.30	7.750	0.80	10.75	0.00
1.833	21.00	4.833	11.30	7.833	0.80	10.83	0.00
1.917	21.00	4.917	11.30	7.917	0.80	10.92	0.00
2.000	21.00	5.000	11.30	8.000	0.80	11.00	0.00
2.083	16.10	5.083	6.40	8.083	0.00	11.08	0.00
2.167	16.10	5.167	6.40	8.167	0.00	11.17	0.00
2.250	16.10	5.250	6.40	8.250	0.00	11.25	0.00
2.333	16.10	5.333	6.40	8.333	0.00	11.33	0.00
2.417	16.10	5.417	6.40	8.417	0.00	11.42	0.00
2.500	16.10	5.500	6.40	8.500	0.00	11.50	0.00
2.583	16.10	5.583	6.40	8.583	0.00	11.58	0.00
2.667	16.10	5.667	6.40	8.667	0.00	11.67	0.00
2.750	16.10	5.750	6.40	8.750	0.00	11.75	0.00
2.833	16.10	5.833	6.40	8.833	0.00	11.83	0.00
2.917	16.10	5.917	6.40	8.917	0.00	11.92	0.00
3.000	16.10	6.000	6.40	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.037 (i)
 TIME TO PEAK (hrs)= 3.250
 RUNOFF VOLUME (mm)= 30.851
 TOTAL RAINFALL (mm)= 80.600
 RUNOFF COEFFICIENT = 0.383

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

```

-----
| ADD HYD ( 0063)|
| 1 + 2 = 3 |
-----
          AREA      QPEAK      TPEAK      R.V.
          (ha)      (cms)      (hrs)      (mm)
          ID1= 1 ( 1102):  2.00  0.037  3.25  30.85
          + ID2= 2 ( 2100): 24.78  0.704  2.00  63.59
          =====
          ID = 3 ( 0063):  26.78  0.726  2.00  61.14
  
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

V  V  I  SSSSS  U  U  A  L          (v 6.2.2008)
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
W  I  SSSSS  UUUUU  A  A  LLLLL
  
```

```

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

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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\V02\voin.dat

Output filename:
 C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\59fa
 344b-58d9-4d19-9e06-5ddc2098b5cb\scen
 Summary filename:
 C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\59fa
 344b-58d9-4d19-9e06-5ddc2098b5cb\scen

DATE: 04/05/2023

TIME: 11:32:33

USER:

COMMENTS: _____

** SIMULATION : 25-Year_12 hour SCS **

READ STORM	Filename: C:\Users\nnapper\AppData Local\Temp\ aa485c45-5c41-4f04-b9f7-20c929bcd42e\3f928b51
Ptotal= 80.38 mm	Comments: 25-Year_12 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	2.00	3.00	3.20	6.00	14.50	9.00	2.80
0.25	2.00	3.25	3.20	6.25	14.50	9.25	2.80
0.50	2.00	3.50	3.20	6.50	6.40	9.50	2.80
0.75	2.00	3.75	3.20	6.75	6.40	9.75	2.80
1.00	2.00	4.00	4.80	7.00	4.80	10.00	1.60
1.25	2.00	4.25	4.80	7.25	4.80	10.25	1.60
1.50	2.00	4.50	6.40	7.50	4.80	10.50	1.60
1.75	2.00	4.75	6.40	7.75	4.80	10.75	1.60
2.00	2.40	5.00	9.70	8.00	2.80	11.00	1.60
2.25	2.40	5.25	9.70	8.25	2.80	11.25	1.60
2.50	2.40	5.50	38.70	8.50	2.80	11.50	1.60
2.75	2.40	5.75	106.40	8.75	2.80	11.75	1.60

CALIB	
NASHYD (2108)	Area (ha)= 1.46 Curve Number (CN)= 60.5
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.67

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80

0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.043 (i)

TIME TO PEAK (hrs)= 6.583

RUNOFF VOLUME (mm)= 23.552

TOTAL RAINFALL (mm)= 80.375

RUNOFF COEFFICIENT = 0.293

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

CALIB	
NASHYD (2101)	Area (ha)= 1.52 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min	Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.16

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80
0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.142 (i)

TIME TO PEAK (hrs)= 6.000

RUNOFF VOLUME (mm)= 28.535

TOTAL RAINFALL (mm)= 80.375

RUNOFF COEFFICIENT = 0.355

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

CALIB							
NASHYD (2102)	Area (ha)=	3.87	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80
0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60

2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.322 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 28.609
TOTAL RAINFALL (mm)= 80.375
RUNOFF COEFFICIENT = 0.356

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

CALIB							
NASHYD (2103)	Area (ha)=	3.55	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80
0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60

2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.295 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 28.609
TOTAL RAINFALL (mm)= 80.375
RUNOFF COEFFICIENT = 0.356

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

CALIB							
NASHYD (2104)	Area (ha)=	3.47	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.27					

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80
0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60

1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.236 (i)
TIME TO PEAK (hrs)= 6.167
RUNOFF VOLUME (mm)= 28.647
TOTAL RAINFALL (mm)= 80.375
RUNOFF COEFFICIENT = 0.356

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

| CALIB |
| NASHYD (2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.37

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80

0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.327 (i)
TIME TO PEAK (hrs)= 6.250
RUNOFF VOLUME (mm)= 28.659
TOTAL RAINFALL (mm)= 80.375
RUNOFF COEFFICIENT = 0.357

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

| CALIB |
| STANDHYD (2106) | Area (ha)= 1.50
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00
|-----|

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.75	0.75
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.20	1.20
Length	(m)=	100.00	166.70
Mannings n	=	0.013	0.250

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80
0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Max.Eff.Inten.(mm/hr)=	106.40	55.31
over (min)	5.00	30.00
Storage Coeff. (min)=	2.36 (ii)	26.91 (ii)
Unit Hyd. Tpeak (min)=	5.00	30.00
Unit Hyd. peak (cms)=	0.30	0.04

TOTALS

PEAK FLOW (cms)=	0.22	0.07	0.258 (iii)
TIME TO PEAK (hrs)=	6.00	6.33	6.00
RUNOFF VOLUME (mm)=	79.37	50.29	64.82
TOTAL RAINFALL (mm)=	80.37	80.37	80.37
RUNOFF COEFFICIENT =	0.99	0.63	0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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	Area (ha)=	3.47
STANDHYD (2107)	Total Imp(%)=	50.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	50.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.74	1.74
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.82	1.82
Length	(m)=	152.10	685.00
Mannings n	=	0.013	0.250

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80
0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80

1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Max.Eff.Inten.(mm/hr)= 106.40 30.62
over (min) 5.00 70.00
Storage Coeff. (min)= 2.68 (ii) 66.76 (ii)
Unit Hyd. Tpeak (min)= 5.00 70.00
Unit Hyd. peak (cms)= 0.29 0.02

TOTALS

PEAK FLOW (cms)= 0.51 0.08 0.534 (iii)
TIME TO PEAK (hrs)= 6.00 7.00 6.00
RUNOFF VOLUME (mm)= 79.37 50.29 64.82
TOTAL RAINFALL (mm)= 80.37 80.37 80.37
RUNOFF COEFFICIENT = 0.99 0.63 0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4

|ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.49

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80
0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.097 (i)
TIME TO PEAK (hrs)= 6.417

RUNOFF VOLUME (mm)= 30.706
TOTAL RAINFALL (mm)= 80.375
RUNOFF COEFFICIENT = 0.382

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

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-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 1103): 2.00 0.097 6.42 30.71
+ ID2= 2 ( 2101): 1.52 0.142 6.00 28.53
=====
ID = 3 ( 0013): 3.52 0.205 6.08 29.77

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
ID1= 3 ( 0013): 3.52 0.205 6.08 29.77
+ ID2= 2 ( 2102): 3.87 0.322 6.08 28.61
=====
ID = 1 ( 0013): 7.39 0.526 6.08 29.16

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 0013): 7.39 0.526 6.08 29.16
+ ID2= 2 ( 2103): 3.55 0.295 6.08 28.61
=====
ID = 3 ( 0013): 10.94 0.821 6.08 28.98

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
ID1= 3 ( 0013): 10.94 0.821 6.08 28.98
+ ID2= 2 ( 2104): 3.47 0.236 6.17 28.65

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=====
ID = 1 ( 0013): 14.41 1.054 6.08 28.90

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 0013): 14.41 1.054 6.08 28.90
+ ID2= 2 ( 2105): 5.95 0.327 6.25 28.66
=====
ID = 3 ( 0013): 20.36 1.334 6.08 28.83

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
ID1= 3 ( 0013): 20.36 1.334 6.08 28.83
+ ID2= 2 ( 2106): 1.50 0.258 6.00 64.82
=====
ID = 1 ( 0013): 21.86 1.435 6.08 31.30

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 0013): 21.86 1.435 6.08 31.30
+ ID2= 2 ( 2107): 3.47 0.534 6.00 64.82
=====
ID = 3 ( 0013): 25.33 1.959 6.00 35.89

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
ID1= 3 ( 0013): 25.33 1.959 6.00 35.89
+ ID2= 2 ( 2108): 1.46 0.043 6.58 23.55
=====
ID = 1 ( 0013): 26.79 1.975 6.00 35.22

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0001)
IN= 2--> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	1.1450	0.1930
0.3370	0.0770	1.3850	0.2270
0.6240	0.1200	1.6330	0.2640
0.8460	0.1510	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	1.975	6.00	35.22
OUTFLOW: ID= 1 (0001)	26.790	1.160	6.42	35.22

PEAK FLOW REDUCTION [Qout/Qin](%)= 58.76
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.1959

CALIB
NASHYD (1100)
ID= 1 DT= 5.0 min

Area (ha)= 24.78 Curve Number (CN)= 75.7
Ia (mm)= 6.20 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.70

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80
0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60

1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 1.089 (i)
TIME TO PEAK (hrs)= 6.667
RUNOFF VOLUME (mm)= 35.334
TOTAL RAINFALL (mm)= 80.375
RUNOFF COEFFICIENT = 0.440

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

CALIB
NASHYD (1101)
ID= 1 DT= 5.0 min

Area (ha)= 2.00 Curve Number (CN)= 69.4
Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80
0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80

0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.097 (i)
 TIME TO PEAK (hrs)= 6.417
 RUNOFF VOLUME (mm)= 30.706
 TOTAL RAINFALL (mm)= 80.375
 RUNOFF COEFFICIENT = 0.382

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

 | ADD HYD (0061) |
 | 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.78	1.089	6.67	35.33
+ ID2= 2 (1101):	2.00	0.097	6.42	30.71

=====

ID = 3 (0061): 26.78 1.176 6.58 34.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 | CALIB |
 | STANDHYD (2100) | Area (ha)= 24.78
 | ID= 1 DT= 5.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.15	13.63
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	406.45	800.00
Mannings n =	0.013	0.250

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80
0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80
0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60

2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Max.Eff.Inten.(mm/hr)= 106.40 30.62
over (min) 5.00 75.00
Storage Coeff. (min)= 4.70 (ii) 73.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 75.00
Unit Hyd. peak (cms)= 0.22 0.02

TOTALS
PEAK FLOW (cms)= 3.21 0.62 3.365 (iii)
TIME TO PEAK (hrs)= 6.00 7.08 6.00
RUNOFF VOLUME (mm)= 79.38 50.29 63.38
TOTAL RAINFALL (mm)= 80.37 80.37 80.37
RUNOFF COEFFICIENT = 0.99 0.63 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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
NASHYD (1102) | Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	2.00	3.083	3.20	6.083	14.50	9.08	2.80
0.167	2.00	3.167	3.20	6.167	14.50	9.17	2.80
0.250	2.00	3.250	3.20	6.250	14.50	9.25	2.80
0.333	2.00	3.333	3.20	6.333	14.50	9.33	2.80
0.417	2.00	3.417	3.20	6.417	14.50	9.42	2.80
0.500	2.00	3.500	3.20	6.500	14.50	9.50	2.80
0.583	2.00	3.583	3.20	6.583	6.40	9.58	2.80

0.667	2.00	3.667	3.20	6.667	6.40	9.67	2.80
0.750	2.00	3.750	3.20	6.750	6.40	9.75	2.80
0.833	2.00	3.833	3.20	6.833	6.40	9.83	2.80
0.917	2.00	3.917	3.20	6.917	6.40	9.92	2.80
1.000	2.00	4.000	3.20	7.000	6.40	10.00	2.80
1.083	2.00	4.083	4.80	7.083	4.80	10.08	1.60
1.167	2.00	4.167	4.80	7.167	4.80	10.17	1.60
1.250	2.00	4.250	4.80	7.250	4.80	10.25	1.60
1.333	2.00	4.333	4.80	7.333	4.80	10.33	1.60
1.417	2.00	4.417	4.80	7.417	4.80	10.42	1.60
1.500	2.00	4.500	4.80	7.500	4.80	10.50	1.60
1.583	2.00	4.583	6.40	7.583	4.80	10.58	1.60
1.667	2.00	4.667	6.40	7.667	4.80	10.67	1.60
1.750	2.00	4.750	6.40	7.750	4.80	10.75	1.60
1.833	2.00	4.833	6.40	7.833	4.80	10.83	1.60
1.917	2.00	4.917	6.40	7.917	4.80	10.92	1.60
2.000	2.00	5.000	6.40	8.000	4.80	11.00	1.60
2.083	2.40	5.083	9.70	8.083	2.80	11.08	1.60
2.167	2.40	5.167	9.70	8.167	2.80	11.17	1.60
2.250	2.40	5.250	9.70	8.250	2.80	11.25	1.60
2.333	2.40	5.333	9.70	8.333	2.80	11.33	1.60
2.417	2.40	5.417	9.70	8.417	2.80	11.42	1.60
2.500	2.40	5.500	9.70	8.500	2.80	11.50	1.60
2.583	2.40	5.583	38.70	8.583	2.80	11.58	1.60
2.667	2.40	5.667	38.70	8.667	2.80	11.67	1.60
2.750	2.40	5.750	38.70	8.750	2.80	11.75	1.60
2.833	2.40	5.833	106.40	8.833	2.80	11.83	1.60
2.917	2.40	5.917	106.40	8.917	2.80	11.92	1.60
3.000	2.40	6.000	106.40	9.000	2.80	12.00	1.60

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.097 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 30.706
TOTAL RAINFALL (mm)= 80.375
RUNOFF COEFFICIENT = 0.382

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

ADD HYD (0063)

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1102):	2.00	0.097	6.42	30.71
+ ID2= 2 (2100):	24.78	3.365	6.00	63.38
=====				
ID = 3 (0063):	26.78	3.415	6.00	60.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

=====

V V I SSSS U U A L (v 6.2.2008)
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
W I SSSS UUUU A A LLLLL

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

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\dd14
5878-c4bb-4f73-b2e9-c70c54b12892\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\dd14
5878-c4bb-4f73-b2e9-c70c54b12892\scen

DATE: 04/05/2023 TIME: 11:32:36

USER:

COMMENTS: _____

** SIMULATION : 25-Year_24 hour SCS **

| READ STORM |
| |
Ptotal= 89.18 mm

Filename: C:\Users\nnapper\AppData\Local\Temp\aa485c45-5c41-4f04-b9f7-20c929bcd42e\3c3fb2644
Comments: 25-Year_24 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	1.00	6.00	1.80	12.00	12.80	18.00	1.60
0.25	1.00	6.25	1.80	12.25	12.80	18.25	1.60
0.50	1.00	6.50	1.80	12.50	6.60	18.50	1.60
0.75	1.00	6.75	1.80	12.75	6.60	18.75	1.60
1.00	1.00	7.00	1.80	13.00	1.20	19.00	1.60
1.25	1.00	7.25	1.80	13.25	1.20	19.25	1.60
1.50	1.00	7.50	1.80	13.50	7.30	19.50	1.60
1.75	1.00	7.75	1.80	13.75	7.30	19.75	1.60
2.00	1.20	8.00	2.40	14.00	2.70	20.00	1.10
2.25	1.20	8.25	2.40	14.25	2.70	20.25	1.10
2.50	1.20	8.50	2.40	14.50	2.70	20.50	1.10
2.75	1.20	8.75	2.40	14.75	2.70	20.75	1.10
3.00	1.20	9.00	2.80	15.00	2.70	21.00	1.10
3.25	1.20	9.25	2.80	15.25	2.70	21.25	1.10
3.50	1.20	9.50	3.20	15.50	2.70	21.50	1.10
3.75	1.20	9.75	3.20	15.75	2.70	21.75	1.10
4.00	1.40	10.00	4.10	16.00	1.60	22.00	1.10
4.25	1.40	10.25	4.10	16.25	1.60	22.25	1.10
4.50	1.40	10.50	5.50	16.50	1.60	22.50	1.10
4.75	1.40	10.75	5.50	16.75	1.60	22.75	1.10
5.00	1.40	11.00	8.50	17.00	1.60	23.00	1.10
5.25	1.40	11.25	8.50	17.25	1.60	23.25	1.10
5.50	1.40	11.50	37.00	17.50	1.60	23.50	1.10
5.75	1.40	11.75	98.10	17.75	1.60	23.75	1.10

| CALIB |
| NASHYD (2108) | Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.67

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60

0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10

4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.043 (i)

TIME TO PEAK (hrs)= 12.583

RUNOFF VOLUME (mm)= 28.339

TOTAL RAINFALL (mm)= 89.175

RUNOFF COEFFICIENT = 0.318

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

 | CALIB |
 | NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.16

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60
0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60

0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10
4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10

4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.141 (i)

TIME TO PEAK (hrs)= 12.000

RUNOFF VOLUME (mm)= 34.051

TOTAL RAINFALL (mm)= 89.175

RUNOFF COEFFICIENT = 0.382

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

CALIB			
NASHYD (2102)			
ID= 1 DT= 5.0 min			

Area (ha)=	3.87	Curve Number (CN)=	67.1
Ia (mm)=	4.60	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.20		

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60
0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60

1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10
4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10

5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.318 (i)

TIME TO PEAK (hrs)= 12.083

RUNOFF VOLUME (mm)= 34.141

TOTAL RAINFALL (mm)= 89.175

RUNOFF COEFFICIENT = 0.383

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

CALIB			
NASHYD (2103)			
ID= 1 DT= 5.0 min			
Area (ha)= 3.55		Curve Number (CN)= 67.1	
Ia (mm)= 4.60		# of Linear Res.(N)= 3.00	
U.H. Tp(hrs)= 0.20			

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60
0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60

1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10
4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10

5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.292 (i)
 TIME TO PEAK (hrs)= 12.083
 RUNOFF VOLUME (mm)= 34.141
 TOTAL RAINFALL (mm)= 89.175
 RUNOFF COEFFICIENT = 0.383

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

 | CALIB |
 | NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.27

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60
0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60

1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10
4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10

5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.234 (i)

TIME TO PEAK (hrs)= 12.167

RUNOFF VOLUME (mm)= 34.186

TOTAL RAINFALL (mm)= 89.175

RUNOFF COEFFICIENT = 0.383

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

 | CALIB |
 | NASHYD (2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.37

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60
0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60

2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10
4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.326 (i)
 TIME TO PEAK (hrs)= 12.250
 RUNOFF VOLUME (mm)= 34.200
 TOTAL RAINFALL (mm)= 89.175
 RUNOFF COEFFICIENT = 0.384

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

 | CALIB |
 | STANDHYD (2106) | Area (ha)= 1.50
 | ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60
0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60

1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10
4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10

6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10
Max.Eff.Inten.(mm/hr)=	98.10	53.48					
over (min)	5.00	30.00					
Storage Coeff. (min)=	2.44 (ii)	27.32 (ii)					
Unit Hyd. Tpeak (min)=	5.00	30.00					
Unit Hyd. peak (cms)=	0.30	0.04					
PEAK FLOW (cms)=	0.20	0.06	0.241 (iii)				
TIME TO PEAK (hrs)=	12.00	12.33	12.00				
RUNOFF VOLUME (mm)=	88.18	58.01	73.08				
TOTAL RAINFALL (mm)=	89.18	89.18	89.18				
RUNOFF COEFFICIENT =	0.99	0.65	0.82				

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107)	Area (ha)=	3.47	
ID= 1 DT= 5.0 min	Total Imp(%)=	50.00	Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60
0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60

0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10
4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10

5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Max.Eff.Inten.(mm/hr)=	98.10	29.35
over (min)	5.00	70.00
Storage Coeff. (min)=	2.77 (ii)	67.94 (ii)
Unit Hyd. Tpeak (min)=	5.00	70.00
Unit Hyd. peak (cms)=	0.28	0.02

TOTALS

PEAK FLOW (cms)=	0.47	0.08	0.495 (iii)
TIME TO PEAK (hrs)=	12.00	13.00	12.00
RUNOFF VOLUME (mm)=	88.17	58.01	73.08
TOTAL RAINFALL (mm)=	89.18	89.18	89.18
RUNOFF COEFFICIENT =	0.99	0.65	0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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			
NASHYD (1103)	Area (ha)=	2.00	Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min	Ia (mm)=	4.40	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.49	

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60

0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10

4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.096 (i)
 TIME TO PEAK (hrs)= 12.333
 RUNOFF VOLUME (mm)= 36.522
 TOTAL RAINFALL (mm)= 89.175
 RUNOFF COEFFICIENT = 0.410

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

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
              AREA   QPEAK   TPEAK   R.V.
              (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 1103):  2.00  0.096  12.33  36.52
+ ID2= 2 ( 2101):  1.52  0.141  12.00  34.05
=====
ID = 3 ( 0013):  3.52  0.204  12.08  35.45

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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
              AREA   QPEAK   TPEAK   R.V.
              (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  3.52  0.204  12.08  35.45
+ ID2= 2 ( 2102):  3.87  0.318  12.08  34.14

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=====

ID = 1 (0013):	7.39	0.522	12.08	34.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	7.39	0.522	12.08	34.77
+ ID2= 2 (2103):	3.55	0.292	12.08	34.14
=====				
ID = 3 (0013):	10.94	0.814	12.08	34.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	10.94	0.814	12.08	34.56
+ ID2= 2 (2104):	3.47	0.234	12.17	34.19
=====				
ID = 1 (0013):	14.41	1.047	12.08	34.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	14.41	1.047	12.08	34.47
+ ID2= 2 (2105):	5.95	0.326	12.25	34.20
=====				
ID = 3 (0013):	20.36	1.333	12.08	34.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	20.36	1.333	12.08	34.39
+ ID2= 2 (2106):	1.50	0.241	12.00	73.08
=====				
ID = 1 (0013):	21.86	1.429	12.08	37.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	21.86	1.429	12.08	37.05
+ ID2= 2 (2107):	3.47	0.495	12.00	73.08
=====				
ID = 3 (0013):	25.33	1.922	12.00	41.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	25.33	1.922	12.00	41.98
+ ID2= 2 (2108):	1.46	0.043	12.58	28.34
=====				
ID = 1 (0013):	26.79	1.939	12.00	41.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0001)				
IN= 2---> OUT= 1				
DT= 5.0 min				

OVERFLOW IS OFF				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	1.1450	0.1930
	0.3370	0.0770	1.3850	0.2270
	0.6240	0.1200	1.6330	0.2640
	0.8460	0.1510	0.0000	0.0000
=====				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	1.939	12.00	41.24
OUTFLOW: ID= 1 (0001)	26.790	1.145	12.33	41.24

PEAK FLOW REDUCTION [Qout/Qin](%)= 59.07
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.1938

CALIB			
NASHYD (1100)			
Area	(ha)=	24.78	Curve Number (CN)= 75.7

|ID= 1 DT= 5.0 min | Ia (mm)= 6.20 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.70

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60
0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10

3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10
4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 1.082 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 41.850
TOTAL RAINFALL (mm)= 89.175
RUNOFF COEFFICIENT = 0.469

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

| CALIB |
| NASHYD (1101) | Area (ha)= 2.00 Curve Number (CN)= 69.4
|ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.49

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60
0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10

3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10
4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.096 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 36.522
TOTAL RAINFALL (mm)= 89.175
RUNOFF COEFFICIENT = 0.410

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

ADD HYD (0061)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1100):		24.78	1.082	12.58	41.85
+ ID2= 2 (1101):		2.00	0.096	12.33	36.52
=====					
ID = 3 (0061):		26.78	1.170	12.58	41.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 CALIB
 STANDHYD (2100)
 ID= 1 DT= 5.0 min

Area (ha)= 24.78
 Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00
 IMPERVIOUS PERVIOUS (i)
 Surface Area (ha)= 11.15 13.63
 Dep. Storage (mm)= 1.00 1.50
 Average Slope (%)= 2.00 2.00
 Length (m)= 406.45 800.00
 Mannings n = 0.013 0.250

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60
0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10
2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10

2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10
4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Max.Eff.Inten.(mm/hr)= 98.10 29.35
 over (min) 5.00 75.00
 Storage Coeff. (min)= 4.85 (ii) 74.39 (ii)
 Unit Hyd. Tpeak (min)= 5.00 75.00
 Unit Hyd. peak (cms)= 0.22 0.02

PEAK FLOW (cms)= 2.95 0.59
 TIME TO PEAK (hrs)= 12.00 13.08
 TOTALS
 3.118 (iii)
 12.00

RUNOFF VOLUME (mm)= 88.18 58.01 71.59
TOTAL RAINFALL (mm)= 89.18 89.18 89.18
RUNOFF COEFFICIENT = 0.99 0.65 0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1102) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.49

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	1.00	6.083	1.80	12.083	12.81	18.08	1.60
0.167	1.00	6.167	1.80	12.167	12.80	18.17	1.60
0.250	1.00	6.250	1.80	12.250	12.80	18.25	1.60
0.333	1.00	6.333	1.80	12.333	12.80	18.33	1.60
0.417	1.00	6.417	1.80	12.417	12.80	18.42	1.60
0.500	1.00	6.500	1.80	12.500	12.80	18.50	1.60
0.583	1.00	6.583	1.80	12.583	6.60	18.58	1.60
0.667	1.00	6.667	1.80	12.667	6.60	18.67	1.60
0.750	1.00	6.750	1.80	12.750	6.60	18.75	1.60
0.833	1.00	6.833	1.80	12.833	6.60	18.83	1.60
0.917	1.00	6.917	1.80	12.917	6.60	18.92	1.60
1.000	1.00	7.000	1.80	13.000	6.60	19.00	1.60
1.083	1.00	7.083	1.80	13.083	1.20	19.08	1.60
1.167	1.00	7.167	1.80	13.167	1.20	19.17	1.60
1.250	1.00	7.250	1.80	13.250	1.20	19.25	1.60
1.333	1.00	7.333	1.80	13.333	1.20	19.33	1.60
1.417	1.00	7.417	1.80	13.417	1.20	19.42	1.60
1.500	1.00	7.500	1.80	13.500	1.20	19.50	1.60
1.583	1.00	7.583	1.80	13.583	7.30	19.58	1.60
1.667	1.00	7.667	1.80	13.667	7.30	19.67	1.60
1.750	1.00	7.750	1.80	13.750	7.30	19.75	1.60
1.833	1.00	7.833	1.80	13.833	7.30	19.83	1.60
1.917	1.00	7.917	1.80	13.917	7.30	19.92	1.60
2.000	1.00	8.000	1.80	14.000	7.30	20.00	1.60
2.083	1.20	8.083	2.40	14.083	2.70	20.08	1.10

2.167	1.20	8.167	2.40	14.167	2.70	20.17	1.10
2.250	1.20	8.250	2.40	14.250	2.70	20.25	1.10
2.333	1.20	8.333	2.40	14.333	2.70	20.33	1.10
2.417	1.20	8.417	2.40	14.417	2.70	20.42	1.10
2.500	1.20	8.500	2.40	14.500	2.70	20.50	1.10
2.583	1.20	8.583	2.40	14.583	2.70	20.58	1.10
2.667	1.20	8.667	2.40	14.667	2.70	20.67	1.10
2.750	1.20	8.750	2.40	14.750	2.70	20.75	1.10
2.833	1.20	8.833	2.40	14.833	2.70	20.83	1.10
2.917	1.20	8.917	2.40	14.917	2.70	20.92	1.10
3.000	1.20	9.000	2.40	15.000	2.70	21.00	1.10
3.083	1.20	9.083	2.80	15.083	2.70	21.08	1.10
3.167	1.20	9.167	2.80	15.167	2.70	21.17	1.10
3.250	1.20	9.250	2.80	15.250	2.70	21.25	1.10
3.333	1.20	9.333	2.80	15.333	2.70	21.33	1.10
3.417	1.20	9.417	2.80	15.417	2.70	21.42	1.10
3.500	1.20	9.500	2.80	15.500	2.70	21.50	1.10
3.583	1.20	9.583	3.20	15.583	2.70	21.58	1.10
3.667	1.20	9.667	3.20	15.667	2.70	21.67	1.10
3.750	1.20	9.750	3.20	15.750	2.70	21.75	1.10
3.833	1.20	9.833	3.20	15.833	2.70	21.83	1.10
3.917	1.20	9.917	3.20	15.917	2.70	21.92	1.10
4.000	1.20	10.000	3.20	16.000	2.70	22.00	1.10
4.083	1.40	10.083	4.10	16.083	1.60	22.08	1.10
4.167	1.40	10.167	4.10	16.167	1.60	22.17	1.10
4.250	1.40	10.250	4.10	16.250	1.60	22.25	1.10
4.333	1.40	10.333	4.10	16.333	1.60	22.33	1.10
4.417	1.40	10.417	4.10	16.417	1.60	22.42	1.10
4.500	1.40	10.500	4.10	16.500	1.60	22.50	1.10
4.583	1.40	10.583	5.50	16.583	1.60	22.58	1.10
4.667	1.40	10.667	5.50	16.667	1.60	22.67	1.10
4.750	1.40	10.750	5.50	16.750	1.60	22.75	1.10
4.833	1.40	10.833	5.50	16.833	1.60	22.83	1.10
4.917	1.40	10.917	5.50	16.917	1.60	22.92	1.10
5.000	1.40	11.000	5.50	17.000	1.60	23.00	1.10
5.083	1.40	11.083	8.50	17.083	1.60	23.08	1.10
5.167	1.40	11.167	8.50	17.167	1.60	23.17	1.10
5.250	1.40	11.250	8.50	17.250	1.60	23.25	1.10
5.333	1.40	11.333	8.50	17.333	1.60	23.33	1.10
5.417	1.40	11.417	8.50	17.417	1.60	23.42	1.10
5.500	1.40	11.500	8.50	17.500	1.60	23.50	1.10
5.583	1.40	11.583	37.00	17.583	1.60	23.58	1.10
5.667	1.40	11.667	37.00	17.667	1.60	23.67	1.10
5.750	1.40	11.750	37.00	17.750	1.60	23.75	1.10
5.833	1.40	11.833	98.09	17.833	1.60	23.83	1.10
5.917	1.40	11.917	98.10	17.917	1.60	23.92	1.10
6.000	1.40	12.000	98.10	18.000	1.60	24.00	1.10

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.096 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 36.522
TOTAL RAINFALL (mm)= 89.175
RUNOFF COEFFICIENT = 0.410

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

```
-----
| ADD HYD ( 0063)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 1102):  2.00  0.096  12.33  36.52
+ ID2= 2 ( 2100): 24.78  3.118  12.00  71.59
=====
ID = 3 ( 0063):  26.78  3.171  12.00  68.97
=====
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
V  V  I  SSSSS  U  U  A  L          (v 6.2.2008)
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
```

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

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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\V02\voin.dat

Output filename:

C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\ea6b6750-afa5-4c93-9edf-2ab95f8133a6\scen

Summary filename:

C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\ea6b6750-afa5-4c93-9edf-2ab95f8133a6\scen

DATE: 04/05/2023

TIME: 11:32:33

USER:

COMMENTS: _____

```
-----
*****
** SIMULATION : 2-Year_12 hour AES          **
*****
```

```
-----
| READ STORM |      Filename: C:\Users\nnapper\AppData
|             |      ata\Local\Temp\
|             |      aa485c45-5c41-4f04-b9f7-20c929bcd42e\aebbcef0
| Ptotal= 44.40 mm |      Comments: 2-Year_12 hour AES
|             |
-----
```

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	5.80	3.00	6.70	6.00	1.30	9.00	0.00
0.17	5.80	3.17	6.70	6.17	1.30	9.17	0.00
0.33	5.80	3.33	6.70	6.33	1.30	9.33	0.00
0.50	5.80	3.50	6.70	6.50	1.30	9.50	0.00
0.67	5.80	3.67	6.70	6.67	1.30	9.67	0.00
0.83	5.80	3.83	6.70	6.83	1.30	9.83	0.00
1.00	11.50	4.00	6.20	7.00	0.40	10.00	0.00
1.17	11.50	4.17	6.20	7.17	0.40	10.17	0.00
1.33	11.50	4.33	6.20	7.33	0.40	10.33	0.00
1.50	11.50	4.50	6.20	7.50	0.40	10.50	0.00
1.67	11.50	4.67	6.20	7.67	0.40	10.67	0.00
1.83	11.50	4.83	6.20	7.83	0.40	10.83	0.00
2.00	8.90	5.00	3.60	8.00	0.00	11.00	0.00
2.17	8.90	5.17	3.60	8.17	0.00	11.17	0.00
2.33	8.90	5.33	3.60	8.33	0.00	11.33	0.00
2.50	8.90	5.50	3.60	8.50	0.00	11.50	0.00
2.67	8.90	5.67	3.60	8.67	0.00	11.67	0.00
2.83	8.90	5.83	3.60	8.83	0.00	11.83	0.00

```
-----
| CALIB      |
| NASHYD ( 2108) | Area (ha)= 1.46 Curve Number (CN)= 60.5
|             |
-----
```

|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.67

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00
0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00
2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.007 (i)
TIME TO PEAK (hrs)= 5.167

RUNOFF VOLUME (mm)= 7.563
TOTAL RAINFALL (mm)= 44.400
RUNOFF COEFFICIENT = 0.170

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

| CALIB |
| NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
|ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.16

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00
0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00

2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.010 (i)
TIME TO PEAK (hrs)= 5.000
RUNOFF VOLUME (mm)= 9.595
TOTAL RAINFALL (mm)= 44.400
RUNOFF COEFFICIENT = 0.216

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

CALIB							
NASHYD (2102)	Area (ha)=	3.87	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00
0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00

1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00
2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.025 (i)
TIME TO PEAK (hrs)= 5.000
RUNOFF VOLUME (mm)= 9.620
TOTAL RAINFALL (mm)= 44.400
RUNOFF COEFFICIENT = 0.217

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

CALIB							
NASHYD (2103)	Area (ha)=	3.55	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00
0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00

1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00
2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.023 (i)
TIME TO PEAK (hrs)= 5.000
RUNOFF VOLUME (mm)= 9.620
TOTAL RAINFALL (mm)= 44.400
RUNOFF COEFFICIENT = 0.217

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

| CALIB |
| NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.27

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00

0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00
2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.022 (i)
TIME TO PEAK (hrs)= 5.000
RUNOFF VOLUME (mm)= 9.633
TOTAL RAINFALL (mm)= 44.400
RUNOFF COEFFICIENT = 0.217

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

| CALIB |
| NASHYD (2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1

|ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.37

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00
0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00
2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.037 (i)
TIME TO PEAK (hrs)= 5.000

RUNOFF VOLUME (mm)= 9.637
TOTAL RAINFALL (mm)= 44.400
RUNOFF COEFFICIENT = 0.217

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

| CALIB |
| STANDHYD (2106) | Area (ha)= 1.50
|ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00
0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00

2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00
2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 11.50 4.66
over (min) 5.00 75.00
Storage Coeff. (min)= 5.75 (ii) 71.80 (ii)
Unit Hyd. Tpeak (min)= 5.00 75.00
Unit Hyd. peak (cms)= 0.20 0.02

TOTALS
PEAK FLOW (cms)= 0.02 0.01 0.026 (iii)
TIME TO PEAK (hrs)= 2.00 5.17 2.00
RUNOFF VOLUME (mm)= 43.40 20.98 32.16
TOTAL RAINFALL (mm)= 44.40 44.40 44.40
RUNOFF COEFFICIENT = 0.98 0.47 0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107)
ID= 1 DT= 5.0 min
Area (ha)= 3.47
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00
0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00
2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 11.50 4.66
over (min) 5.00 145.00
Storage Coeff. (min)= 6.52 (ii) 142.63 (ii)
Unit Hyd. Tpeak (min)= 5.00 145.00
Unit Hyd. peak (cms)= 0.18 0.01

TOTALS
PEAK FLOW (cms)= 0.06 0.02 0.057 (iii)
TIME TO PEAK (hrs)= 2.00 6.33 2.00
RUNOFF VOLUME (mm)= 43.40 20.98 32.17
TOTAL RAINFALL (mm)= 44.40 44.40 44.40
RUNOFF COEFFICIENT = 0.98 0.47 0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 85.0 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
 NASHYD (1103)
 ID= 1 DT= 5.0 min

 Area (ha)= 2.00 Curve Number (CN)= 69.4
 Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
 U.H. Tp(hrs)= 0.49

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00
0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00

2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.013 (i)
 TIME TO PEAK (hrs)= 5.083
 RUNOFF VOLUME (mm)= 10.526
 TOTAL RAINFALL (mm)= 44.400
 RUNOFF COEFFICIENT = 0.237

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

 ADD HYD (0013)
 1 + 2 = 3

 AREA QPEAK TPEAK R.V.
 (ha) (cms) (hrs) (mm)
 ID1= 1 (1103): 2.00 0.013 5.08 10.53
 + ID2= 2 (2101): 1.52 0.010 5.00 9.60
 =====
 ID = 3 (0013): 3.52 0.023 5.00 10.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 ADD HYD (0013)
 3 + 2 = 1

 AREA QPEAK TPEAK R.V.
 (ha) (cms) (hrs) (mm)
 ID1= 3 (0013): 3.52 0.023 5.00 10.12
 + ID2= 2 (2102): 3.87 0.025 5.00 9.62
 =====
 ID = 1 (0013): 7.39 0.048 5.00 9.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 ADD HYD (0013)
 1 + 2 = 3

 AREA QPEAK TPEAK R.V.
 (ha) (cms) (hrs) (mm)
 ID1= 1 (0013): 7.39 0.048 5.00 9.86
 + ID2= 2 (2103): 3.55 0.023 5.00 9.62
 =====
 ID = 3 (0013): 10.94 0.071 5.00 9.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  10.94  0.071  5.00  9.78
+ ID2= 2 ( 2104):   3.47  0.022  5.00  9.63
=====
ID = 1 ( 0013):   14.41  0.093  5.00  9.75
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):  14.41  0.093  5.00  9.75
+ ID2= 2 ( 2105):   5.95  0.037  5.00  9.64
=====
ID = 3 ( 0013):  20.36  0.130  5.00  9.71
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  20.36  0.130  5.00  9.71
+ ID2= 2 ( 2106):   1.50  0.026  2.00  32.16
=====
ID = 1 ( 0013):  21.86  0.151  5.00  11.25
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):  21.86  0.151  5.00  11.25
+ ID2= 2 ( 2107):   3.47  0.057  2.00  32.17
=====
ID = 3 ( 0013):  25.33  0.195  5.00  14.12
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  25.33  0.195  5.00  14.12
+ ID2= 2 ( 2108):   1.46  0.007  5.17  7.56
=====
ID = 1 ( 0013):  26.79  0.202  5.00  13.76
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| RESERVOIR( 0001)|
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
-----
          OVERFLOW IS OFF
          OUTFLOW   STORAGE   OUTFLOW   STORAGE
          (cms)   (ha.m.)   (cms)   (ha.m.)
          0.0000   0.0000   1.1450   0.1930
          0.3370   0.0770   1.3850   0.2270
          0.6240   0.1200   1.6330   0.2640
          0.8460   0.1510   0.0000   0.0000
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
INFLOW : ID= 2 ( 0013)  26.790  0.202  5.00  13.76
OUTFLOW: ID= 1 ( 0001)  26.790  0.193  5.08  13.76

          PEAK FLOW REDUCTION [Qout/Qin](%)= 95.56
          TIME SHIFT OF PEAK FLOW (min)= 5.00
          MAXIMUM STORAGE USED (ha.m.)= 0.0442
```

```
-----
| CALIB
| NASHYD ( 1100)|
| ID= 1 DT= 5.0 min |
-----
          Area (ha)= 24.78   Curve Number (CN)= 75.7
          Ia (mm)= 6.20     # of Linear Res.(N)= 3.00
          U.H. Tp(hrs)= 0.70
```

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  5.80 | 3.083  6.70 | 6.083  1.30 | 9.08  0.00
0.167  5.80 | 3.167  6.70 | 6.167  1.30 | 9.17  0.00
0.250  5.80 | 3.250  6.70 | 6.250  1.30 | 9.25  0.00
0.333  5.80 | 3.333  6.70 | 6.333  1.30 | 9.33  0.00
0.417  5.80 | 3.417  6.70 | 6.417  1.30 | 9.42  0.00
```

0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00
2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.192 (i)
TIME TO PEAK (hrs)= 5.083
RUNOFF VOLUME (mm)= 12.187
TOTAL RAINFALL (mm)= 44.400
RUNOFF COEFFICIENT = 0.274

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

| CALIB |
| NASHYD (1101) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.49

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00
0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00
2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.013 (i)
TIME TO PEAK (hrs)= 5.083
RUNOFF VOLUME (mm)= 10.526
TOTAL RAINFALL (mm)= 44.400
RUNOFF COEFFICIENT = 0.237

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

ADD HYD (0061)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1100):	24.78	0.192	5.08	12.19
+ ID2= 2 (1101):	2.00	0.013	5.08	10.53
=====				
ID = 3 (0061):	26.78	0.205	5.08	12.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (2100)			
ID= 1 DT= 5.0 min			

	Area (ha)=	24.78	
	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.15	13.63
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	406.45	800.00
Mannings n =	0.013	0.250

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00
0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00

1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00
2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)=	11.50	4.66
over (min)	10.00	160.00
Storage Coeff. (min)=	11.43 (ii)	156.65 (ii)
Unit Hyd. Tpeak (min)=	10.00	160.00
Unit Hyd. peak (cms)=	0.10	0.01

TOTALS

PEAK FLOW (cms)=	0.35	0.12	0.363 (iii)
TIME TO PEAK (hrs)=	2.00	6.50	2.00
RUNOFF VOLUME (mm)=	43.40	20.98	31.07
TOTAL RAINFALL (mm)=	44.40	44.40	44.40
RUNOFF COEFFICIENT =	0.98	0.47	0.70

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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			
NASHYD (1102)			
ID= 1 DT= 5.0 min			

	Area (ha)=	2.00	Curve Number (CN)= 69.4
	Ia (mm)=	4.40	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.49	

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	5.80	3.083	6.70	6.083	1.30	9.08	0.00
0.167	5.80	3.167	6.70	6.167	1.30	9.17	0.00
0.250	5.80	3.250	6.70	6.250	1.30	9.25	0.00
0.333	5.80	3.333	6.70	6.333	1.30	9.33	0.00
0.417	5.80	3.417	6.70	6.417	1.30	9.42	0.00
0.500	5.80	3.500	6.70	6.500	1.30	9.50	0.00
0.583	5.80	3.583	6.70	6.583	1.30	9.58	0.00
0.667	5.80	3.667	6.70	6.667	1.30	9.67	0.00
0.750	5.80	3.750	6.70	6.750	1.30	9.75	0.00
0.833	5.80	3.833	6.70	6.833	1.30	9.83	0.00
0.917	5.80	3.917	6.70	6.917	1.30	9.92	0.00
1.000	5.80	4.000	6.70	7.000	1.30	10.00	0.00
1.083	11.50	4.083	6.20	7.083	0.40	10.08	0.00
1.167	11.50	4.167	6.20	7.167	0.40	10.17	0.00
1.250	11.50	4.250	6.20	7.250	0.40	10.25	0.00
1.333	11.50	4.333	6.20	7.333	0.40	10.33	0.00
1.417	11.50	4.417	6.20	7.417	0.40	10.42	0.00
1.500	11.50	4.500	6.20	7.500	0.40	10.50	0.00
1.583	11.50	4.583	6.20	7.583	0.40	10.58	0.00
1.667	11.50	4.667	6.20	7.667	0.40	10.67	0.00
1.750	11.50	4.750	6.20	7.750	0.40	10.75	0.00
1.833	11.50	4.833	6.20	7.833	0.40	10.83	0.00
1.917	11.50	4.917	6.20	7.917	0.40	10.92	0.00
2.000	11.50	5.000	6.20	8.000	0.40	11.00	0.00
2.083	8.90	5.083	3.60	8.083	0.00	11.08	0.00
2.167	8.90	5.167	3.60	8.167	0.00	11.17	0.00
2.250	8.90	5.250	3.60	8.250	0.00	11.25	0.00
2.333	8.90	5.333	3.60	8.333	0.00	11.33	0.00
2.417	8.90	5.417	3.60	8.417	0.00	11.42	0.00
2.500	8.90	5.500	3.60	8.500	0.00	11.50	0.00
2.583	8.90	5.583	3.60	8.583	0.00	11.58	0.00
2.667	8.90	5.667	3.60	8.667	0.00	11.67	0.00
2.750	8.90	5.750	3.60	8.750	0.00	11.75	0.00
2.833	8.90	5.833	3.60	8.833	0.00	11.83	0.00
2.917	8.90	5.917	3.60	8.917	0.00	11.92	0.00
3.000	8.90	6.000	3.60	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.013 (i)
TIME TO PEAK (hrs)= 5.083
RUNOFF VOLUME (mm)= 10.526
TOTAL RAINFALL (mm)= 44.400
RUNOFF COEFFICIENT = 0.237

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

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-----
| ADD HYD ( 0063)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 1102): 2.00 0.013 5.08 10.53
+ ID2= 2 ( 2100): 24.78 0.363 2.00 31.07
=====
ID = 3 ( 0063): 26.78 0.369 2.00 29.53

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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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V V I SSSSS U U A L (v 6.2.2008)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSSS UUUUU A A LLLLL

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

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\db60
c46e-8766-453b-95c6-8f7cd6ce863f\scen

Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\db60
c46e-8766-453b-95c6-8f7cd6ce863f\scen

DATE: 04/05/2023

TIME: 11:32:34

USER:

COMMENTS: _____

** SIMULATION : 2-Year_12 hour SCS **

READ STORM
Ptotal= 44.58 mm

Filename: C:\Users\nnapper\AppData
ata\Local\Temp\
aa485c45-5c41-4f04-b9f7-20c929bcd42e\d12a208f
Comments: 2-Year_12 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	1.10	3.00	1.80	6.00	8.00	9.00	1.60
0.25	1.10	3.25	1.80	6.25	8.00	9.25	1.60
0.50	1.10	3.50	1.80	6.50	3.60	9.50	1.60
0.75	1.10	3.75	1.80	6.75	3.60	9.75	1.60
1.00	1.10	4.00	2.70	7.00	2.70	10.00	0.90
1.25	1.10	4.25	2.70	7.25	2.70	10.25	0.90
1.50	1.10	4.50	3.60	7.50	2.70	10.50	0.90
1.75	1.10	4.75	3.60	7.75	2.70	10.75	0.90
2.00	1.30	5.00	5.30	8.00	1.60	11.00	0.90
2.25	1.30	5.25	5.30	8.25	1.60	11.25	0.90
2.50	1.30	5.50	21.30	8.50	1.60	11.50	0.90
2.75	1.30	5.75	58.60	8.75	1.60	11.75	0.90

| CALIB |
| NASHYD (2108) |
ID= 1 DT= 5.0 min

Area (ha)= 1.46 Curve Number (CN)= 60.5
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.67

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	1.10	3.083	1.80	6.083	8.00	9.08	1.60
0.167	1.10	3.167	1.80	6.167	8.00	9.17	1.60
0.250	1.10	3.250	1.80	6.250	8.00	9.25	1.60
0.333	1.10	3.333	1.80	6.333	8.00	9.33	1.60
0.417	1.10	3.417	1.80	6.417	8.00	9.42	1.60
0.500	1.10	3.500	1.80	6.500	8.00	9.50	1.60

0.583	1.10	3.583	1.80	6.583	3.60	9.58	1.60
0.667	1.10	3.667	1.80	6.667	3.60	9.67	1.60
0.750	1.10	3.750	1.80	6.750	3.60	9.75	1.60
0.833	1.10	3.833	1.80	6.833	3.60	9.83	1.60
0.917	1.10	3.917	1.80	6.917	3.60	9.92	1.60
1.000	1.10	4.000	1.80	7.000	3.60	10.00	1.60
1.083	1.10	4.083	2.70	7.083	2.70	10.08	0.90
1.167	1.10	4.167	2.70	7.167	2.70	10.17	0.90
1.250	1.10	4.250	2.70	7.250	2.70	10.25	0.90
1.333	1.10	4.333	2.70	7.333	2.70	10.33	0.90
1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90
1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90
2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.013 (i)
TIME TO PEAK (hrs)= 6.667
RUNOFF VOLUME (mm)= 7.624
TOTAL RAINFALL (mm)= 44.575
RUNOFF COEFFICIENT = 0.171

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

| CALIB |
| NASHYD (2101) |
ID= 1 DT= 5.0 min

Area (ha)= 1.52 Curve Number (CN)= 67.1
Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.16

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	1.10	3.083	1.80	6.083	8.00	9.08	1.60
0.167	1.10	3.167	1.80	6.167	8.00	9.17	1.60
0.250	1.10	3.250	1.80	6.250	8.00	9.25	1.60
0.333	1.10	3.333	1.80	6.333	8.00	9.33	1.60
0.417	1.10	3.417	1.80	6.417	8.00	9.42	1.60
0.500	1.10	3.500	1.80	6.500	8.00	9.50	1.60
0.583	1.10	3.583	1.80	6.583	3.60	9.58	1.60
0.667	1.10	3.667	1.80	6.667	3.60	9.67	1.60
0.750	1.10	3.750	1.80	6.750	3.60	9.75	1.60
0.833	1.10	3.833	1.80	6.833	3.60	9.83	1.60
0.917	1.10	3.917	1.80	6.917	3.60	9.92	1.60
1.000	1.10	4.000	1.80	7.000	3.60	10.00	1.60
1.083	1.10	4.083	2.70	7.083	2.70	10.08	0.90
1.167	1.10	4.167	2.70	7.167	2.70	10.17	0.90
1.250	1.10	4.250	2.70	7.250	2.70	10.25	0.90
1.333	1.10	4.333	2.70	7.333	2.70	10.33	0.90
1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90
1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90
2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.046 (i)

TIME TO PEAK (hrs)= 6.000

RUNOFF VOLUME (mm)= 9.670

TOTAL RAINFALL (mm)= 44.575

RUNOFF COEFFICIENT = 0.217

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

 CALIB
 NASHYD (2102)
 ID= 1 DT= 5.0 min
 Area (ha)= 3.87 Curve Number (CN)= 67.1
 Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
 U.H. Tp(hrs)= 0.20

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	1.10	3.083	1.80	6.083	8.00	9.08	1.60
0.167	1.10	3.167	1.80	6.167	8.00	9.17	1.60
0.250	1.10	3.250	1.80	6.250	8.00	9.25	1.60
0.333	1.10	3.333	1.80	6.333	8.00	9.33	1.60
0.417	1.10	3.417	1.80	6.417	8.00	9.42	1.60
0.500	1.10	3.500	1.80	6.500	8.00	9.50	1.60
0.583	1.10	3.583	1.80	6.583	3.60	9.58	1.60
0.667	1.10	3.667	1.80	6.667	3.60	9.67	1.60
0.750	1.10	3.750	1.80	6.750	3.60	9.75	1.60
0.833	1.10	3.833	1.80	6.833	3.60	9.83	1.60
0.917	1.10	3.917	1.80	6.917	3.60	9.92	1.60
1.000	1.10	4.000	1.80	7.000	3.60	10.00	1.60
1.083	1.10	4.083	2.70	7.083	2.70	10.08	0.90
1.167	1.10	4.167	2.70	7.167	2.70	10.17	0.90
1.250	1.10	4.250	2.70	7.250	2.70	10.25	0.90
1.333	1.10	4.333	2.70	7.333	2.70	10.33	0.90
1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90
1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90
2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.106 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 9.695
TOTAL RAINFALL (mm)= 44.575
RUNOFF COEFFICIENT = 0.217

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

| CALIB |
| NASHYD (2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.20

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 1.10 | 3.083 1.80 | 6.083 8.00 | 9.08 1.60
0.167 1.10 | 3.167 1.80 | 6.167 8.00 | 9.17 1.60
0.250 1.10 | 3.250 1.80 | 6.250 8.00 | 9.25 1.60
0.333 1.10 | 3.333 1.80 | 6.333 8.00 | 9.33 1.60
0.417 1.10 | 3.417 1.80 | 6.417 8.00 | 9.42 1.60
0.500 1.10 | 3.500 1.80 | 6.500 8.00 | 9.50 1.60
0.583 1.10 | 3.583 1.80 | 6.583 3.60 | 9.58 1.60
0.667 1.10 | 3.667 1.80 | 6.667 3.60 | 9.67 1.60
0.750 1.10 | 3.750 1.80 | 6.750 3.60 | 9.75 1.60
0.833 1.10 | 3.833 1.80 | 6.833 3.60 | 9.83 1.60
0.917 1.10 | 3.917 1.80 | 6.917 3.60 | 9.92 1.60
1.000 1.10 | 4.000 1.80 | 7.000 3.60 | 10.00 1.60
1.083 1.10 | 4.083 2.70 | 7.083 2.70 | 10.08 0.90
1.167 1.10 | 4.167 2.70 | 7.167 2.70 | 10.17 0.90
1.250 1.10 | 4.250 2.70 | 7.250 2.70 | 10.25 0.90
1.333 1.10 | 4.333 2.70 | 7.333 2.70 | 10.33 0.90
1.417 1.10 | 4.417 2.70 | 7.417 2.70 | 10.42 0.90
1.500 1.10 | 4.500 2.70 | 7.500 2.70 | 10.50 0.90
1.583 1.10 | 4.583 3.60 | 7.583 2.70 | 10.58 0.90
1.667 1.10 | 4.667 3.60 | 7.667 2.70 | 10.67 0.90
1.750 1.10 | 4.750 3.60 | 7.750 2.70 | 10.75 0.90
1.833 1.10 | 4.833 3.60 | 7.833 2.70 | 10.83 0.90
1.917 1.10 | 4.917 3.60 | 7.917 2.70 | 10.92 0.90
2.000 1.10 | 5.000 3.60 | 8.000 2.70 | 11.00 0.90
2.083 1.30 | 5.083 5.30 | 8.083 1.60 | 11.08 0.90
2.167 1.30 | 5.167 5.30 | 8.167 1.60 | 11.17 0.90

2.250 1.30 | 5.250 5.30 | 8.250 1.60 | 11.25 0.90
2.333 1.30 | 5.333 5.30 | 8.333 1.60 | 11.33 0.90
2.417 1.30 | 5.417 5.30 | 8.417 1.60 | 11.42 0.90
2.500 1.30 | 5.500 5.30 | 8.500 1.60 | 11.50 0.90
2.583 1.30 | 5.583 21.30 | 8.583 1.60 | 11.58 0.90
2.667 1.30 | 5.667 21.30 | 8.667 1.60 | 11.67 0.90
2.750 1.30 | 5.750 21.30 | 8.750 1.60 | 11.75 0.90
2.833 1.30 | 5.833 58.60 | 8.833 1.60 | 11.83 0.90
2.917 1.30 | 5.917 58.60 | 8.917 1.60 | 11.92 0.90
3.000 1.30 | 6.000 58.60 | 9.000 1.60 | 12.00 0.90

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.097 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 9.695
TOTAL RAINFALL (mm)= 44.575
RUNOFF COEFFICIENT = 0.217

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

| CALIB |
| NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.27

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 1.10 | 3.083 1.80 | 6.083 8.00 | 9.08 1.60
0.167 1.10 | 3.167 1.80 | 6.167 8.00 | 9.17 1.60
0.250 1.10 | 3.250 1.80 | 6.250 8.00 | 9.25 1.60
0.333 1.10 | 3.333 1.80 | 6.333 8.00 | 9.33 1.60
0.417 1.10 | 3.417 1.80 | 6.417 8.00 | 9.42 1.60
0.500 1.10 | 3.500 1.80 | 6.500 8.00 | 9.50 1.60
0.583 1.10 | 3.583 1.80 | 6.583 3.60 | 9.58 1.60
0.667 1.10 | 3.667 1.80 | 6.667 3.60 | 9.67 1.60
0.750 1.10 | 3.750 1.80 | 6.750 3.60 | 9.75 1.60
0.833 1.10 | 3.833 1.80 | 6.833 3.60 | 9.83 1.60
0.917 1.10 | 3.917 1.80 | 6.917 3.60 | 9.92 1.60
1.000 1.10 | 4.000 1.80 | 7.000 3.60 | 10.00 1.60
1.083 1.10 | 4.083 2.70 | 7.083 2.70 | 10.08 0.90
1.167 1.10 | 4.167 2.70 | 7.167 2.70 | 10.17 0.90
1.250 1.10 | 4.250 2.70 | 7.250 2.70 | 10.25 0.90
1.333 1.10 | 4.333 2.70 | 7.333 2.70 | 10.33 0.90

1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90
1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90
2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.077 (i)
TIME TO PEAK (hrs)= 6.167
RUNOFF VOLUME (mm)= 9.708
TOTAL RAINFALL (mm)= 44.575
RUNOFF COEFFICIENT = 0.218

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

| CALIB |
| NASHYD (2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.37

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	1.10	3.083	1.80	6.083	8.00	9.08	1.60
0.167	1.10	3.167	1.80	6.167	8.00	9.17	1.60
0.250	1.10	3.250	1.80	6.250	8.00	9.25	1.60
0.333	1.10	3.333	1.80	6.333	8.00	9.33	1.60
0.417	1.10	3.417	1.80	6.417	8.00	9.42	1.60
0.500	1.10	3.500	1.80	6.500	8.00	9.50	1.60

0.583	1.10	3.583	1.80	6.583	3.60	9.58	1.60
0.667	1.10	3.667	1.80	6.667	3.60	9.67	1.60
0.750	1.10	3.750	1.80	6.750	3.60	9.75	1.60
0.833	1.10	3.833	1.80	6.833	3.60	9.83	1.60
0.917	1.10	3.917	1.80	6.917	3.60	9.92	1.60
1.000	1.10	4.000	1.80	7.000	3.60	10.00	1.60
1.083	1.10	4.083	2.70	7.083	2.70	10.08	0.90
1.167	1.10	4.167	2.70	7.167	2.70	10.17	0.90
1.250	1.10	4.250	2.70	7.250	2.70	10.25	0.90
1.333	1.10	4.333	2.70	7.333	2.70	10.33	0.90
1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90
1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90
2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.106 (i)
TIME TO PEAK (hrs)= 6.250
RUNOFF VOLUME (mm)= 9.712
TOTAL RAINFALL (mm)= 44.575
RUNOFF COEFFICIENT = 0.218

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

| CALIB |
| STANDHYD (2106) | Area (ha)= 1.50
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00
|-----|

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.75	0.75
Dep. Storage	(mm)=	1.00	1.50

Average Slope (%)= 1.20 1.20
 Length (m)= 100.00 166.70
 Mannings n = 0.013 0.250

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	1.10	3.083	1.80	6.083	8.00	9.08	1.60
0.167	1.10	3.167	1.80	6.167	8.00	9.17	1.60
0.250	1.10	3.250	1.80	6.250	8.00	9.25	1.60
0.333	1.10	3.333	1.80	6.333	8.00	9.33	1.60
0.417	1.10	3.417	1.80	6.417	8.00	9.42	1.60
0.500	1.10	3.500	1.80	6.500	8.00	9.50	1.60
0.583	1.10	3.583	1.80	6.583	3.60	9.58	1.60
0.667	1.10	3.667	1.80	6.667	3.60	9.67	1.60
0.750	1.10	3.750	1.80	6.750	3.60	9.75	1.60
0.833	1.10	3.833	1.80	6.833	3.60	9.83	1.60
0.917	1.10	3.917	1.80	6.917	3.60	9.92	1.60
1.000	1.10	4.000	1.80	7.000	3.60	10.00	1.60
1.083	1.10	4.083	2.70	7.083	2.70	10.08	0.90
1.167	1.10	4.167	2.70	7.167	2.70	10.17	0.90
1.250	1.10	4.250	2.70	7.250	2.70	10.25	0.90
1.333	1.10	4.333	2.70	7.333	2.70	10.33	0.90
1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90
1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90
2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Max.Eff.Inten.(mm/hr)= 58.60 16.38
 over (min) 5.00 45.00
 Storage Coeff. (min)= 3.00 (ii) 42.93 (ii)

Unit Hyd. Tpeak (min)= 5.00 45.00
 Unit Hyd. peak (cms)= 0.28 0.03
 TOTALS
 PEAK FLOW (cms)= 0.12 0.02 0.129 (iii)
 TIME TO PEAK (hrs)= 6.00 6.58 6.00
 RUNOFF VOLUME (mm)= 43.57 21.11 32.32
 TOTAL RAINFALL (mm)= 44.57 44.57 44.57
 RUNOFF COEFFICIENT = 0.98 0.47 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 85.0 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 (2107) | Area (ha)= 3.47
 | ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	1.10	3.083	1.80	6.083	8.00	9.08	1.60
0.167	1.10	3.167	1.80	6.167	8.00	9.17	1.60
0.250	1.10	3.250	1.80	6.250	8.00	9.25	1.60
0.333	1.10	3.333	1.80	6.333	8.00	9.33	1.60
0.417	1.10	3.417	1.80	6.417	8.00	9.42	1.60
0.500	1.10	3.500	1.80	6.500	8.00	9.50	1.60
0.583	1.10	3.583	1.80	6.583	3.60	9.58	1.60
0.667	1.10	3.667	1.80	6.667	3.60	9.67	1.60
0.750	1.10	3.750	1.80	6.750	3.60	9.75	1.60
0.833	1.10	3.833	1.80	6.833	3.60	9.83	1.60
0.917	1.10	3.917	1.80	6.917	3.60	9.92	1.60
1.000	1.10	4.000	1.80	7.000	3.60	10.00	1.60
1.083	1.10	4.083	2.70	7.083	2.70	10.08	0.90
1.167	1.10	4.167	2.70	7.167	2.70	10.17	0.90

1.250	1.10	4.250	2.70	7.250	2.70	10.25	0.90
1.333	1.10	4.333	2.70	7.333	2.70	10.33	0.90
1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90
1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90
2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Max.Eff.Inten.(mm/hr)= 58.60 12.69
over (min) 5.00 95.00
Storage Coeff. (min)= 3.40 (ii) 94.56 (ii)
Unit Hyd. Tpeak (min)= 5.00 95.00
Unit Hyd. peak (cms)= 0.26 0.01

TOTALS

PEAK FLOW (cms)= 0.28 0.03 0.285 (iii)
TIME TO PEAK (hrs)= 6.00 7.50 6.00
RUNOFF VOLUME (mm)= 43.57 21.11 32.33
TOTAL RAINFALL (mm)= 44.57 44.57 44.57
RUNOFF COEFFICIENT = 0.98 0.47 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.49

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	1.10	3.083	1.80	6.083	8.00	9.08	1.60
0.167	1.10	3.167	1.80	6.167	8.00	9.17	1.60
0.250	1.10	3.250	1.80	6.250	8.00	9.25	1.60
0.333	1.10	3.333	1.80	6.333	8.00	9.33	1.60
0.417	1.10	3.417	1.80	6.417	8.00	9.42	1.60
0.500	1.10	3.500	1.80	6.500	8.00	9.50	1.60
0.583	1.10	3.583	1.80	6.583	3.60	9.58	1.60
0.667	1.10	3.667	1.80	6.667	3.60	9.67	1.60
0.750	1.10	3.750	1.80	6.750	3.60	9.75	1.60
0.833	1.10	3.833	1.80	6.833	3.60	9.83	1.60
0.917	1.10	3.917	1.80	6.917	3.60	9.92	1.60
1.000	1.10	4.000	1.80	7.000	3.60	10.00	1.60
1.083	1.10	4.083	2.70	7.083	2.70	10.08	0.90
1.167	1.10	4.167	2.70	7.167	2.70	10.17	0.90
1.250	1.10	4.250	2.70	7.250	2.70	10.25	0.90
1.333	1.10	4.333	2.70	7.333	2.70	10.33	0.90
1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90
1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90
2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.032 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 10.606
TOTAL RAINFALL (mm)= 44.575
RUNOFF COEFFICIENT = 0.238

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

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1103):	2.00	0.032	6.42	10.61
+ ID2= 2 (2101):	1.52	0.046	6.00	9.67
=====				
ID = 3 (0013):	3.52	0.067	6.08	10.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	3.52	0.067	6.08	10.20
+ ID2= 2 (2102):	3.87	0.106	6.08	9.69
=====				
ID = 1 (0013):	7.39	0.172	6.08	9.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	7.39	0.172	6.08	9.94
+ ID2= 2 (2103):	3.55	0.097	6.08	9.69
=====				
ID = 3 (0013):	10.94	0.269	6.08	9.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	10.94	0.269	6.08	9.86
+ ID2= 2 (2104):	3.47	0.077	6.17	9.71
=====				
ID = 1 (0013):	14.41	0.344	6.08	9.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	14.41	0.344	6.08	9.82
+ ID2= 2 (2105):	5.95	0.106	6.25	9.71
=====				
ID = 3 (0013):	20.36	0.433	6.08	9.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	20.36	0.433	6.08	9.79
+ ID2= 2 (2106):	1.50	0.129	6.00	32.32
=====				
ID = 1 (0013):	21.86	0.499	6.00	11.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	21.86	0.499	6.00	11.34
+ ID2= 2 (2107):	3.47	0.285	6.00	32.33
=====				
ID = 3 (0013):	25.33	0.784	6.00	14.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	25.33	0.784	6.00	14.21
+ ID2= 2 (2108):	1.46	0.013	6.67	7.62
=====				
ID = 1 (0013):	26.79	0.788	6.00	13.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0001)
IN= 2---> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	1.1450	0.1930
0.3370	0.0770	1.3850	0.2270
0.6240	0.1200	1.6330	0.2640
0.8460	0.1510	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	0.788	6.00	13.85
OUTFLOW: ID= 1 (0001)	26.790	0.375	6.42	13.85

PEAK FLOW REDUCTION [Qout/Qin](%)= 47.54
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.0828

CALIB
NASHYD (1100)
ID= 1 DT= 5.0 min

Area (ha)= 24.78 Curve Number (CN)= 75.7
Ia (mm)= 6.20 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.70

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	1.10	3.083	1.80	6.083	8.00	9.08	1.60
0.167	1.10	3.167	1.80	6.167	8.00	9.17	1.60
0.250	1.10	3.250	1.80	6.250	8.00	9.25	1.60
0.333	1.10	3.333	1.80	6.333	8.00	9.33	1.60
0.417	1.10	3.417	1.80	6.417	8.00	9.42	1.60
0.500	1.10	3.500	1.80	6.500	8.00	9.50	1.60
0.583	1.10	3.583	1.80	6.583	3.60	9.58	1.60
0.667	1.10	3.667	1.80	6.667	3.60	9.67	1.60
0.750	1.10	3.750	1.80	6.750	3.60	9.75	1.60
0.833	1.10	3.833	1.80	6.833	3.60	9.83	1.60
0.917	1.10	3.917	1.80	6.917	3.60	9.92	1.60
1.000	1.10	4.000	1.80	7.000	3.60	10.00	1.60
1.083	1.10	4.083	2.70	7.083	2.70	10.08	0.90
1.167	1.10	4.167	2.70	7.167	2.70	10.17	0.90
1.250	1.10	4.250	2.70	7.250	2.70	10.25	0.90
1.333	1.10	4.333	2.70	7.333	2.70	10.33	0.90
1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90

1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90
2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.360 (i)
TIME TO PEAK (hrs)= 6.667
RUNOFF VOLUME (mm)= 12.281
TOTAL RAINFALL (mm)= 44.575
RUNOFF COEFFICIENT = 0.276

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

CALIB
NASHYD (1101)
ID= 1 DT= 5.0 min

Area (ha)= 2.00 Curve Number (CN)= 69.4
Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	1.10	3.083	1.80	6.083	8.00	9.08	1.60
0.167	1.10	3.167	1.80	6.167	8.00	9.17	1.60
0.250	1.10	3.250	1.80	6.250	8.00	9.25	1.60
0.333	1.10	3.333	1.80	6.333	8.00	9.33	1.60
0.417	1.10	3.417	1.80	6.417	8.00	9.42	1.60
0.500	1.10	3.500	1.80	6.500	8.00	9.50	1.60
0.583	1.10	3.583	1.80	6.583	3.60	9.58	1.60
0.667	1.10	3.667	1.80	6.667	3.60	9.67	1.60

0.750	1.10	3.750	1.80	6.750	3.60	9.75	1.60
0.833	1.10	3.833	1.80	6.833	3.60	9.83	1.60
0.917	1.10	3.917	1.80	6.917	3.60	9.92	1.60
1.000	1.10	4.000	1.80	7.000	3.60	10.00	1.60
1.083	1.10	4.083	2.70	7.083	2.70	10.08	0.90
1.167	1.10	4.167	2.70	7.167	2.70	10.17	0.90
1.250	1.10	4.250	2.70	7.250	2.70	10.25	0.90
1.333	1.10	4.333	2.70	7.333	2.70	10.33	0.90
1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90
1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90
2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.032 (i)
 TIME TO PEAK (hrs)= 6.417
 RUNOFF VOLUME (mm)= 10.606
 TOTAL RAINFALL (mm)= 44.575
 RUNOFF COEFFICIENT = 0.238

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

ADD HYD (0061)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1100):	24.78	0.360	6.67	12.28
+ ID2= 2 (1101):	2.00	0.032	6.42	10.61
=====				
ID = 3 (0061):	26.78	0.389	6.67	12.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (2100)	Area (ha)=	24.78	
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.15	13.63
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	2.00	2.00
Length (m)=	406.45	800.00
Mannings n =	0.013	0.250

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	1.10	3.083	1.80	6.083	8.00	9.08	1.60
0.167	1.10	3.167	1.80	6.167	8.00	9.17	1.60
0.250	1.10	3.250	1.80	6.250	8.00	9.25	1.60
0.333	1.10	3.333	1.80	6.333	8.00	9.33	1.60
0.417	1.10	3.417	1.80	6.417	8.00	9.42	1.60
0.500	1.10	3.500	1.80	6.500	8.00	9.50	1.60
0.583	1.10	3.583	1.80	6.583	3.60	9.58	1.60
0.667	1.10	3.667	1.80	6.667	3.60	9.67	1.60
0.750	1.10	3.750	1.80	6.750	3.60	9.75	1.60
0.833	1.10	3.833	1.80	6.833	3.60	9.83	1.60
0.917	1.10	3.917	1.80	6.917	3.60	9.92	1.60
1.000	1.10	4.000	1.80	7.000	3.60	10.00	1.60
1.083	1.10	4.083	2.70	7.083	2.70	10.08	0.90
1.167	1.10	4.167	2.70	7.167	2.70	10.17	0.90
1.250	1.10	4.250	2.70	7.250	2.70	10.25	0.90
1.333	1.10	4.333	2.70	7.333	2.70	10.33	0.90
1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90
1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90

2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Max.Eff.Inten.(mm/hr)= 58.60 12.69
over (min) 5.00 105.00
Storage Coeff. (min)= 5.96 (ii) 103.23 (ii)
Unit Hyd. Tpeak (min)= 5.00 105.00
Unit Hyd. peak (cms)= 0.19 0.01

TOTALS
PEAK FLOW (cms)= 1.72 0.19 1.751 (iii)
TIME TO PEAK (hrs)= 6.00 7.67 6.00
RUNOFF VOLUME (mm)= 43.57 21.11 31.22
TOTAL RAINFALL (mm)= 44.57 44.57 44.57
RUNOFF COEFFICIENT = 0.98 0.47 0.70

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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
NASHYD (1102) | Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	1.10	3.083	1.80	6.083	8.00	9.08	1.60
0.167	1.10	3.167	1.80	6.167	8.00	9.17	1.60
0.250	1.10	3.250	1.80	6.250	8.00	9.25	1.60
0.333	1.10	3.333	1.80	6.333	8.00	9.33	1.60
0.417	1.10	3.417	1.80	6.417	8.00	9.42	1.60
0.500	1.10	3.500	1.80	6.500	8.00	9.50	1.60
0.583	1.10	3.583	1.80	6.583	3.60	9.58	1.60
0.667	1.10	3.667	1.80	6.667	3.60	9.67	1.60
0.750	1.10	3.750	1.80	6.750	3.60	9.75	1.60
0.833	1.10	3.833	1.80	6.833	3.60	9.83	1.60
0.917	1.10	3.917	1.80	6.917	3.60	9.92	1.60

1.000	1.10	4.000	1.80	7.000	3.60	10.00	1.60
1.083	1.10	4.083	2.70	7.083	2.70	10.08	0.90
1.167	1.10	4.167	2.70	7.167	2.70	10.17	0.90
1.250	1.10	4.250	2.70	7.250	2.70	10.25	0.90
1.333	1.10	4.333	2.70	7.333	2.70	10.33	0.90
1.417	1.10	4.417	2.70	7.417	2.70	10.42	0.90
1.500	1.10	4.500	2.70	7.500	2.70	10.50	0.90
1.583	1.10	4.583	3.60	7.583	2.70	10.58	0.90
1.667	1.10	4.667	3.60	7.667	2.70	10.67	0.90
1.750	1.10	4.750	3.60	7.750	2.70	10.75	0.90
1.833	1.10	4.833	3.60	7.833	2.70	10.83	0.90
1.917	1.10	4.917	3.60	7.917	2.70	10.92	0.90
2.000	1.10	5.000	3.60	8.000	2.70	11.00	0.90
2.083	1.30	5.083	5.30	8.083	1.60	11.08	0.90
2.167	1.30	5.167	5.30	8.167	1.60	11.17	0.90
2.250	1.30	5.250	5.30	8.250	1.60	11.25	0.90
2.333	1.30	5.333	5.30	8.333	1.60	11.33	0.90
2.417	1.30	5.417	5.30	8.417	1.60	11.42	0.90
2.500	1.30	5.500	5.30	8.500	1.60	11.50	0.90
2.583	1.30	5.583	21.30	8.583	1.60	11.58	0.90
2.667	1.30	5.667	21.30	8.667	1.60	11.67	0.90
2.750	1.30	5.750	21.30	8.750	1.60	11.75	0.90
2.833	1.30	5.833	58.60	8.833	1.60	11.83	0.90
2.917	1.30	5.917	58.60	8.917	1.60	11.92	0.90
3.000	1.30	6.000	58.60	9.000	1.60	12.00	0.90

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.032 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 10.606
TOTAL RAINFALL (mm)= 44.575
RUNOFF COEFFICIENT = 0.238

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

ADD HYD (0063) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (1102): 2.00 0.032 6.42 10.61
+ ID2= 2 (2100): 24.78 1.751 6.00 31.22
===== ID = 3 (0063): 26.78 1.767 6.00 29.68

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

=====

V V I SSSS U U A L (v 6.2.2008)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
W I SSSS UUUU A A LLLLL

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

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\dd9c
d2c3-97ca-483b-923a-bea5980a2421\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\dd9c
d2c3-97ca-483b-923a-bea5980a2421\scen

DATE: 04/05/2023

TIME: 11:32:36

USER:

COMMENTS: _____

** SIMULATION : 2-Year_24 hour SCS **

| READ STORM | Filename: C:\Users\nnapper\AppData
| | ata\Local\Temp\
| | aa485c45-5c41-4f04-b9f7-20c929bcd42e\15bee0a9

| Ptotal= 49.13 mm | Comments: 2-Year_24 hour SCS

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.00	0.50	6.00	1.00	12.00	7.10	18.00	0.90	
0.25	0.50	6.25	1.00	12.25	7.10	18.25	0.90	
0.50	0.50	6.50	1.00	12.50	3.60	18.50	0.90	
0.75	0.50	6.75	1.00	12.75	3.60	18.75	0.90	
1.00	0.50	7.00	1.00	13.00	0.70	19.00	0.90	
1.25	0.50	7.25	1.00	13.25	0.70	19.25	0.90	
1.50	0.50	7.50	1.00	13.50	4.00	19.50	0.90	
1.75	0.50	7.75	1.00	13.75	4.00	19.75	0.90	
2.00	0.60	8.00	1.30	14.00	1.50	20.00	0.60	
2.25	0.60	8.25	1.30	14.25	1.50	20.25	0.60	
2.50	0.60	8.50	1.30	14.50	1.50	20.50	0.60	
2.75	0.60	8.75	1.30	14.75	1.50	20.75	0.60	
3.00	0.60	9.00	1.60	15.00	1.50	21.00	0.60	
3.25	0.60	9.25	1.60	15.25	1.50	21.25	0.60	
3.50	0.60	9.50	1.80	15.50	1.50	21.50	0.60	
3.75	0.60	9.75	1.80	15.75	1.50	21.75	0.60	
4.00	0.80	10.00	2.30	16.00	0.90	22.00	0.60	
4.25	0.80	10.25	2.30	16.25	0.90	22.25	0.60	
4.50	0.80	10.50	3.00	16.50	0.90	22.50	0.60	
4.75	0.80	10.75	3.00	16.75	0.90	22.75	0.60	
5.00	0.80	11.00	4.70	17.00	0.90	23.00	0.60	
5.25	0.80	11.25	4.70	17.25	0.90	23.25	0.60	
5.50	0.80	11.50	20.40	17.50	0.90	23.50	0.60	
5.75	0.80	11.75	54.10	17.75	0.90	23.75	0.60	

| CALIB |
| NASHYD (2108) | Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
| U.H. Tp(hrs)= 0.67

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90	
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90	
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90	
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90	
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90	
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90	
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90	

0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60

4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.013 (i)

TIME TO PEAK (hrs)= 12.583

RUNOFF VOLUME (mm)= 9.272

TOTAL RAINFALL (mm)= 49.125

RUNOFF COEFFICIENT = 0.189

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

CALIB			
NASHYD (2101)			
ID= 1 DT= 5.0 min			

Area (ha)=	1.52	Curve Number (CN)=	67.1
Ia (mm)=	4.60	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.16		

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90
0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90

1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60
4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60

5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.047 (i)

TIME TO PEAK (hrs)= 12.000

RUNOFF VOLUME (mm)= 11.673

TOTAL RAINFALL (mm)= 49.125

RUNOFF COEFFICIENT = 0.238

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

CALIB			
NASHYD (2102)		Area (ha)= 3.87	Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min		Ia (mm)= 4.60	# of Linear Res.(N)= 3.00

		U.H. Tp(hrs)= 0.20	

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90
0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90

1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60
4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60

5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.106 (i)
 TIME TO PEAK (hrs)= 12.083
 RUNOFF VOLUME (mm)= 11.704
 TOTAL RAINFALL (mm)= 49.125
 RUNOFF COEFFICIENT = 0.238

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

 | CALIB |
 | NASHYD (2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.20

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90
0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90

1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60
4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60

5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.097 (i)
 TIME TO PEAK (hrs)= 12.083
 RUNOFF VOLUME (mm)= 11.704
 TOTAL RAINFALL (mm)= 49.125
 RUNOFF COEFFICIENT = 0.238

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

 | CALIB |
 | NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.27

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90
0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90

2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60
4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.078 (i)
 TIME TO PEAK (hrs)= 12.167
 RUNOFF VOLUME (mm)= 11.719
 TOTAL RAINFALL (mm)= 49.125
 RUNOFF COEFFICIENT = 0.239

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

 | CALIB |
 | NASHYD (2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.37

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90
0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60

2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60
4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.108 (i)
TIME TO PEAK (hrs)= 12.250

RUNOFF VOLUME (mm)= 11.724
TOTAL RAINFALL (mm)= 49.125
RUNOFF COEFFICIENT = 0.239

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

CALIB
STANDHYD (2106)
ID= 1 DT= 5.0 min
Area (ha)= 1.50
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90
0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60

2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60
4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Max.Eff.Inten.(mm/hr)=	54.10	14.86
over (min)	5.00	45.00

Storage Coeff. (min)=	3.09 (ii)	44.62 (ii)
Unit Hyd. Tpeak (min)=	5.00	45.00
Unit Hyd. peak (cms)=	0.27	0.03

			TOTALS
PEAK FLOW (cms)=	0.11	0.02	0.120 (iii)
TIME TO PEAK (hrs)=	12.00	12.58	12.00
RUNOFF VOLUME (mm)=	48.12	24.53	36.31
TOTAL RAINFALL (mm)=	49.13	49.13	49.13
RUNOFF COEFFICIENT =	0.98	0.50	0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 85.0 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	Area (ha)= 3.47
STANDHYD (2107)	Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00
ID= 1 DT= 5.0 min	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90
0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90

1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60
4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60

5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Max.Eff.Inten.(mm/hr)=	54.10	12.34
over (min)	5.00	100.00
Storage Coeff. (min)=	3.51 (ii)	95.68 (ii)
Unit Hyd. Tpeak (min)=	5.00	100.00
Unit Hyd. peak (cms)=	0.26	0.01

PEAK FLOW (cms)=	0.26	0.03	*TOTALS*
TIME TO PEAK (hrs)=	12.00	13.50	0.264 (iii)
RUNOFF VOLUME (mm)=	48.13	24.53	12.00
TOTAL RAINFALL (mm)=	49.13	49.13	36.31
RUNOFF COEFFICIENT =	0.98	0.50	49.13
			0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 85.0 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	
NASHYD (1103)	Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min	Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.49

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90

0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60

4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.032 (i)
 TIME TO PEAK (hrs)= 12.417
 RUNOFF VOLUME (mm)= 12.763
 TOTAL RAINFALL (mm)= 49.125
 RUNOFF COEFFICIENT = 0.260

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

ADD HYD (0013)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (1103):	2.00	0.032	12.42	12.76
+ ID2= 2 (2101):	1.52	0.047	12.00	11.67
=====				
ID = 3 (0013):	3.52	0.068	12.08	12.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3 + 2 = 1				
ID1= 3 (0013):	3.52	0.068	12.08	12.29
+ ID2= 2 (2102):	3.87	0.106	12.08	11.70
=====				
ID = 1 (0013):	7.39	0.174	12.08	11.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):  7.39  0.174  12.08  11.98
+ ID2= 2 ( 2103):  3.55  0.097  12.08  11.70
=====
ID = 3 ( 0013):  10.94  0.271  12.08  11.89

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  10.94  0.271  12.08  11.89
+ ID2= 2 ( 2104):  3.47  0.078  12.17  11.72
=====
ID = 1 ( 0013):  14.41  0.348  12.08  11.85

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):  14.41  0.348  12.08  11.85
+ ID2= 2 ( 2105):  5.95  0.108  12.25  11.72
=====
ID = 3 ( 0013):  20.36  0.440  12.08  11.81

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  20.36  0.440  12.08  11.81
+ ID2= 2 ( 2106):  1.50  0.120  12.00  36.31
=====
ID = 1 ( 0013):  21.86  0.504  12.00  13.50

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):  21.86  0.504  12.00  13.50
+ ID2= 2 ( 2107):  3.47  0.264  12.00  36.31
=====
ID = 3 ( 0013):  25.33  0.768  12.00  16.62

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  25.33  0.768  12.00  16.62
+ ID2= 2 ( 2108):  1.46  0.013  12.58  9.27
=====
ID = 1 ( 0013):  26.79  0.773  12.00  16.22

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| RESERVOIR( 0001)|
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
-----
OVERFLOW IS OFF
-----
          OUTFLOW   STORAGE   OUTFLOW   STORAGE
          (cms)   (ha.m.)   (cms)   (ha.m.)
0.0000   0.0000   1.1450   0.1930
0.3370   0.0770   1.3850   0.2270
0.6240   0.1200   1.6330   0.2640
0.8460   0.1510   0.0000   0.0000
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
INFLOW : ID= 2 ( 0013)  26.790   0.773   12.00   16.22
OUTFLOW: ID= 1 ( 0001)  26.790   0.371   12.42   16.22

```

```

PEAK FLOW REDUCTION [Qout/Qin](%)= 47.99
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.0821

```

```

-----
| CALIB
| NASHYD ( 1100)|
| ID= 1 DT= 5.0 min |
-----
          Area   (ha)= 24.78   Curve Number (CN)= 75.7
          Ia     (mm)= 6.20    # of Linear Res.(N)= 3.00
          U.H. Tp(hrs)= 0.70

```

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr		hrs	mm/hr	hrs
0.083	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90
0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60

3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60
4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.366 (i)
TIME TO PEAK (hrs)= 12.667
RUNOFF VOLUME (mm)= 14.804
TOTAL RAINFALL (mm)= 49.125
RUNOFF COEFFICIENT = 0.301

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

| CALIB |
| NASHYD (1101) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.49

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90
0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60

4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60
4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.032 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 12.763
TOTAL RAINFALL (mm)= 49.125
RUNOFF COEFFICIENT = 0.260

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

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| ADD HYD ( 0061)|
| 1 + 2 = 3 |
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          AREA      QPEAK      TPEAK      R.V.
          (ha)      (cms)      (hrs)      (mm)
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ID1= 1 ( 1100):  24.78  0.366  12.67  14.80
+ ID2= 2 ( 1101):   2.00  0.032  12.42  12.76
=====
ID = 3 ( 0061):  26.78  0.395  12.58  14.65

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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB
| STANDHYD ( 2100)| Area (ha)= 24.78

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|ID= 1 DT= 5.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 45.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	11.15	13.63
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	406.45	800.00
Mannings n	=	0.013	0.250

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90
0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60
2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60

3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60
4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Max.Eff.Inten.(mm/hr)=	54.10	12.34
over (min)	5.00	105.00
Storage Coeff. (min)=	6.15 (ii)	104.50 (ii)
Unit Hyd. Tpeak (min)=	5.00	105.00
Unit Hyd. peak (cms)=	0.19	0.01

TOTALS

PEAK FLOW (cms)=	1.58	0.19	1.619 (iii)
TIME TO PEAK (hrs)=	12.00	13.58	12.00
RUNOFF VOLUME (mm)=	48.12	24.53	35.15
TOTAL RAINFALL (mm)=	49.13	49.13	49.13
RUNOFF COEFFICIENT =	0.98	0.50	0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 85.0 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 |
 | NASHYD (1102) | Area (ha)= 2.00 Curve Number (CN)= 69.4
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
 |-----| U.H. Tp(hrs)= 0.49

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	0.50	6.083	1.00	12.083	7.11	18.08	0.90
0.167	0.50	6.167	1.00	12.167	7.10	18.17	0.90
0.250	0.50	6.250	1.00	12.250	7.10	18.25	0.90
0.333	0.50	6.333	1.00	12.333	7.10	18.33	0.90
0.417	0.50	6.417	1.00	12.417	7.10	18.42	0.90
0.500	0.50	6.500	1.00	12.500	7.10	18.50	0.90
0.583	0.50	6.583	1.00	12.583	3.60	18.58	0.90
0.667	0.50	6.667	1.00	12.667	3.60	18.67	0.90
0.750	0.50	6.750	1.00	12.750	3.60	18.75	0.90
0.833	0.50	6.833	1.00	12.833	3.60	18.83	0.90
0.917	0.50	6.917	1.00	12.917	3.60	18.92	0.90
1.000	0.50	7.000	1.00	13.000	3.60	19.00	0.90
1.083	0.50	7.083	1.00	13.083	0.70	19.08	0.90
1.167	0.50	7.167	1.00	13.167	0.70	19.17	0.90
1.250	0.50	7.250	1.00	13.250	0.70	19.25	0.90
1.333	0.50	7.333	1.00	13.333	0.70	19.33	0.90
1.417	0.50	7.417	1.00	13.417	0.70	19.42	0.90
1.500	0.50	7.500	1.00	13.500	0.70	19.50	0.90
1.583	0.50	7.583	1.00	13.583	4.00	19.58	0.90
1.667	0.50	7.667	1.00	13.667	4.00	19.67	0.90
1.750	0.50	7.750	1.00	13.750	4.00	19.75	0.90
1.833	0.50	7.833	1.00	13.833	4.00	19.83	0.90
1.917	0.50	7.917	1.00	13.917	4.00	19.92	0.90
2.000	0.50	8.000	1.00	14.000	4.00	20.00	0.90
2.083	0.60	8.083	1.30	14.083	1.50	20.08	0.60
2.167	0.60	8.167	1.30	14.167	1.50	20.17	0.60
2.250	0.60	8.250	1.30	14.250	1.50	20.25	0.60
2.333	0.60	8.333	1.30	14.333	1.50	20.33	0.60
2.417	0.60	8.417	1.30	14.417	1.50	20.42	0.60
2.500	0.60	8.500	1.30	14.500	1.50	20.50	0.60

2.583	0.60	8.583	1.30	14.583	1.50	20.58	0.60
2.667	0.60	8.667	1.30	14.667	1.50	20.67	0.60
2.750	0.60	8.750	1.30	14.750	1.50	20.75	0.60
2.833	0.60	8.833	1.30	14.833	1.50	20.83	0.60
2.917	0.60	8.917	1.30	14.917	1.50	20.92	0.60
3.000	0.60	9.000	1.30	15.000	1.50	21.00	0.60
3.083	0.60	9.083	1.60	15.083	1.50	21.08	0.60
3.167	0.60	9.167	1.60	15.167	1.50	21.17	0.60
3.250	0.60	9.250	1.60	15.250	1.50	21.25	0.60
3.333	0.60	9.333	1.60	15.333	1.50	21.33	0.60
3.417	0.60	9.417	1.60	15.417	1.50	21.42	0.60
3.500	0.60	9.500	1.60	15.500	1.50	21.50	0.60
3.583	0.60	9.583	1.80	15.583	1.50	21.58	0.60
3.667	0.60	9.667	1.80	15.667	1.50	21.67	0.60
3.750	0.60	9.750	1.80	15.750	1.50	21.75	0.60
3.833	0.60	9.833	1.80	15.833	1.50	21.83	0.60
3.917	0.60	9.917	1.80	15.917	1.50	21.92	0.60
4.000	0.60	10.000	1.80	16.000	1.50	22.00	0.60
4.083	0.80	10.083	2.30	16.083	0.90	22.08	0.60
4.167	0.80	10.167	2.30	16.167	0.90	22.17	0.60
4.250	0.80	10.250	2.30	16.250	0.90	22.25	0.60
4.333	0.80	10.333	2.30	16.333	0.90	22.33	0.60
4.417	0.80	10.417	2.30	16.417	0.90	22.42	0.60
4.500	0.80	10.500	2.30	16.500	0.90	22.50	0.60
4.583	0.80	10.583	3.00	16.583	0.90	22.58	0.60
4.667	0.80	10.667	3.00	16.667	0.90	22.67	0.60
4.750	0.80	10.750	3.00	16.750	0.90	22.75	0.60
4.833	0.80	10.833	3.00	16.833	0.90	22.83	0.60
4.917	0.80	10.917	3.00	16.917	0.90	22.92	0.60
5.000	0.80	11.000	3.00	17.000	0.90	23.00	0.60
5.083	0.80	11.083	4.70	17.083	0.90	23.08	0.60
5.167	0.80	11.167	4.70	17.167	0.90	23.17	0.60
5.250	0.80	11.250	4.70	17.250	0.90	23.25	0.60
5.333	0.80	11.333	4.70	17.333	0.90	23.33	0.60
5.417	0.80	11.417	4.70	17.417	0.90	23.42	0.60
5.500	0.80	11.500	4.70	17.500	0.90	23.50	0.60
5.583	0.80	11.583	20.40	17.583	0.90	23.58	0.60
5.667	0.80	11.667	20.40	17.667	0.90	23.67	0.60
5.750	0.80	11.750	20.40	17.750	0.90	23.75	0.60
5.833	0.80	11.833	54.10	17.833	0.90	23.83	0.60
5.917	0.80	11.917	54.10	17.917	0.90	23.92	0.60
6.000	0.80	12.000	54.10	18.000	0.90	24.00	0.60

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.032 (i)
 TIME TO PEAK (hrs)= 12.417
 RUNOFF VOLUME (mm)= 12.763
 TOTAL RAINFALL (mm)= 49.125
 RUNOFF COEFFICIENT = 0.260

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

```
-----
| ADD HYD ( 0063)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 1102):   2.00   0.032   12.42   12.76
+ ID2= 2 ( 2100):  24.78   1.619   12.00   35.15
=====
ID = 3 ( 0063):  26.78   1.636   12.00   33.48
=====
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
V  V  I  SSSSS  U  U  A  L          (v 6.2.2008)
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
```

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

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\5a82
2462-4c4e-4307-91db-71fe0bc038fb\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\5a82
2462-4c4e-4307-91db-71fe0bc038fb\scen

DATE: 04/05/2023

TIME: 11:32:32

USER:

COMMENTS: _____

```
-----
*****
** SIMULATION : 50-Year_12 hour AES          **
*****
```

```
-----
| READ STORM |      Filename: C:\Users\nnapper\AppData
|            |      ata\Local\Temp\
|            |      aa485c45-5c41-4f04-b9f7-20c929bcd42e\2a5c2dc1
| Ptotal= 89.50 mm |      Comments: 50-Year_12 hour AES
-----
```

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	11.60	3.00	13.40	6.00	2.70	9.00	0.00
0.17	11.60	3.17	13.40	6.17	2.70	9.17	0.00
0.33	11.60	3.33	13.40	6.33	2.70	9.33	0.00
0.50	11.60	3.50	13.40	6.50	2.70	9.50	0.00
0.67	11.60	3.67	13.40	6.67	2.70	9.67	0.00
0.83	11.60	3.83	13.40	6.83	2.70	9.83	0.00
1.00	23.30	4.00	12.50	7.00	0.90	10.00	0.00
1.17	23.30	4.17	12.50	7.17	0.90	10.17	0.00
1.33	23.30	4.33	12.50	7.33	0.90	10.33	0.00
1.50	23.30	4.50	12.50	7.50	0.90	10.50	0.00
1.67	23.30	4.67	12.50	7.67	0.90	10.67	0.00
1.83	23.30	4.83	12.50	7.83	0.90	10.83	0.00
2.00	17.90	5.00	7.20	8.00	0.00	11.00	0.00
2.17	17.90	5.17	7.20	8.17	0.00	11.17	0.00
2.33	17.90	5.33	7.20	8.33	0.00	11.33	0.00
2.50	17.90	5.50	7.20	8.50	0.00	11.50	0.00
2.67	17.90	5.67	7.20	8.67	0.00	11.67	0.00
2.83	17.90	5.83	7.20	8.83	0.00	11.83	0.00

```
-----
| CALIB      |
| NASHYD ( 2108)| Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|              | U.H. Tp(hrs)= 0.67
-----
```

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	11.60	3.083	13.40	6.083	2.70	9.08	0.00
0.167	11.60	3.167	13.40	6.167	2.70	9.17	0.00
0.250	11.60	3.250	13.40	6.250	2.70	9.25	0.00
0.333	11.60	3.333	13.40	6.333	2.70	9.33	0.00
0.417	11.60	3.417	13.40	6.417	2.70	9.42	0.00
0.500	11.60	3.500	13.40	6.500	2.70	9.50	0.00
0.583	11.60	3.583	13.40	6.583	2.70	9.58	0.00
0.667	11.60	3.667	13.40	6.667	2.70	9.67	0.00
0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00
1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.025 (i)

TIME TO PEAK (hrs)= 5.083

RUNOFF VOLUME (mm)= 28.521

TOTAL RAINFALL (mm)= 89.500

RUNOFF COEFFICIENT = 0.319

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

 | CALIB |
 | NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.16

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	11.60	3.083	13.40	6.083	2.70	9.08	0.00
0.167	11.60	3.167	13.40	6.167	2.70	9.17	0.00
0.250	11.60	3.250	13.40	6.250	2.70	9.25	0.00
0.333	11.60	3.333	13.40	6.333	2.70	9.33	0.00
0.417	11.60	3.417	13.40	6.417	2.70	9.42	0.00
0.500	11.60	3.500	13.40	6.500	2.70	9.50	0.00
0.583	11.60	3.583	13.40	6.583	2.70	9.58	0.00
0.667	11.60	3.667	13.40	6.667	2.70	9.67	0.00
0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00
1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.034 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 34.260
TOTAL RAINFALL (mm)= 89.500
RUNOFF COEFFICIENT = 0.383

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

| CALIB |
| NASHYD (2102) | Area (ha)= 3.87 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.20

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	11.60	3.083	13.40	6.083	2.70	9.08	0.00
0.167	11.60	3.167	13.40	6.167	2.70	9.17	0.00
0.250	11.60	3.250	13.40	6.250	2.70	9.25	0.00
0.333	11.60	3.333	13.40	6.333	2.70	9.33	0.00
0.417	11.60	3.417	13.40	6.417	2.70	9.42	0.00
0.500	11.60	3.500	13.40	6.500	2.70	9.50	0.00
0.583	11.60	3.583	13.40	6.583	2.70	9.58	0.00
0.667	11.60	3.667	13.40	6.667	2.70	9.67	0.00
0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00
1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00

2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.087 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 34.350
TOTAL RAINFALL (mm)= 89.500
RUNOFF COEFFICIENT = 0.384

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

| CALIB |
| NASHYD (2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.20

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	11.60	3.083	13.40	6.083	2.70	9.08	0.00
0.167	11.60	3.167	13.40	6.167	2.70	9.17	0.00
0.250	11.60	3.250	13.40	6.250	2.70	9.25	0.00
0.333	11.60	3.333	13.40	6.333	2.70	9.33	0.00
0.417	11.60	3.417	13.40	6.417	2.70	9.42	0.00
0.500	11.60	3.500	13.40	6.500	2.70	9.50	0.00
0.583	11.60	3.583	13.40	6.583	2.70	9.58	0.00
0.667	11.60	3.667	13.40	6.667	2.70	9.67	0.00
0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00

1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.079 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 34.350
TOTAL RAINFALL (mm)= 89.500
RUNOFF COEFFICIENT = 0.384

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

CALIB			
NASHYD (2104)	Area (ha)= 3.47	Curve Number (CN)= 67.1	
ID= 1 DT= 5.0 min	Ia (mm)= 4.60	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.27		

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	11.60	3.083	13.40	6.083	2.70	9.08	0.00
0.167	11.60	3.167	13.40	6.167	2.70	9.17	0.00
0.250	11.60	3.250	13.40	6.250	2.70	9.25	0.00
0.333	11.60	3.333	13.40	6.333	2.70	9.33	0.00
0.417	11.60	3.417	13.40	6.417	2.70	9.42	0.00
0.500	11.60	3.500	13.40	6.500	2.70	9.50	0.00

0.583	11.60	3.583	13.40	6.583	2.70	9.58	0.00
0.667	11.60	3.667	13.40	6.667	2.70	9.67	0.00
0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00
1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.076 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 34.395
TOTAL RAINFALL (mm)= 89.500
RUNOFF COEFFICIENT = 0.384

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

CALIB			
NASHYD (2105)	Area (ha)= 5.95	Curve Number (CN)= 67.1	
ID= 1 DT= 5.0 min	Ia (mm)= 4.60	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.37		

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	11.60	3.083	13.40	6.083	2.70	9.08	0.00
0.167	11.60	3.167	13.40	6.167	2.70	9.17	0.00
0.250	11.60	3.250	13.40	6.250	2.70	9.25	0.00
0.333	11.60	3.333	13.40	6.333	2.70	9.33	0.00
0.417	11.60	3.417	13.40	6.417	2.70	9.42	0.00
0.500	11.60	3.500	13.40	6.500	2.70	9.50	0.00
0.583	11.60	3.583	13.40	6.583	2.70	9.58	0.00
0.667	11.60	3.667	13.40	6.667	2.70	9.67	0.00
0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00
1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.127 (i)

TIME TO PEAK (hrs)= 3.083

RUNOFF VOLUME (mm)= 34.410

TOTAL RAINFALL (mm)= 89.500

RUNOFF COEFFICIENT = 0.384

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

 | CALIB |
 | STANDHYD (2106) | Area (ha)= 1.50
 | ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	11.60	3.083	13.40	6.083	2.70	9.08	0.00
0.167	11.60	3.167	13.40	6.167	2.70	9.17	0.00
0.250	11.60	3.250	13.40	6.250	2.70	9.25	0.00
0.333	11.60	3.333	13.40	6.333	2.70	9.33	0.00
0.417	11.60	3.417	13.40	6.417	2.70	9.42	0.00
0.500	11.60	3.500	13.40	6.500	2.70	9.50	0.00
0.583	11.60	3.583	13.40	6.583	2.70	9.58	0.00
0.667	11.60	3.667	13.40	6.667	2.70	9.67	0.00
0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00
1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00

2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 23.30 13.65
over (min) 5.00 50.00
Storage Coeff. (min)= 4.33 (ii) 47.29 (ii)
Unit Hyd. Tpeak (min)= 5.00 50.00
Unit Hyd. peak (cms)= 0.23 0.02

TOTALS
PEAK FLOW (cms)= 0.05 0.02 0.062 (iii)
TIME TO PEAK (hrs)= 2.00 3.50 2.00
RUNOFF VOLUME (mm)= 88.50 58.30 73.38
TOTAL RAINFALL (mm)= 89.50 89.50 89.50
RUNOFF COEFFICIENT = 0.99 0.65 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107) | Area (ha)= 3.47
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	11.60	3.083	13.40	6.083	2.70	9.08	0.00
0.167	11.60	3.167	13.40	6.167	2.70	9.17	0.00
0.250	11.60	3.250	13.40	6.250	2.70	9.25	0.00
0.333	11.60	3.333	13.40	6.333	2.70	9.33	0.00

0.417	11.60	3.417	13.40	6.417	2.70	9.42	0.00
0.500	11.60	3.500	13.40	6.500	2.70	9.50	0.00
0.583	11.60	3.583	13.40	6.583	2.70	9.58	0.00
0.667	11.60	3.667	13.40	6.667	2.70	9.67	0.00
0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00
1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 23.30 13.49
over (min) 5.00 95.00
Storage Coeff. (min)= 4.92 (ii) 93.87 (ii)
Unit Hyd. Tpeak (min)= 5.00 95.00
Unit Hyd. peak (cms)= 0.22 0.01

TOTALS
PEAK FLOW (cms)= 0.11 0.05 0.123 (iii)
TIME TO PEAK (hrs)= 2.00 5.17 2.00
RUNOFF VOLUME (mm)= 88.50 58.30 73.39
TOTAL RAINFALL (mm)= 89.50 89.50 89.50
RUNOFF COEFFICIENT = 0.99 0.65 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.49

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	11.60	3.083	13.40	6.083	2.70	9.08	0.00
0.167	11.60	3.167	13.40	6.167	2.70	9.17	0.00
0.250	11.60	3.250	13.40	6.250	2.70	9.25	0.00
0.333	11.60	3.333	13.40	6.333	2.70	9.33	0.00
0.417	11.60	3.417	13.40	6.417	2.70	9.42	0.00
0.500	11.60	3.500	13.40	6.500	2.70	9.50	0.00
0.583	11.60	3.583	13.40	6.583	2.70	9.58	0.00
0.667	11.60	3.667	13.40	6.667	2.70	9.67	0.00
0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00
1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00

2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.045 (i)
TIME TO PEAK (hrs)= 3.250
RUNOFF VOLUME (mm)= 36.741
TOTAL RAINFALL (mm)= 89.500
RUNOFF COEFFICIENT = 0.411

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

| ADD HYD (0013) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (1103): 2.00 0.045 3.25 36.74
+ ID2= 2 (2101): 1.52 0.034 3.00 34.26
=====

ID = 3 (0013): 3.52 0.078 3.00 35.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0013) |
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0013): 3.52 0.078 3.00 35.67
+ ID2= 2 (2102): 3.87 0.087 3.00 34.35
=====

ID = 1 (0013): 7.39 0.164 3.00 34.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0013) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0013): 7.39 0.164 3.00 34.98
+ ID2= 2 (2103): 3.55 0.079 3.00 34.35
=====

ID = 3 (0013): 10.94 0.244 3.00 34.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  10.94  0.244  3.00  34.77
+ ID2= 2 ( 2104):   3.47  0.076  3.08  34.40
=====
ID = 1 ( 0013):   14.41  0.320  3.00  34.68

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):  14.41  0.320  3.00  34.68
+ ID2= 2 ( 2105):   5.95  0.127  3.08  34.41
=====
ID = 3 ( 0013):  20.36  0.445  3.00  34.60

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  20.36  0.445  3.00  34.60
+ ID2= 2 ( 2106):   1.50  0.062  2.00  73.38
=====
ID = 1 ( 0013):  21.86  0.506  3.00  37.26

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 0013):  21.86  0.506  3.00  37.26
+ ID2= 2 ( 2107):   3.47  0.123  2.00  73.39
=====
ID = 3 ( 0013):  25.33  0.625  3.00  42.21

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):  25.33  0.625  3.00  42.21
+ ID2= 2 ( 2108):   1.46  0.025  5.08  28.52
=====
ID = 1 ( 0013):  26.79  0.646  3.00  41.47

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| RESERVOIR( 0001)|
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
-----
          OVERFLOW IS OFF
          OUTFLOW   STORAGE   OUTFLOW   STORAGE
          (cms)   (ha.m.)   (cms)   (ha.m.)
          0.0000   0.0000   1.1450   0.1930
          0.3370   0.0770   1.3850   0.2270
          0.6240   0.1200   1.6330   0.2640
          0.8460   0.1510   0.0000   0.0000
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
INFLOW : ID= 2 ( 0013)  26.790  0.646  3.00  41.47
OUTFLOW: ID= 1 ( 0001)  26.790  0.597  3.25  41.47

```

PEAK FLOW REDUCTION [Qout/Qin](%)= 92.44
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.1161

```

-----
| CALIB
| NASHYD ( 1100)|
| ID= 1 DT= 5.0 min |
-----
          Area (ha)= 24.78   Curve Number (CN)= 75.7
          Ia (mm)= 6.20     # of Linear Res.(N)= 3.00
          U.H. Tp(hrs)= 0.70

```

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  11.60  3.083  13.40  6.083  2.70  9.08  0.00
0.167  11.60  3.167  13.40  6.167  2.70  9.17  0.00
0.250  11.60  3.250  13.40  6.250  2.70  9.25  0.00
0.333  11.60  3.333  13.40  6.333  2.70  9.33  0.00
0.417  11.60  3.417  13.40  6.417  2.70  9.42  0.00
0.500  11.60  3.500  13.40  6.500  2.70  9.50  0.00
0.583  11.60  3.583  13.40  6.583  2.70  9.58  0.00
0.667  11.60  3.667  13.40  6.667  2.70  9.67  0.00

```

0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00
1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.613 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 42.095
TOTAL RAINFALL (mm)= 89.500
RUNOFF COEFFICIENT = 0.470

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

| CALIB |
| NASHYD (1101) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.49

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	11.60	3.083	13.40	6.083	2.70	9.08	0.00
0.167	11.60	3.167	13.40	6.167	2.70	9.17	0.00
0.250	11.60	3.250	13.40	6.250	2.70	9.25	0.00
0.333	11.60	3.333	13.40	6.333	2.70	9.33	0.00
0.417	11.60	3.417	13.40	6.417	2.70	9.42	0.00
0.500	11.60	3.500	13.40	6.500	2.70	9.50	0.00
0.583	11.60	3.583	13.40	6.583	2.70	9.58	0.00
0.667	11.60	3.667	13.40	6.667	2.70	9.67	0.00
0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00
1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.045 (i)
TIME TO PEAK (hrs)= 3.250
RUNOFF VOLUME (mm)= 36.741
TOTAL RAINFALL (mm)= 89.500
RUNOFF COEFFICIENT = 0.411

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

```

-----
| ADD HYD ( 0061) |
| 1 + 2 = 3 |
-----

```

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.78	0.613	3.58	42.10
+ ID2= 2 (1101):	2.00	0.045	3.25	36.74
=====				
ID = 3 (0061):	26.78	0.656	3.58	41.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| CALIB |
| STANDHYD ( 2100) |
| ID= 1 DT= 5.0 min |
-----

```

Area (ha)=	24.78		
Total Imp(%)=	45.00	Dir. Conn.(%)=	45.00

	IMPERVIOUS (ha)=	PERVIOUS (i) 13.63
Surface Area	11.15	
Dep. Storage	1.00	1.50
Average Slope	2.00	2.00
Length	406.45	800.00
Mannings n	0.013	0.250

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  11.60 | 3.083  13.40 | 6.083  2.70 | 9.08  0.00
0.167  11.60 | 3.167  13.40 | 6.167  2.70 | 9.17  0.00
0.250  11.60 | 3.250  13.40 | 6.250  2.70 | 9.25  0.00
0.333  11.60 | 3.333  13.40 | 6.333  2.70 | 9.33  0.00
0.417  11.60 | 3.417  13.40 | 6.417  2.70 | 9.42  0.00
0.500  11.60 | 3.500  13.40 | 6.500  2.70 | 9.50  0.00
0.583  11.60 | 3.583  13.40 | 6.583  2.70 | 9.58  0.00
0.667  11.60 | 3.667  13.40 | 6.667  2.70 | 9.67  0.00
0.750  11.60 | 3.750  13.40 | 6.750  2.70 | 9.75  0.00
0.833  11.60 | 3.833  13.40 | 6.833  2.70 | 9.83  0.00
0.917  11.60 | 3.917  13.40 | 6.917  2.70 | 9.92  0.00
1.000  11.60 | 4.000  13.40 | 7.000  2.70 | 10.00 0.00
1.083  23.30 | 4.083  12.50 | 7.083  0.90 | 10.08 0.00
1.167  23.30 | 4.167  12.50 | 7.167  0.90 | 10.17 0.00
1.250  23.30 | 4.250  12.50 | 7.250  0.90 | 10.25 0.00
1.333  23.30 | 4.333  12.50 | 7.333  0.90 | 10.33 0.00
1.417  23.30 | 4.417  12.50 | 7.417  0.90 | 10.42 0.00
1.500  23.30 | 4.500  12.50 | 7.500  0.90 | 10.50 0.00
1.583  23.30 | 4.583  12.50 | 7.583  0.90 | 10.58 0.00
1.667  23.30 | 4.667  12.50 | 7.667  0.90 | 10.67 0.00

```

1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)=	23.30	13.49
over (min)	10.00	105.00
Storage Coeff. (min)=	8.62 (ii)	103.53 (ii)
Unit Hyd. Tpeak (min)=	10.00	105.00
Unit Hyd. peak (cms)=	0.12	0.01

TOTALS

PEAK FLOW (cms)=	0.72	0.38	0.793 (iii)
TIME TO PEAK (hrs)=	2.00	5.33	2.00
RUNOFF VOLUME (mm)=	88.50	58.30	71.89
TOTAL RAINFALL (mm)=	89.50	89.50	89.50
RUNOFF COEFFICIENT =	0.99	0.65	0.80

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |

```

NASHYD (1102)	Area (ha)=	2.00	Curve Number (CN)=	69.4
ID= 1 DT= 5.0 min	Ia (mm)=	4.40	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=		0.49		

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  11.60 | 3.083  13.40 | 6.083  2.70 | 9.08  0.00

```

0.167	11.60	3.167	13.40	6.167	2.70	9.17	0.00
0.250	11.60	3.250	13.40	6.250	2.70	9.25	0.00
0.333	11.60	3.333	13.40	6.333	2.70	9.33	0.00
0.417	11.60	3.417	13.40	6.417	2.70	9.42	0.00
0.500	11.60	3.500	13.40	6.500	2.70	9.50	0.00
0.583	11.60	3.583	13.40	6.583	2.70	9.58	0.00
0.667	11.60	3.667	13.40	6.667	2.70	9.67	0.00
0.750	11.60	3.750	13.40	6.750	2.70	9.75	0.00
0.833	11.60	3.833	13.40	6.833	2.70	9.83	0.00
0.917	11.60	3.917	13.40	6.917	2.70	9.92	0.00
1.000	11.60	4.000	13.40	7.000	2.70	10.00	0.00
1.083	23.30	4.083	12.50	7.083	0.90	10.08	0.00
1.167	23.30	4.167	12.50	7.167	0.90	10.17	0.00
1.250	23.30	4.250	12.50	7.250	0.90	10.25	0.00
1.333	23.30	4.333	12.50	7.333	0.90	10.33	0.00
1.417	23.30	4.417	12.50	7.417	0.90	10.42	0.00
1.500	23.30	4.500	12.50	7.500	0.90	10.50	0.00
1.583	23.30	4.583	12.50	7.583	0.90	10.58	0.00
1.667	23.30	4.667	12.50	7.667	0.90	10.67	0.00
1.750	23.30	4.750	12.50	7.750	0.90	10.75	0.00
1.833	23.30	4.833	12.50	7.833	0.90	10.83	0.00
1.917	23.30	4.917	12.50	7.917	0.90	10.92	0.00
2.000	23.30	5.000	12.50	8.000	0.90	11.00	0.00
2.083	17.90	5.083	7.20	8.083	0.00	11.08	0.00
2.167	17.90	5.167	7.20	8.167	0.00	11.17	0.00
2.250	17.90	5.250	7.20	8.250	0.00	11.25	0.00
2.333	17.90	5.333	7.20	8.333	0.00	11.33	0.00
2.417	17.90	5.417	7.20	8.417	0.00	11.42	0.00
2.500	17.90	5.500	7.20	8.500	0.00	11.50	0.00
2.583	17.90	5.583	7.20	8.583	0.00	11.58	0.00
2.667	17.90	5.667	7.20	8.667	0.00	11.67	0.00
2.750	17.90	5.750	7.20	8.750	0.00	11.75	0.00
2.833	17.90	5.833	7.20	8.833	0.00	11.83	0.00
2.917	17.90	5.917	7.20	8.917	0.00	11.92	0.00
3.000	17.90	6.000	7.20	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.045 (i)

TIME TO PEAK (hrs)= 3.250

RUNOFF VOLUME (mm)= 36.741

TOTAL RAINFALL (mm)= 89.500

RUNOFF COEFFICIENT = 0.411

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

| ADD HYD (0063)|

1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
-----	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1102):	2.00	0.045	3.25	36.74
+ ID2= 2 (2100):	24.78	0.793	2.00	71.89
=====				
ID = 3 (0063):	26.78	0.823	3.00	69.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.2.2008)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
V V I SSSSS UUUUU A A LLLLL

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

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\f2ce
6718-a8c4-4c29-a32c-92f95a2f9db2\scen

Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\f2ce
6718-a8c4-4c29-a32c-92f95a2f9db2\scen

DATE: 04/05/2023

TIME: 11:32:34

USER:

COMMENTS: _____

** SIMULATION : 50-Year_12 hour SCS **

| READ STORM |
Ptotal= 89.48 mm
Filename: C:\Users\nnapper\AppData
Local\Temp\
aa485c45-5c41-4f04-b9f7-20c929bcd42e\7d184b4c
Comments: 50-Year_12 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	2.20	3.00	3.60	6.00	16.10	9.00	3.10
0.25	2.20	3.25	3.60	6.25	16.10	9.25	3.10
0.50	2.20	3.50	3.60	6.50	7.20	9.50	3.10
0.75	2.20	3.75	3.60	6.75	7.20	9.75	3.10
1.00	2.20	4.00	5.40	7.00	5.40	10.00	1.80
1.25	2.20	4.25	5.40	7.25	5.40	10.25	1.80
1.50	2.20	4.50	7.20	7.50	5.40	10.50	1.80
1.75	2.20	4.75	7.20	7.75	5.40	10.75	1.80
2.00	2.70	5.00	10.70	8.00	3.10	11.00	1.80
2.25	2.70	5.25	10.70	8.25	3.10	11.25	1.80
2.50	2.70	5.50	43.00	8.50	3.10	11.50	1.80
2.75	2.70	5.75	118.10	8.75	3.10	11.75	1.80

| CALIB |
| NASHYD (2108) | Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.67

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	2.20	3.083	3.60	6.083	16.10	9.08	3.10
0.167	2.20	3.167	3.60	6.167	16.10	9.17	3.10
0.250	2.20	3.250	3.60	6.250	16.10	9.25	3.10
0.333	2.20	3.333	3.60	6.333	16.10	9.33	3.10
0.417	2.20	3.417	3.60	6.417	16.10	9.42	3.10
0.500	2.20	3.500	3.60	6.500	16.10	9.50	3.10
0.583	2.20	3.583	3.60	6.583	7.20	9.58	3.10
0.667	2.20	3.667	3.60	6.667	7.20	9.67	3.10
0.750	2.20	3.750	3.60	6.750	7.20	9.75	3.10

0.833	2.20	3.833	3.60	6.833	7.20	9.83	3.10
0.917	2.20	3.917	3.60	6.917	7.20	9.92	3.10
1.000	2.20	4.000	3.60	7.000	7.20	10.00	3.10
1.083	2.20	4.083	5.40	7.083	5.40	10.08	1.80
1.167	2.20	4.167	5.40	7.167	5.40	10.17	1.80
1.250	2.20	4.250	5.40	7.250	5.40	10.25	1.80
1.333	2.20	4.333	5.40	7.333	5.40	10.33	1.80
1.417	2.20	4.417	5.40	7.417	5.40	10.42	1.80
1.500	2.20	4.500	5.40	7.500	5.40	10.50	1.80
1.583	2.20	4.583	7.20	7.583	5.40	10.58	1.80
1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80
1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80
2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.052 (i)
TIME TO PEAK (hrs)= 6.583
RUNOFF VOLUME (mm)= 28.507
TOTAL RAINFALL (mm)= 89.475
RUNOFF COEFFICIENT = 0.319

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

| CALIB |
| NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.16

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	2.20	3.083	3.60	6.083	16.10	9.08	3.10
0.167	2.20	3.167	3.60	6.167	16.10	9.17	3.10
0.250	2.20	3.250	3.60	6.250	16.10	9.25	3.10
0.333	2.20	3.333	3.60	6.333	16.10	9.33	3.10
0.417	2.20	3.417	3.60	6.417	16.10	9.42	3.10
0.500	2.20	3.500	3.60	6.500	16.10	9.50	3.10
0.583	2.20	3.583	3.60	6.583	7.20	9.58	3.10
0.667	2.20	3.667	3.60	6.667	7.20	9.67	3.10
0.750	2.20	3.750	3.60	6.750	7.20	9.75	3.10
0.833	2.20	3.833	3.60	6.833	7.20	9.83	3.10
0.917	2.20	3.917	3.60	6.917	7.20	9.92	3.10
1.000	2.20	4.000	3.60	7.000	7.20	10.00	3.10
1.083	2.20	4.083	5.40	7.083	5.40	10.08	1.80
1.167	2.20	4.167	5.40	7.167	5.40	10.17	1.80
1.250	2.20	4.250	5.40	7.250	5.40	10.25	1.80
1.333	2.20	4.333	5.40	7.333	5.40	10.33	1.80
1.417	2.20	4.417	5.40	7.417	5.40	10.42	1.80
1.500	2.20	4.500	5.40	7.500	5.40	10.50	1.80
1.583	2.20	4.583	7.20	7.583	5.40	10.58	1.80
1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80
1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80
2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.170 (i)
TIME TO PEAK (hrs)= 6.000
RUNOFF VOLUME (mm)= 34.244
TOTAL RAINFALL (mm)= 89.475
RUNOFF COEFFICIENT = 0.383

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

CALIB
NASHYD (2102) | Area (ha)= 3.87 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.20

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	2.20	3.083	3.60	6.083	16.10	9.08	3.10
0.167	2.20	3.167	3.60	6.167	16.10	9.17	3.10
0.250	2.20	3.250	3.60	6.250	16.10	9.25	3.10
0.333	2.20	3.333	3.60	6.333	16.10	9.33	3.10
0.417	2.20	3.417	3.60	6.417	16.10	9.42	3.10
0.500	2.20	3.500	3.60	6.500	16.10	9.50	3.10
0.583	2.20	3.583	3.60	6.583	7.20	9.58	3.10
0.667	2.20	3.667	3.60	6.667	7.20	9.67	3.10
0.750	2.20	3.750	3.60	6.750	7.20	9.75	3.10
0.833	2.20	3.833	3.60	6.833	7.20	9.83	3.10
0.917	2.20	3.917	3.60	6.917	7.20	9.92	3.10
1.000	2.20	4.000	3.60	7.000	7.20	10.00	3.10
1.083	2.20	4.083	5.40	7.083	5.40	10.08	1.80
1.167	2.20	4.167	5.40	7.167	5.40	10.17	1.80
1.250	2.20	4.250	5.40	7.250	5.40	10.25	1.80
1.333	2.20	4.333	5.40	7.333	5.40	10.33	1.80
1.417	2.20	4.417	5.40	7.417	5.40	10.42	1.80
1.500	2.20	4.500	5.40	7.500	5.40	10.50	1.80
1.583	2.20	4.583	7.20	7.583	5.40	10.58	1.80
1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80
1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80
2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.386 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 34.334
TOTAL RAINFALL (mm)= 89.475
RUNOFF COEFFICIENT = 0.384

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

| CALIB |
| NASHYD (2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.20

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 2.20 3.083 3.60 6.083 16.10 9.08 3.10
0.167 2.20 3.167 3.60 6.167 16.10 9.17 3.10
0.250 2.20 3.250 3.60 6.250 16.10 9.25 3.10
0.333 2.20 3.333 3.60 6.333 16.10 9.33 3.10
0.417 2.20 3.417 3.60 6.417 16.10 9.42 3.10
0.500 2.20 3.500 3.60 6.500 16.10 9.50 3.10
0.583 2.20 3.583 3.60 6.583 7.20 9.58 3.10
0.667 2.20 3.667 3.60 6.667 7.20 9.67 3.10
0.750 2.20 3.750 3.60 6.750 7.20 9.75 3.10
0.833 2.20 3.833 3.60 6.833 7.20 9.83 3.10
0.917 2.20 3.917 3.60 6.917 7.20 9.92 3.10
1.000 2.20 4.000 3.60 7.000 7.20 10.00 3.10
1.083 2.20 4.083 5.40 7.083 5.40 10.08 1.80
1.167 2.20 4.167 5.40 7.167 5.40 10.17 1.80
1.250 2.20 4.250 5.40 7.250 5.40 10.25 1.80
1.333 2.20 4.333 5.40 7.333 5.40 10.33 1.80
1.417 2.20 4.417 5.40 7.417 5.40 10.42 1.80
1.500 2.20 4.500 5.40 7.500 5.40 10.50 1.80
1.583 2.20 4.583 7.20 7.583 5.40 10.58 1.80
1.667 2.20 4.667 7.20 7.667 5.40 10.67 1.80
1.750 2.20 4.750 7.20 7.750 5.40 10.75 1.80
1.833 2.20 4.833 7.20 7.833 5.40 10.83 1.80
1.917 2.20 4.917 7.20 7.917 5.40 10.92 1.80
2.000 2.20 5.000 7.20 8.000 5.40 11.00 1.80
2.083 2.70 5.083 10.70 8.083 3.10 11.08 1.80
2.167 2.70 5.167 10.70 8.167 3.10 11.17 1.80
2.250 2.70 5.250 10.70 8.250 3.10 11.25 1.80
2.333 2.70 5.333 10.70 8.333 3.10 11.33 1.80
2.417 2.70 5.417 10.70 8.417 3.10 11.42 1.80

2.500 2.70 5.500 10.70 8.500 3.10 11.50 1.80
2.583 2.70 5.583 43.00 8.583 3.10 11.58 1.80
2.667 2.70 5.667 43.00 8.667 3.10 11.67 1.80
2.750 2.70 5.750 43.00 8.750 3.10 11.75 1.80
2.833 2.70 5.833 118.10 8.833 3.10 11.83 1.80
2.917 2.70 5.917 118.10 8.917 3.10 11.92 1.80
3.000 2.70 6.000 118.10 9.000 3.10 12.00 1.80

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.354 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 34.334
TOTAL RAINFALL (mm)= 89.475
RUNOFF COEFFICIENT = 0.384

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

| CALIB |
| NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.27

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 2.20 3.083 3.60 6.083 16.10 9.08 3.10
0.167 2.20 3.167 3.60 6.167 16.10 9.17 3.10
0.250 2.20 3.250 3.60 6.250 16.10 9.25 3.10
0.333 2.20 3.333 3.60 6.333 16.10 9.33 3.10
0.417 2.20 3.417 3.60 6.417 16.10 9.42 3.10
0.500 2.20 3.500 3.60 6.500 16.10 9.50 3.10
0.583 2.20 3.583 3.60 6.583 7.20 9.58 3.10
0.667 2.20 3.667 3.60 6.667 7.20 9.67 3.10
0.750 2.20 3.750 3.60 6.750 7.20 9.75 3.10
0.833 2.20 3.833 3.60 6.833 7.20 9.83 3.10
0.917 2.20 3.917 3.60 6.917 7.20 9.92 3.10
1.000 2.20 4.000 3.60 7.000 7.20 10.00 3.10
1.083 2.20 4.083 5.40 7.083 5.40 10.08 1.80
1.167 2.20 4.167 5.40 7.167 5.40 10.17 1.80
1.250 2.20 4.250 5.40 7.250 5.40 10.25 1.80
1.333 2.20 4.333 5.40 7.333 5.40 10.33 1.80
1.417 2.20 4.417 5.40 7.417 5.40 10.42 1.80
1.500 2.20 4.500 5.40 7.500 5.40 10.50 1.80
1.583 2.20 4.583 7.20 7.583 5.40 10.58 1.80

1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80
1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80
2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.283 (i)
TIME TO PEAK (hrs)= 6.167
RUNOFF VOLUME (mm)= 34.379
TOTAL RAINFALL (mm)= 89.475
RUNOFF COEFFICIENT = 0.384

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

CALIB			
NASHYD (2105)	Area (ha)= 5.95	Curve Number (CN)= 67.1	
ID= 1 DT= 5.0 min	Ia (mm)= 4.60	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.37		

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	2.20	3.083	3.60	6.083	16.10	9.08	3.10
0.167	2.20	3.167	3.60	6.167	16.10	9.17	3.10
0.250	2.20	3.250	3.60	6.250	16.10	9.25	3.10
0.333	2.20	3.333	3.60	6.333	16.10	9.33	3.10
0.417	2.20	3.417	3.60	6.417	16.10	9.42	3.10
0.500	2.20	3.500	3.60	6.500	16.10	9.50	3.10
0.583	2.20	3.583	3.60	6.583	7.20	9.58	3.10
0.667	2.20	3.667	3.60	6.667	7.20	9.67	3.10
0.750	2.20	3.750	3.60	6.750	7.20	9.75	3.10

0.833	2.20	3.833	3.60	6.833	7.20	9.83	3.10
0.917	2.20	3.917	3.60	6.917	7.20	9.92	3.10
1.000	2.20	4.000	3.60	7.000	7.20	10.00	3.10
1.083	2.20	4.083	5.40	7.083	5.40	10.08	1.80
1.167	2.20	4.167	5.40	7.167	5.40	10.17	1.80
1.250	2.20	4.250	5.40	7.250	5.40	10.25	1.80
1.333	2.20	4.333	5.40	7.333	5.40	10.33	1.80
1.417	2.20	4.417	5.40	7.417	5.40	10.42	1.80
1.500	2.20	4.500	5.40	7.500	5.40	10.50	1.80
1.583	2.20	4.583	7.20	7.583	5.40	10.58	1.80
1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80
1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80
2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.393 (i)
TIME TO PEAK (hrs)= 6.250
RUNOFF VOLUME (mm)= 34.394
TOTAL RAINFALL (mm)= 89.475
RUNOFF COEFFICIENT = 0.384

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

CALIB			
STANDHYD (2106)	Area (ha)= 1.50		
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00	Dir. Conn.(%)= 50.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	2.20	3.083	3.60	6.083	16.10	9.08	3.10
0.167	2.20	3.167	3.60	6.167	16.10	9.17	3.10
0.250	2.20	3.250	3.60	6.250	16.10	9.25	3.10
0.333	2.20	3.333	3.60	6.333	16.10	9.33	3.10
0.417	2.20	3.417	3.60	6.417	16.10	9.42	3.10
0.500	2.20	3.500	3.60	6.500	16.10	9.50	3.10
0.583	2.20	3.583	3.60	6.583	7.20	9.58	3.10
0.667	2.20	3.667	3.60	6.667	7.20	9.67	3.10
0.750	2.20	3.750	3.60	6.750	7.20	9.75	3.10
0.833	2.20	3.833	3.60	6.833	7.20	9.83	3.10
0.917	2.20	3.917	3.60	6.917	7.20	9.92	3.10
1.000	2.20	4.000	3.60	7.000	7.20	10.00	3.10
1.083	2.20	4.083	5.40	7.083	5.40	10.08	1.80
1.167	2.20	4.167	5.40	7.167	5.40	10.17	1.80
1.250	2.20	4.250	5.40	7.250	5.40	10.25	1.80
1.333	2.20	4.333	5.40	7.333	5.40	10.33	1.80
1.417	2.20	4.417	5.40	7.417	5.40	10.42	1.80
1.500	2.20	4.500	5.40	7.500	5.40	10.50	1.80
1.583	2.20	4.583	7.20	7.583	5.40	10.58	1.80
1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80
1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80
2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Max.Eff.Inten.(mm/hr)= 118.10 63.95
over (min) 5.00 30.00
Storage Coeff. (min)= 2.26 (ii) 25.43 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.30 0.04

TOTALS

PEAK FLOW (cms)= 0.25 0.08 0.290 (iii)
TIME TO PEAK (hrs)= 6.00 6.33 6.00
RUNOFF VOLUME (mm)= 88.47 58.28 73.37
TOTAL RAINFALL (mm)= 89.47 89.47 89.47
RUNOFF COEFFICIENT = 0.99 0.65 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107)
ID= 1 DT= 5.0 min

Area (ha)= 3.47
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.74 1.74
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.82 1.82
Length (m)= 152.10 685.00
Mannings n = 0.013 0.250

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	2.20	3.083	3.60	6.083	16.10	9.08	3.10
0.167	2.20	3.167	3.60	6.167	16.10	9.17	3.10
0.250	2.20	3.250	3.60	6.250	16.10	9.25	3.10
0.333	2.20	3.333	3.60	6.333	16.10	9.33	3.10
0.417	2.20	3.417	3.60	6.417	16.10	9.42	3.10
0.500	2.20	3.500	3.60	6.500	16.10	9.50	3.10
0.583	2.20	3.583	3.60	6.583	7.20	9.58	3.10
0.667	2.20	3.667	3.60	6.667	7.20	9.67	3.10
0.750	2.20	3.750	3.60	6.750	7.20	9.75	3.10
0.833	2.20	3.833	3.60	6.833	7.20	9.83	3.10
0.917	2.20	3.917	3.60	6.917	7.20	9.92	3.10
1.000	2.20	4.000	3.60	7.000	7.20	10.00	3.10
1.083	2.20	4.083	5.40	7.083	5.40	10.08	1.80
1.167	2.20	4.167	5.40	7.167	5.40	10.17	1.80
1.250	2.20	4.250	5.40	7.250	5.40	10.25	1.80
1.333	2.20	4.333	5.40	7.333	5.40	10.33	1.80
1.417	2.20	4.417	5.40	7.417	5.40	10.42	1.80

1.500	2.20	4.500	5.40	7.500	5.40	10.50	1.80
1.583	2.20	4.583	7.20	7.583	5.40	10.58	1.80
1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80
1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80
2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Max.Eff.Inten.(mm/hr)= 118.10 35.36
over (min) 5.00 65.00
Storage Coeff. (min)= 2.57 (ii) 63.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 65.00
Unit Hyd. peak (cms)= 0.29 0.02

TOTALS

PEAK FLOW (cms)= 0.57 0.10 0.598 (iii)
TIME TO PEAK (hrs)= 6.00 6.92 6.00
RUNOFF VOLUME (mm)= 88.47 58.28 73.37
TOTAL RAINFALL (mm)= 89.47 89.47 89.47
RUNOFF COEFFICIENT = 0.99 0.65 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.49

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	2.20	3.083	3.60	6.083	16.10	9.08	3.10
0.167	2.20	3.167	3.60	6.167	16.10	9.17	3.10
0.250	2.20	3.250	3.60	6.250	16.10	9.25	3.10
0.333	2.20	3.333	3.60	6.333	16.10	9.33	3.10
0.417	2.20	3.417	3.60	6.417	16.10	9.42	3.10
0.500	2.20	3.500	3.60	6.500	16.10	9.50	3.10
0.583	2.20	3.583	3.60	6.583	7.20	9.58	3.10
0.667	2.20	3.667	3.60	6.667	7.20	9.67	3.10
0.750	2.20	3.750	3.60	6.750	7.20	9.75	3.10
0.833	2.20	3.833	3.60	6.833	7.20	9.83	3.10
0.917	2.20	3.917	3.60	6.917	7.20	9.92	3.10
1.000	2.20	4.000	3.60	7.000	7.20	10.00	3.10
1.083	2.20	4.083	5.40	7.083	5.40	10.08	1.80
1.167	2.20	4.167	5.40	7.167	5.40	10.17	1.80
1.250	2.20	4.250	5.40	7.250	5.40	10.25	1.80
1.333	2.20	4.333	5.40	7.333	5.40	10.33	1.80
1.417	2.20	4.417	5.40	7.417	5.40	10.42	1.80
1.500	2.20	4.500	5.40	7.500	5.40	10.50	1.80
1.583	2.20	4.583	7.20	7.583	5.40	10.58	1.80
1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80
1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80
2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.116 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 36.724
TOTAL RAINFALL (mm)= 89.475
RUNOFF COEFFICIENT = 0.410

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

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 1103): 2.00 0.116 6.42 36.72
+ ID2= 2 ( 2101): 1.52 0.170 6.00 34.24
=====
ID = 3 ( 0013): 3.52 0.246 6.08 35.65

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
ID1= 3 ( 0013): 3.52 0.246 6.08 35.65
+ ID2= 2 ( 2102): 3.87 0.386 6.08 34.33
=====
ID = 1 ( 0013): 7.39 0.631 6.08 34.96

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 0013): 7.39 0.631 6.08 34.96
+ ID2= 2 ( 2103): 3.55 0.354 6.08 34.33
=====
ID = 3 ( 0013): 10.94 0.985 6.08 34.76

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
ID1= 3 ( 0013): 10.94 0.985 6.08 34.76
+ ID2= 2 ( 2104): 3.47 0.283 6.17 34.38
=====
ID = 1 ( 0013): 14.41 1.265 6.08 34.67

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 0013): 14.41 1.265 6.08 34.67
+ ID2= 2 ( 2105): 5.95 0.393 6.25 34.39
=====
ID = 3 ( 0013): 20.36 1.604 6.08 34.59

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
ID1= 3 ( 0013): 20.36 1.604 6.08 34.59
+ ID2= 2 ( 2106): 1.50 0.290 6.00 73.37
=====
ID = 1 ( 0013): 21.86 1.717 6.08 37.25

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 0013): 21.86 1.717 6.08 37.25
+ ID2= 2 ( 2107): 3.47 0.598 6.00 73.37
=====
ID = 3 ( 0013): 25.33 2.296 6.00 42.20

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
ID1= 3 ( 0013): 25.33 2.296 6.00 42.20
+ ID2= 2 ( 2108): 1.46 0.052 6.58 28.51
=====
ID = 1 ( 0013): 26.79 2.315 6.00 41.45

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

| RESERVOIR( 0001)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |

```

DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	1.1450	0.1930
	0.3370	0.0770	1.3850	0.2270
	0.6240	0.1200	1.6330	0.2640
	0.8460	0.1510	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0013)	26.790	2.315	6.00	41.45
OUTFLOW: ID= 1 (0001)	26.790	1.387	6.42	41.45

PEAK FLOW REDUCTION [Qout/Qin](%)= 59.89
 TIME SHIFT OF PEAK FLOW (min)= 25.00
 MAXIMUM STORAGE USED (ha.m.)= 0.2282

CALIB	Area (ha)=	Curve Number (CN)=
NASHYD (1100)	24.78	75.7
ID= 1 DT= 5.0 min	Ia (mm)= 6.20	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.70	

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	2.20	3.083	3.60	6.083	16.10	9.08	3.10
0.167	2.20	3.167	3.60	6.167	16.10	9.17	3.10
0.250	2.20	3.250	3.60	6.250	16.10	9.25	3.10
0.333	2.20	3.333	3.60	6.333	16.10	9.33	3.10
0.417	2.20	3.417	3.60	6.417	16.10	9.42	3.10
0.500	2.20	3.500	3.60	6.500	16.10	9.50	3.10
0.583	2.20	3.583	3.60	6.583	7.20	9.58	3.10
0.667	2.20	3.667	3.60	6.667	7.20	9.67	3.10
0.750	2.20	3.750	3.60	6.750	7.20	9.75	3.10
0.833	2.20	3.833	3.60	6.833	7.20	9.83	3.10
0.917	2.20	3.917	3.60	6.917	7.20	9.92	3.10
1.000	2.20	4.000	3.60	7.000	7.20	10.00	3.10
1.083	2.20	4.083	5.40	7.083	5.40	10.08	1.80
1.167	2.20	4.167	5.40	7.167	5.40	10.17	1.80
1.250	2.20	4.250	5.40	7.250	5.40	10.25	1.80
1.333	2.20	4.333	5.40	7.333	5.40	10.33	1.80
1.417	2.20	4.417	5.40	7.417	5.40	10.42	1.80
1.500	2.20	4.500	5.40	7.500	5.40	10.50	1.80
1.583	2.20	4.583	7.20	7.583	5.40	10.58	1.80
1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80

1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80
2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 1.298 (i)
 TIME TO PEAK (hrs)= 6.667
 RUNOFF VOLUME (mm)= 42.076
 TOTAL RAINFALL (mm)= 89.475
 RUNOFF COEFFICIENT = 0.470

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

CALIB	Area (ha)=	Curve Number (CN)=
NASHYD (1101)	2.00	69.4
ID= 1 DT= 5.0 min	Ia (mm)= 4.40	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.49	

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	2.20	3.083	3.60	6.083	16.10	9.08	3.10
0.167	2.20	3.167	3.60	6.167	16.10	9.17	3.10
0.250	2.20	3.250	3.60	6.250	16.10	9.25	3.10
0.333	2.20	3.333	3.60	6.333	16.10	9.33	3.10
0.417	2.20	3.417	3.60	6.417	16.10	9.42	3.10
0.500	2.20	3.500	3.60	6.500	16.10	9.50	3.10
0.583	2.20	3.583	3.60	6.583	7.20	9.58	3.10
0.667	2.20	3.667	3.60	6.667	7.20	9.67	3.10
0.750	2.20	3.750	3.60	6.750	7.20	9.75	3.10
0.833	2.20	3.833	3.60	6.833	7.20	9.83	3.10
0.917	2.20	3.917	3.60	6.917	7.20	9.92	3.10

1.000	2.20	4.000	3.60	7.000	7.20	10.00	3.10
1.083	2.20	4.083	5.40	7.083	5.40	10.08	1.80
1.167	2.20	4.167	5.40	7.167	5.40	10.17	1.80
1.250	2.20	4.250	5.40	7.250	5.40	10.25	1.80
1.333	2.20	4.333	5.40	7.333	5.40	10.33	1.80
1.417	2.20	4.417	5.40	7.417	5.40	10.42	1.80
1.500	2.20	4.500	5.40	7.500	5.40	10.50	1.80
1.583	2.20	4.583	7.20	7.583	5.40	10.58	1.80
1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80
1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80
2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.116 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 36.724
TOTAL RAINFALL (mm)= 89.475
RUNOFF COEFFICIENT = 0.410

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

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-----
| ADD HYD ( 0061)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 1100): 24.78 1.298 6.67 42.08
+ ID2= 2 ( 1101): 2.00 0.116 6.42 36.72
=====
ID = 3 ( 0061): 26.78 1.404 6.58 41.68

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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB
| STANDHYD ( 2100)|
|ID= 1 DT= 5.0 min|
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		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	11.15	13.63
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	406.45	800.00
Mannings n	=	0.013	0.250

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

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

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TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.20	3.083	3.60	6.083	16.10	9.08	3.10
0.167	2.20	3.167	3.60	6.167	16.10	9.17	3.10
0.250	2.20	3.250	3.60	6.250	16.10	9.25	3.10
0.333	2.20	3.333	3.60	6.333	16.10	9.33	3.10
0.417	2.20	3.417	3.60	6.417	16.10	9.42	3.10
0.500	2.20	3.500	3.60	6.500	16.10	9.50	3.10
0.583	2.20	3.583	3.60	6.583	7.20	9.58	3.10
0.667	2.20	3.667	3.60	6.667	7.20	9.67	3.10
0.750	2.20	3.750	3.60	6.750	7.20	9.75	3.10
0.833	2.20	3.833	3.60	6.833	7.20	9.83	3.10
0.917	2.20	3.917	3.60	6.917	7.20	9.92	3.10
1.000	2.20	4.000	3.60	7.000	7.20	10.00	3.10
1.083	2.20	4.083	5.40	7.083	5.40	10.08	1.80
1.167	2.20	4.167	5.40	7.167	5.40	10.17	1.80
1.250	2.20	4.250	5.40	7.250	5.40	10.25	1.80
1.333	2.20	4.333	5.40	7.333	5.40	10.33	1.80
1.417	2.20	4.417	5.40	7.417	5.40	10.42	1.80
1.500	2.20	4.500	5.40	7.500	5.40	10.50	1.80
1.583	2.20	4.583	7.20	7.583	5.40	10.58	1.80
1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80
1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80

2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Max.Eff.Inten.(mm/hr)= 118.10 35.36
over (min) 5.00 70.00
Storage Coeff. (min)= 4.50 (ii) 69.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 70.00
Unit Hyd. peak (cms)= 0.23 0.02

TOTALS
PEAK FLOW (cms)= 3.57 0.75 3.779 (iii)
TIME TO PEAK (hrs)= 6.00 7.00 6.00
RUNOFF VOLUME (mm)= 88.47 58.28 71.87
TOTAL RAINFALL (mm)= 89.47 89.47 89.47
RUNOFF COEFFICIENT = 0.99 0.65 0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 85.0 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
NASHYD (1102) | Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	2.20	3.083	3.60	6.083	16.10	9.08	3.10
0.167	2.20	3.167	3.60	6.167	16.10	9.17	3.10
0.250	2.20	3.250	3.60	6.250	16.10	9.25	3.10
0.333	2.20	3.333	3.60	6.333	16.10	9.33	3.10
0.417	2.20	3.417	3.60	6.417	16.10	9.42	3.10
0.500	2.20	3.500	3.60	6.500	16.10	9.50	3.10
0.583	2.20	3.583	3.60	6.583	7.20	9.58	3.10
0.667	2.20	3.667	3.60	6.667	7.20	9.67	3.10
0.750	2.20	3.750	3.60	6.750	7.20	9.75	3.10
0.833	2.20	3.833	3.60	6.833	7.20	9.83	3.10
0.917	2.20	3.917	3.60	6.917	7.20	9.92	3.10
1.000	2.20	4.000	3.60	7.000	7.20	10.00	3.10
1.083	2.20	4.083	5.40	7.083	5.40	10.08	1.80

1.167	2.20	4.167	5.40	7.167	5.40	10.17	1.80
1.250	2.20	4.250	5.40	7.250	5.40	10.25	1.80
1.333	2.20	4.333	5.40	7.333	5.40	10.33	1.80
1.417	2.20	4.417	5.40	7.417	5.40	10.42	1.80
1.500	2.20	4.500	5.40	7.500	5.40	10.50	1.80
1.583	2.20	4.583	7.20	7.583	5.40	10.58	1.80
1.667	2.20	4.667	7.20	7.667	5.40	10.67	1.80
1.750	2.20	4.750	7.20	7.750	5.40	10.75	1.80
1.833	2.20	4.833	7.20	7.833	5.40	10.83	1.80
1.917	2.20	4.917	7.20	7.917	5.40	10.92	1.80
2.000	2.20	5.000	7.20	8.000	5.40	11.00	1.80
2.083	2.70	5.083	10.70	8.083	3.10	11.08	1.80
2.167	2.70	5.167	10.70	8.167	3.10	11.17	1.80
2.250	2.70	5.250	10.70	8.250	3.10	11.25	1.80
2.333	2.70	5.333	10.70	8.333	3.10	11.33	1.80
2.417	2.70	5.417	10.70	8.417	3.10	11.42	1.80
2.500	2.70	5.500	10.70	8.500	3.10	11.50	1.80
2.583	2.70	5.583	43.00	8.583	3.10	11.58	1.80
2.667	2.70	5.667	43.00	8.667	3.10	11.67	1.80
2.750	2.70	5.750	43.00	8.750	3.10	11.75	1.80
2.833	2.70	5.833	118.10	8.833	3.10	11.83	1.80
2.917	2.70	5.917	118.10	8.917	3.10	11.92	1.80
3.000	2.70	6.000	118.10	9.000	3.10	12.00	1.80

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.116 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 36.724
TOTAL RAINFALL (mm)= 89.475
RUNOFF COEFFICIENT = 0.410

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

ADD HYD (0063) |
1 + 2 = 3 |

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1102):	2.00	0.116	6.42	36.72
+ ID2= 2 (2100):	24.78	3.779	6.00	71.87
=====				
ID = 3 (0063):	26.78	3.840	6.00	69.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSS U U A L (v 6.2.2008)
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 SSSS UUUU A A LLLLL

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

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\799c
20f4-df70-4049-8c01-bf79a8992e2b\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\799c
20f4-df70-4049-8c01-bf79a8992e2b\scen

DATE: 04/05/2023 TIME: 11:32:35

USER:

COMMENTS: _____

** SIMULATION : 50-Year_24 hour SCS **

READ STORM	Filename: C:\Users\nnapper\AppData\Local\Temp\aa485c45-5c41-4f04-b9f7-20c929bcd42e\7641247c
Ptotal= 99.23 mm	Comments: 50-Year_24 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	1.10	6.00	2.00	12.00	14.20	18.00	1.80
0.25	1.10	6.25	2.00	12.25	14.20	18.25	1.80
0.50	1.10	6.50	2.00	12.50	7.30	18.50	1.80
0.75	1.10	6.75	2.00	12.75	7.30	18.75	1.80
1.00	1.10	7.00	2.00	13.00	1.40	19.00	1.80
1.25	1.10	7.25	2.00	13.25	1.40	19.25	1.80
1.50	1.10	7.50	2.00	13.50	8.10	19.50	1.80
1.75	1.10	7.75	2.00	13.75	8.10	19.75	1.80
2.00	1.30	8.00	2.70	14.00	3.00	20.00	1.20
2.25	1.30	8.25	2.70	14.25	3.00	20.25	1.20
2.50	1.30	8.50	2.70	14.50	3.00	20.50	1.20
2.75	1.30	8.75	2.70	14.75	3.00	20.75	1.20
3.00	1.30	9.00	3.20	15.00	3.00	21.00	1.20
3.25	1.30	9.25	3.20	15.25	3.00	21.25	1.20
3.50	1.30	9.50	3.60	15.50	3.00	21.50	1.20
3.75	1.30	9.75	3.60	15.75	3.00	21.75	1.20
4.00	1.60	10.00	4.50	16.00	1.80	22.00	1.20
4.25	1.60	10.25	4.50	16.25	1.80	22.25	1.20
4.50	1.60	10.50	6.10	16.50	1.80	22.50	1.20
4.75	1.60	10.75	6.10	16.75	1.80	22.75	1.20
5.00	1.60	11.00	9.50	17.00	1.80	23.00	1.20
5.25	1.60	11.25	9.50	17.25	1.80	23.25	1.20
5.50	1.60	11.50	41.10	17.50	1.80	23.50	1.20
5.75	1.60	11.75	109.20	17.75	1.80	23.75	1.20

CALIB	
NASHYD (2108)	Area (ha)= 1.46 Curve Number (CN)= 60.5
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.67

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80

0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20

5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.052 (i)
 TIME TO PEAK (hrs)= 12.583
 RUNOFF VOLUME (mm)= 34.138
 TOTAL RAINFALL (mm)= 99.225
 RUNOFF COEFFICIENT = 0.344

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

 | CALIB |
 | NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.16

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80
0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80

1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20
5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20

5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.169 (i)

TIME TO PEAK (hrs)= 12.000

RUNOFF VOLUME (mm)= 40.671

TOTAL RAINFALL (mm)= 99.225

RUNOFF COEFFICIENT = 0.410

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

CALIB							
NASHYD (2102)	Area (ha)=	3.87	Curve Number (CN)=	67.1			
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.20					

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80
0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80

1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20
5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20

5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.381 (i)
 TIME TO PEAK (hrs)= 12.083
 RUNOFF VOLUME (mm)= 40.777
 TOTAL RAINFALL (mm)= 99.225
 RUNOFF COEFFICIENT = 0.411

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

 | CALIB |
 | NASHYD (2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.20

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80
0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80

1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20
5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20

6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.350 (i)
 TIME TO PEAK (hrs)= 12.083
 RUNOFF VOLUME (mm)= 40.777
 TOTAL RAINFALL (mm)= 99.225
 RUNOFF COEFFICIENT = 0.411

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

 | CALIB |
 | NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.27

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80
0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20

2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20
5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.280 (i)
 TIME TO PEAK (hrs)= 12.167
 RUNOFF VOLUME (mm)= 40.831
 TOTAL RAINFALL (mm)= 99.225
 RUNOFF COEFFICIENT = 0.411

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

 | CALIB |
 | NASHYD (2105) | Area (ha)= 5.95 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.37

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80
0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20

2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20
5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.392 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 40.848
TOTAL RAINFALL (mm)= 99.225

RUNOFF COEFFICIENT = 0.412

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

CALIB
STANDHYD (2106)
ID= 1 DT= 5.0 min

Area (ha)= 1.50
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80
0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20

2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20
5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Max.Eff.Inten.(mm/hr)= 109.20 61.80
over (min) 5.00 30.00
Storage Coeff. (min)= 2.34 (ii) 25.82 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00

Unit Hyd. peak (cms)=	0.30	0.04	
PEAK FLOW (cms)=	0.23	0.08	0.271 (iii)
TIME TO PEAK (hrs)=	12.00	12.33	12.00
RUNOFF VOLUME (mm)=	98.23	67.00	82.60
TOTAL RAINFALL (mm)=	99.23	99.23	99.23
RUNOFF COEFFICIENT =	0.99	0.68	0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107)	Area (ha)= 3.47
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80
0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80

1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20
5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20

5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Max.Eff.Inten.(mm/hr)=	109.20	33.86
over (min)	5.00	65.00
Storage Coeff. (min)=	2.65 (ii)	64.20 (ii)
Unit Hyd. Tpeak (min)=	5.00	65.00
Unit Hyd. peak (cms)=	0.29	0.02

TOTALS

PEAK FLOW (cms)=	0.53	0.10	0.556 (iii)
TIME TO PEAK (hrs)=	12.00	12.92	12.00
RUNOFF VOLUME (mm)=	98.22	67.00	82.60
TOTAL RAINFALL (mm)=	99.23	99.23	99.23
RUNOFF COEFFICIENT =	0.99	0.68	0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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	
NASHYD (1103)	Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min	Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.49

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80

0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20

5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.115 (i)
 TIME TO PEAK (hrs)= 12.333
 RUNOFF VOLUME (mm)= 43.474
 TOTAL RAINFALL (mm)= 99.225
 RUNOFF COEFFICIENT = 0.438

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

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
              AREA   QPEAK   TPEAK   R.V.
              (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 1103):   2.00   0.115   12.33   43.47
+ ID2= 2 ( 2101):   1.52   0.169   12.00   40.67
=====
ID = 3 ( 0013):   3.52   0.245   12.08   42.26

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
              AREA   QPEAK   TPEAK   R.V.
              (ha)   (cms)   (hrs)   (mm)
ID1= 3 ( 0013):   3.52   0.245   12.08   42.26
+ ID2= 2 ( 2102):   3.87   0.381   12.08   40.78
=====
ID = 1 ( 0013):   7.39   0.626   12.08   41.48

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 1 ( 0013):    7.39    0.626    12.08    41.48
+ ID2= 2 ( 2103):    3.55    0.350    12.08    40.78
=====
ID = 3 ( 0013):    10.94    0.976    12.08    41.26

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 3 ( 0013):    10.94    0.976    12.08    41.26
+ ID2= 2 ( 2104):    3.47    0.280    12.17    40.83
=====
ID = 1 ( 0013):    14.41    1.256    12.08    41.15

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 1 + 2 = 3 |
-----
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 1 ( 0013):    14.41    1.256    12.08    41.15
+ ID2= 2 ( 2105):    5.95    0.392    12.25    40.85
=====
ID = 3 ( 0013):    20.36    1.602    12.08    41.06

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 3 ( 0013):    20.36    1.602    12.08    41.06
+ ID2= 2 ( 2106):    1.50    0.271    12.00    82.60
=====
ID = 1 ( 0013):    21.86    1.710    12.08    43.91

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|

```

```

-----
| 1 + 2 = 3 |
-----
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 1 ( 0013):    21.86    1.710    12.08    43.91
+ ID2= 2 ( 2107):    3.47    0.556    12.00    82.60
=====
ID = 3 ( 0013):    25.33    2.255    12.00    49.21

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| ADD HYD ( 0013)|
| 3 + 2 = 1 |
-----
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 3 ( 0013):    25.33    2.255    12.00    49.21
+ ID2= 2 ( 2108):    1.46    0.052    12.58    34.14
=====
ID = 1 ( 0013):    26.79    2.277    12.00    48.39

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| RESERVOIR( 0001)|
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
-----
          OVERFLOW IS OFF
          OUTFLOW    STORAGE    OUTFLOW    STORAGE
          (cms)    (ha.m.)    (cms)    (ha.m.)
          0.0000    0.0000    1.1450    0.1930
          0.3370    0.0770    1.3850    0.2270
          0.6240    0.1200    1.6330    0.2640
          0.8460    0.1510    0.0000    0.0000

```

```

          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
INFLOW : ID= 2 ( 0013)    26.790    2.277    12.00    48.39
OUTFLOW: ID= 1 ( 0001)    26.790    1.369    12.33    48.39

```

```

          PEAK FLOW REDUCTION [Qout/Qin](%)= 60.15
          TIME SHIFT OF PEAK FLOW (min)= 20.00
          MAXIMUM STORAGE USED (ha.m.)= 0.2256

```

```

-----
| CALIB |
| NASHYD ( 1100)|
| ID= 1 DT= 5.0 min |
-----
          Area (ha)= 24.78 Curve Number (CN)= 75.7
          Ia (mm)= 6.20 # of Linear Res.(N)= 3.00
          U.H. Tp(hrs)= 0.70

```

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80
0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20

4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20
5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 1.289 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 49.574
TOTAL RAINFALL (mm)= 99.225
RUNOFF COEFFICIENT = 0.500

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

| CALIB |
| NASHYD (1101) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.49

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80

0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80
0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20

4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20
5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.115 (i)
 TIME TO PEAK (hrs)= 12.333
 RUNOFF VOLUME (mm)= 43.474
 TOTAL RAINFALL (mm)= 99.225
 RUNOFF COEFFICIENT = 0.438

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

ADD HYD (0061)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1100):	24.78	1.289	12.58	49.57
+ ID2= 2 (1101):	2.00	0.115	12.33	43.47
=====				
ID = 3 (0061):	26.78	1.394	12.58	49.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (2100)			
ID= 1 DT= 5.0 min			

Area	(ha)=	24.78	
Total Imp(%)=	45.00	Dir. Conn.(%)=	45.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	11.15	13.63
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	406.45	800.00
Mannings n	=	0.013	0.250

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80
0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20
2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20

3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20
5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Max.Eff.Inten.(mm/hr)=	109.20	33.86
over (min)	5.00	75.00
Storage Coeff. (min)=	4.65 (ii)	70.32 (ii)
Unit Hyd. Tpeak (min)=	5.00	75.00
Unit Hyd. peak (cms)=	0.22	0.02

PEAK FLOW (cms)=	3.30	0.71	*TOTALS*
TIME TO PEAK (hrs)=	12.00	13.08	3.500 (iii)
RUNOFF VOLUME (mm)=	98.22	66.99	81.05
TOTAL RAINFALL (mm)=	99.23	99.23	99.23
RUNOFF COEFFICIENT =	0.99	0.68	0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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
NASHYD (1102)
ID= 1 DT= 5.0 min

Area (ha)= 2.00 Curve Number (CN)= 69.4
Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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	1.10	6.083	2.00	12.083	14.21	18.08	1.80
0.167	1.10	6.167	2.00	12.167	14.20	18.17	1.80
0.250	1.10	6.250	2.00	12.250	14.20	18.25	1.80
0.333	1.10	6.333	2.00	12.333	14.20	18.33	1.80
0.417	1.10	6.417	2.00	12.417	14.20	18.42	1.80
0.500	1.10	6.500	2.00	12.500	14.20	18.50	1.80
0.583	1.10	6.583	2.00	12.583	7.30	18.58	1.80
0.667	1.10	6.667	2.00	12.667	7.30	18.67	1.80
0.750	1.10	6.750	2.00	12.750	7.30	18.75	1.80
0.833	1.10	6.833	2.00	12.833	7.30	18.83	1.80
0.917	1.10	6.917	2.00	12.917	7.30	18.92	1.80
1.000	1.10	7.000	2.00	13.000	7.30	19.00	1.80
1.083	1.10	7.083	2.00	13.083	1.40	19.08	1.80
1.167	1.10	7.167	2.00	13.167	1.40	19.17	1.80
1.250	1.10	7.250	2.00	13.250	1.40	19.25	1.80
1.333	1.10	7.333	2.00	13.333	1.40	19.33	1.80
1.417	1.10	7.417	2.00	13.417	1.40	19.42	1.80
1.500	1.10	7.500	2.00	13.500	1.40	19.50	1.80
1.583	1.10	7.583	2.00	13.583	8.10	19.58	1.80
1.667	1.10	7.667	2.00	13.667	8.10	19.67	1.80
1.750	1.10	7.750	2.00	13.750	8.10	19.75	1.80
1.833	1.10	7.833	2.00	13.833	8.10	19.83	1.80
1.917	1.10	7.917	2.00	13.917	8.10	19.92	1.80
2.000	1.10	8.000	2.00	14.000	8.10	20.00	1.80
2.083	1.30	8.083	2.70	14.083	3.00	20.08	1.20
2.167	1.30	8.167	2.70	14.167	3.00	20.17	1.20
2.250	1.30	8.250	2.70	14.250	3.00	20.25	1.20
2.333	1.30	8.333	2.70	14.333	3.00	20.33	1.20
2.417	1.30	8.417	2.70	14.417	3.00	20.42	1.20
2.500	1.30	8.500	2.70	14.500	3.00	20.50	1.20
2.583	1.30	8.583	2.70	14.583	3.00	20.58	1.20

2.667	1.30	8.667	2.70	14.667	3.00	20.67	1.20
2.750	1.30	8.750	2.70	14.750	3.00	20.75	1.20
2.833	1.30	8.833	2.70	14.833	3.00	20.83	1.20
2.917	1.30	8.917	2.70	14.917	3.00	20.92	1.20
3.000	1.30	9.000	2.70	15.000	3.00	21.00	1.20
3.083	1.30	9.083	3.20	15.083	3.00	21.08	1.20
3.167	1.30	9.167	3.20	15.167	3.00	21.17	1.20
3.250	1.30	9.250	3.20	15.250	3.00	21.25	1.20
3.333	1.30	9.333	3.20	15.333	3.00	21.33	1.20
3.417	1.30	9.417	3.20	15.417	3.00	21.42	1.20
3.500	1.30	9.500	3.20	15.500	3.00	21.50	1.20
3.583	1.30	9.583	3.60	15.583	3.00	21.58	1.20
3.667	1.30	9.667	3.60	15.667	3.00	21.67	1.20
3.750	1.30	9.750	3.60	15.750	3.00	21.75	1.20
3.833	1.30	9.833	3.60	15.833	3.00	21.83	1.20
3.917	1.30	9.917	3.60	15.917	3.00	21.92	1.20
4.000	1.30	10.000	3.60	16.000	3.00	22.00	1.20
4.083	1.60	10.083	4.50	16.083	1.80	22.08	1.20
4.167	1.60	10.167	4.50	16.167	1.80	22.17	1.20
4.250	1.60	10.250	4.50	16.250	1.80	22.25	1.20
4.333	1.60	10.333	4.50	16.333	1.80	22.33	1.20
4.417	1.60	10.417	4.50	16.417	1.80	22.42	1.20
4.500	1.60	10.500	4.50	16.500	1.80	22.50	1.20
4.583	1.60	10.583	6.10	16.583	1.80	22.58	1.20
4.667	1.60	10.667	6.10	16.667	1.80	22.67	1.20
4.750	1.60	10.750	6.10	16.750	1.80	22.75	1.20
4.833	1.60	10.833	6.10	16.833	1.80	22.83	1.20
4.917	1.60	10.917	6.10	16.917	1.80	22.92	1.20
5.000	1.60	11.000	6.10	17.000	1.80	23.00	1.20
5.083	1.60	11.083	9.50	17.083	1.80	23.08	1.20
5.167	1.60	11.167	9.50	17.167	1.80	23.17	1.20
5.250	1.60	11.250	9.50	17.250	1.80	23.25	1.20
5.333	1.60	11.333	9.50	17.333	1.80	23.33	1.20
5.417	1.60	11.417	9.50	17.417	1.80	23.42	1.20
5.500	1.60	11.500	9.50	17.500	1.80	23.50	1.20
5.583	1.60	11.583	41.10	17.583	1.80	23.58	1.20
5.667	1.60	11.667	41.10	17.667	1.80	23.67	1.20
5.750	1.60	11.750	41.10	17.750	1.80	23.75	1.20
5.833	1.60	11.833	109.19	17.833	1.80	23.83	1.20
5.917	1.60	11.917	109.20	17.917	1.80	23.92	1.20
6.000	1.60	12.000	109.20	18.000	1.80	24.00	1.20

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.115 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 43.474
TOTAL RAINFALL (mm)= 99.225
RUNOFF COEFFICIENT = 0.438

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

```
-----
| ADD HYD ( 0063)|
| 1 + 2 = 3 |
-----
          AREA   QPEAK   TPEAK   R.V.
          (ha)   (cms)   (hrs)   (mm)
ID1= 1 ( 1102):   2.00   0.115   12.33   43.47
+ ID2= 2 ( 2100):  24.78   3.500   12.00   81.05
=====
ID = 3 ( 0063):   26.78   3.564   12.00   78.24
=====
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
=====
V  V  I  SSSSS  U  U  A  L          (v 6.2.2008)
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
W  I  SSSSS  UUUUU  A  A  LLLLL

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

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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\V02\voin.dat

Output filename:

C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\6b5a930d-ed2c-49ba-bfe9-8828946c6940\scen

Summary filename:

C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\6b5a930d-ed2c-49ba-bfe9-8828946c6940\scen

DATE: 04/05/2023

TIME: 11:32:32

USER:

COMMENTS: _____

```
-----
*****
** SIMULATION : 5-Year_12 hour AES          **
*****
```

```
-----
| READ STORM |      Filename: C:\Users\nnapper\AppData
|            |      ata\Local\Temp\
|            |      aa485c45-5c41-4f04-b9f7-20c929bcd42e\0ac1adf3
| Ptotal= 58.90 mm |      Comments: 5-Year_12 hour AES
-----
```

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	7.70	3.00	8.80	6.00	1.80	9.00	0.00
0.17	7.70	3.17	8.80	6.17	1.80	9.17	0.00
0.33	7.70	3.33	8.80	6.33	1.80	9.33	0.00
0.50	7.70	3.50	8.80	6.50	1.80	9.50	0.00
0.67	7.70	3.67	8.80	6.67	1.80	9.67	0.00
0.83	7.70	3.83	8.80	6.83	1.80	9.83	0.00
1.00	15.30	4.00	8.20	7.00	0.60	10.00	0.00
1.17	15.30	4.17	8.20	7.17	0.60	10.17	0.00
1.33	15.30	4.33	8.20	7.33	0.60	10.33	0.00
1.50	15.30	4.50	8.20	7.50	0.60	10.50	0.00
1.67	15.30	4.67	8.20	7.67	0.60	10.67	0.00
1.83	15.30	4.83	8.20	7.83	0.60	10.83	0.00
2.00	11.80	5.00	4.70	8.00	0.00	11.00	0.00
2.17	11.80	5.17	4.70	8.17	0.00	11.17	0.00
2.33	11.80	5.33	4.70	8.33	0.00	11.33	0.00
2.50	11.80	5.50	4.70	8.50	0.00	11.50	0.00
2.67	11.80	5.67	4.70	8.67	0.00	11.67	0.00
2.83	11.80	5.83	4.70	8.83	0.00	11.83	0.00

```
-----
| CALIB      |
| NASHYD ( 2108) | Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.67
-----
```

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	7.70	3.083	8.80	6.083	1.80	9.08	0.00
0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00
0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00
0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00
0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00
1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00
1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00
2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00
2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00
2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.012 (i)

TIME TO PEAK (hrs)= 5.083

RUNOFF VOLUME (mm)= 13.220

TOTAL RAINFALL (mm)= 58.900

RUNOFF COEFFICIENT = 0.224

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

 CALIB
 NASHYD (2101)
 ID= 1 DT= 5.0 min

Area (ha)= 1.52 Curve Number (CN)= 67.1
 Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
 U.H. Tp(hrs)= 0.16

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	7.70	3.083	8.80	6.083	1.80	9.08	0.00
0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00
0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00
0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00
0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00
1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00
1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00
2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00
2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00
2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.016 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 16.412
TOTAL RAINFALL (mm)= 58.900
RUNOFF COEFFICIENT = 0.279

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

| CALIB |
| NASHYD (2102) | Area (ha)= 3.87 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.20

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	7.70	3.083	8.80	6.083	1.80	9.08	0.00
0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00
0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00
0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00
0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00
1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00
1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00
2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00

2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00
2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.041 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 16.455
TOTAL RAINFALL (mm)= 58.900
RUNOFF COEFFICIENT = 0.279

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

| CALIB |
| NASHYD (2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
| ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.20

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	7.70	3.083	8.80	6.083	1.80	9.08	0.00
0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00
0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00
0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00
0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00
1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00

1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00
2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00
2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00
2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.038 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 16.455
TOTAL RAINFALL (mm)= 58.900
RUNOFF COEFFICIENT = 0.279

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

CALIB					
NASHYD (2104)	Area (ha)=	3.47	Curve Number (CN)=	67.1	
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.27			

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	7.70	3.083	8.80	6.083	1.80	9.08	0.00
0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00
0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00
0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00

0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00
1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00
1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00
2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00
2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00
2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.036 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 16.477
TOTAL RAINFALL (mm)= 58.900
RUNOFF COEFFICIENT = 0.280

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

CALIB					
NASHYD (2105)	Area (ha)=	5.95	Curve Number (CN)=	67.1	
ID= 1 DT= 5.0 min	Ia (mm)=	4.60	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.37			

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	7.70	3.083	8.80	6.083	1.80	9.08	0.00
0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00
0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00
0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00
0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00
1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00
1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00
2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00
2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00
2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.061 (i)
 TIME TO PEAK (hrs)= 5.000
 RUNOFF VOLUME (mm)= 16.484
 TOTAL RAINFALL (mm)= 58.900
 RUNOFF COEFFICIENT = 0.280

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

 CALIB
 STANDHYD (2106)
 ID= 1 DT= 5.0 min
 Area (ha)= 1.50
 Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	7.70	3.083	8.80	6.083	1.80	9.08	0.00
0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00
0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00
0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00
0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00
1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00
1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00
2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00
2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00

2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 15.30 7.26
over (min) 5.00 65.00
Storage Coeff. (min)= 5.13 (ii) 60.43 (ii)
Unit Hyd. Tpeak (min)= 5.00 65.00
Unit Hyd. peak (cms)= 0.21 0.02

TOTALS
PEAK FLOW (cms)= 0.03 0.01 0.036 (iii)
TIME TO PEAK (hrs)= 2.00 5.00 2.00
RUNOFF VOLUME (mm)= 57.90 32.23 45.04
TOTAL RAINFALL (mm)= 58.90 58.90 58.90
RUNOFF COEFFICIENT = 0.98 0.55 0.76

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107)
ID= 1 DT= 5.0 min
Area (ha)= 3.47
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	7.70	3.083	8.80	6.083	1.80	9.08	0.00
0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00
0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00

0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00
0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00
1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00
1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00
2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00
2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00
2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)= 15.30 7.26
over (min) 5.00 120.00
Storage Coeff. (min)= 5.82 (ii) 119.77 (ii)
Unit Hyd. Tpeak (min)= 5.00 120.00
Unit Hyd. peak (cms)= 0.20 0.01

TOTALS
PEAK FLOW (cms)= 0.07 0.03 0.077 (iii)
TIME TO PEAK (hrs)= 2.00 5.83 2.00
RUNOFF VOLUME (mm)= 57.90 32.23 45.05
TOTAL RAINFALL (mm)= 58.90 58.90 58.90
RUNOFF COEFFICIENT = 0.98 0.55 0.76

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD ( 1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
-----
| U.H. Tp(hrs)= 0.49

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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 7.70 3.083 8.80 6.083 1.80 9.08 0.00
0.167 7.70 3.167 8.80 6.167 1.80 9.17 0.00
0.250 7.70 3.250 8.80 6.250 1.80 9.25 0.00
0.333 7.70 3.333 8.80 6.333 1.80 9.33 0.00
0.417 7.70 3.417 8.80 6.417 1.80 9.42 0.00
0.500 7.70 3.500 8.80 6.500 1.80 9.50 0.00
0.583 7.70 3.583 8.80 6.583 1.80 9.58 0.00
0.667 7.70 3.667 8.80 6.667 1.80 9.67 0.00
0.750 7.70 3.750 8.80 6.750 1.80 9.75 0.00
0.833 7.70 3.833 8.80 6.833 1.80 9.83 0.00
0.917 7.70 3.917 8.80 6.917 1.80 9.92 0.00
1.000 7.70 4.000 8.80 7.000 1.80 10.00 0.00
1.083 15.30 4.083 8.20 7.083 0.60 10.08 0.00
1.167 15.30 4.167 8.20 7.167 0.60 10.17 0.00
1.250 15.30 4.250 8.20 7.250 0.60 10.25 0.00
1.333 15.30 4.333 8.20 7.333 0.60 10.33 0.00
1.417 15.30 4.417 8.20 7.417 0.60 10.42 0.00
1.500 15.30 4.500 8.20 7.500 0.60 10.50 0.00
1.583 15.30 4.583 8.20 7.583 0.60 10.58 0.00
1.667 15.30 4.667 8.20 7.667 0.60 10.67 0.00
1.750 15.30 4.750 8.20 7.750 0.60 10.75 0.00
1.833 15.30 4.833 8.20 7.833 0.60 10.83 0.00
1.917 15.30 4.917 8.20 7.917 0.60 10.92 0.00
2.000 15.30 5.000 8.20 8.000 0.60 11.00 0.00
2.083 11.80 5.083 4.70 8.083 0.00 11.08 0.00
2.167 11.80 5.167 4.70 8.167 0.00 11.17 0.00
2.250 11.80 5.250 4.70 8.250 0.00 11.25 0.00
2.333 11.80 5.333 4.70 8.333 0.00 11.33 0.00
2.417 11.80 5.417 4.70 8.417 0.00 11.42 0.00
2.500 11.80 5.500 4.70 8.500 0.00 11.50 0.00
2.583 11.80 5.583 4.70 8.583 0.00 11.58 0.00
2.667 11.80 5.667 4.70 8.667 0.00 11.67 0.00
2.750 11.80 5.750 4.70 8.750 0.00 11.75 0.00
2.833 11.80 5.833 4.70 8.833 0.00 11.83 0.00
2.917 11.80 5.917 4.70 8.917 0.00 11.92 0.00
3.000 11.80 6.000 4.70 9.000 0.00 12.00 0.00

```

Unit Hyd Qpeak (cms)= 0.156

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PEAK FLOW (cms)= 0.022 (i)
TIME TO PEAK (hrs)= 5.083
RUNOFF VOLUME (mm)= 17.838
TOTAL RAINFALL (mm)= 58.900
RUNOFF COEFFICIENT = 0.303

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

```

-----
| ADD HYD ( 0013) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
              (ha) (cms) (hrs) (mm)
ID1= 1 ( 1103): 2.00 0.022 5.08 17.84
+ ID2= 2 ( 2101): 1.52 0.016 3.00 16.41
=====
ID = 3 ( 0013): 3.52 0.038 5.00 17.22

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
| ADD HYD ( 0013) |
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
              (ha) (cms) (hrs) (mm)
ID1= 3 ( 0013): 3.52 0.038 5.00 17.22
+ ID2= 2 ( 2102): 3.87 0.041 3.00 16.46
=====
ID = 1 ( 0013): 7.39 0.078 5.00 16.82

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
| ADD HYD ( 0013) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
              (ha) (cms) (hrs) (mm)
ID1= 1 ( 0013): 7.39 0.078 5.00 16.82
+ ID2= 2 ( 2103): 3.55 0.038 3.00 16.46
=====
ID = 3 ( 0013): 10.94 0.116 3.00 16.70

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
| ADD HYD ( 0013) |

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3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
-----	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	10.94	0.116	3.00	16.70
+ ID2= 2 (2104):	3.47	0.036	3.08	16.48
=====				
ID = 1 (0013):	14.41	0.152	3.00	16.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	14.41	0.152	3.00	16.65
+ ID2= 2 (2105):	5.95	0.061	5.00	16.48
=====				
ID = 3 (0013):	20.36	0.212	5.00	16.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	20.36	0.212	5.00	16.60
+ ID2= 2 (2106):	1.50	0.036	2.00	45.04
=====				
ID = 1 (0013):	21.86	0.246	3.00	18.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	21.86	0.246	3.00	18.55
+ ID2= 2 (2107):	3.47	0.077	2.00	45.05
=====				
ID = 3 (0013):	25.33	0.314	3.00	22.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)

ID1= 3 (0013):	25.33	0.314	3.00	22.18
+ ID2= 2 (2108):	1.46	0.012	5.08	13.22
=====				
ID = 1 (0013):	26.79	0.323	3.00	21.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0001)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min				
-----	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	1.1450	0.1930
	0.3370	0.0770	1.3850	0.2270
	0.6240	0.1200	1.6330	0.2640
	0.8460	0.1510	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	0.323	3.00	21.69
OUTFLOW: ID= 1 (0001)	26.790	0.307	5.08	21.69

PEAK FLOW REDUCTION [Qout/Qin](%)= 94.90
TIME SHIFT OF PEAK FLOW (min)=125.00
MAXIMUM STORAGE USED (ha.m.)= 0.0702

CALIB			
NASHYD (1100)	Area (ha)=	24.78	Curve Number (CN)= 75.7
ID= 1 DT= 5.0 min	Ia (mm)=	6.20	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.70	

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	7.70	3.083	8.80	6.083	1.80	9.08	0.00
0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00
0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00
0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00
0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00

1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00
1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00
2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00
2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00
2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.311 (i)
TIME TO PEAK (hrs)= 5.083
RUNOFF VOLUME (mm)= 20.689
TOTAL RAINFALL (mm)= 58.900
RUNOFF COEFFICIENT = 0.351

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

CALIB	
NASHYD (1101)	Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min	Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.49

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	7.70	3.083	8.80	6.083	1.80	9.08	0.00

0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00
0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00
0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00
0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00
1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00
1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00
2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00
2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00
2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.022 (i)
TIME TO PEAK (hrs)= 5.083
RUNOFF VOLUME (mm)= 17.838
TOTAL RAINFALL (mm)= 58.900
RUNOFF COEFFICIENT = 0.303

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

| ADD HYD (0061)|

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	24.78	0.311	5.08	20.69
+ ID2= 2 (1101):	2.00	0.022	5.08	17.84
=====				
ID = 3 (0061):	26.78	0.333	5.08	20.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	24.78
STANDHYD (2100)	Total Imp(%)=	45.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	45.00

	IMPERVIOUS (ha)=	PERVIOUS (i) 13.63
Surface Area	11.15	
Dep. Storage	1.00	1.50
Average Slope	2.00	2.00
Length	406.45	800.00
Mannings n	0.013	0.250

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	7.70	3.083	8.80	6.083	1.80	9.08	0.00
0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00
0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00
0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00
0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00
1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00
1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00

2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00
2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00
2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Max.Eff.Inten.(mm/hr)=	15.30	7.26
over (min)	10.00	135.00
Storage Coeff. (min)=	10.20 (ii)	131.79 (ii)
Unit Hyd. Tpeak (min)=	10.00	135.00
Unit Hyd. peak (cms)=	0.11	0.01

TOTALS

PEAK FLOW (cms)=	0.47	0.19	0.493 (iii)
TIME TO PEAK (hrs)=	2.00	6.08	2.00
RUNOFF VOLUME (mm)=	57.90	32.23	43.78
TOTAL RAINFALL (mm)=	58.90	58.90	58.90
RUNOFF COEFFICIENT =	0.98	0.55	0.74

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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	Area (ha)=	2.00	Curve Number (CN)=	69.4
NASHYD (1102)	Ia (mm)=	4.40	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.49		

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	7.70	3.083	8.80	6.083	1.80	9.08	0.00
0.167	7.70	3.167	8.80	6.167	1.80	9.17	0.00
0.250	7.70	3.250	8.80	6.250	1.80	9.25	0.00
0.333	7.70	3.333	8.80	6.333	1.80	9.33	0.00

0.417	7.70	3.417	8.80	6.417	1.80	9.42	0.00
0.500	7.70	3.500	8.80	6.500	1.80	9.50	0.00
0.583	7.70	3.583	8.80	6.583	1.80	9.58	0.00
0.667	7.70	3.667	8.80	6.667	1.80	9.67	0.00
0.750	7.70	3.750	8.80	6.750	1.80	9.75	0.00
0.833	7.70	3.833	8.80	6.833	1.80	9.83	0.00
0.917	7.70	3.917	8.80	6.917	1.80	9.92	0.00
1.000	7.70	4.000	8.80	7.000	1.80	10.00	0.00
1.083	15.30	4.083	8.20	7.083	0.60	10.08	0.00
1.167	15.30	4.167	8.20	7.167	0.60	10.17	0.00
1.250	15.30	4.250	8.20	7.250	0.60	10.25	0.00
1.333	15.30	4.333	8.20	7.333	0.60	10.33	0.00
1.417	15.30	4.417	8.20	7.417	0.60	10.42	0.00
1.500	15.30	4.500	8.20	7.500	0.60	10.50	0.00
1.583	15.30	4.583	8.20	7.583	0.60	10.58	0.00
1.667	15.30	4.667	8.20	7.667	0.60	10.67	0.00
1.750	15.30	4.750	8.20	7.750	0.60	10.75	0.00
1.833	15.30	4.833	8.20	7.833	0.60	10.83	0.00
1.917	15.30	4.917	8.20	7.917	0.60	10.92	0.00
2.000	15.30	5.000	8.20	8.000	0.60	11.00	0.00
2.083	11.80	5.083	4.70	8.083	0.00	11.08	0.00
2.167	11.80	5.167	4.70	8.167	0.00	11.17	0.00
2.250	11.80	5.250	4.70	8.250	0.00	11.25	0.00
2.333	11.80	5.333	4.70	8.333	0.00	11.33	0.00
2.417	11.80	5.417	4.70	8.417	0.00	11.42	0.00
2.500	11.80	5.500	4.70	8.500	0.00	11.50	0.00
2.583	11.80	5.583	4.70	8.583	0.00	11.58	0.00
2.667	11.80	5.667	4.70	8.667	0.00	11.67	0.00
2.750	11.80	5.750	4.70	8.750	0.00	11.75	0.00
2.833	11.80	5.833	4.70	8.833	0.00	11.83	0.00
2.917	11.80	5.917	4.70	8.917	0.00	11.92	0.00
3.000	11.80	6.000	4.70	9.000	0.00	12.00	0.00

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.022 (i)
TIME TO PEAK (hrs)= 5.083
RUNOFF VOLUME (mm)= 17.838
TOTAL RAINFALL (mm)= 58.900
RUNOFF COEFFICIENT = 0.303

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

ADD HYD (0063)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1102):	2.00	0.022	5.08 17.84

+ ID2= 2 (2100): 24.78 0.493 2.00 43.78
ID = 3 (0063): 26.78 0.504 2.00 41.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.2.2008)
V V I SS U U A A L
V V I SS U U A A A L
V V I SS U U A A L
V I SSSSS UUUUU A A LLLLL

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

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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\V02\voin.dat

Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\0250
f712-4ad6-481f-8c9f-5cfd9b0c6151\scen

Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\0250
f712-4ad6-481f-8c9f-5cfd9b0c6151\scen

DATE: 04/05/2023

TIME: 11:32:33

USER:

COMMENTS:

** SIMULATION : 5-Year_12 hour SCS **

READ STORM
Ptotal= 59.10 mm |

Filename: C:\Users\nnapper\AppData
ata\Local\Temp\
aa485c45-5c41-4f04-b9f7-20c929bcd42e\94d0a0fb
Comments: 5-Year_12 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	1.50	3.00	2.40	6.00	10.60	9.00	2.10
0.25	1.50	3.25	2.40	6.25	10.60	9.25	2.10
0.50	1.50	3.50	2.40	6.50	4.70	9.50	2.10
0.75	1.50	3.75	2.40	6.75	4.70	9.75	2.10
1.00	1.50	4.00	3.50	7.00	3.50	10.00	1.20
1.25	1.50	4.25	3.50	7.25	3.50	10.25	1.20
1.50	1.50	4.50	4.70	7.50	3.50	10.50	1.20
1.75	1.50	4.75	4.70	7.75	3.50	10.75	1.20
2.00	1.80	5.00	7.10	8.00	2.10	11.00	1.20
2.25	1.80	5.25	7.10	8.25	2.10	11.25	1.20
2.50	1.80	5.50	28.30	8.50	2.10	11.50	1.20
2.75	1.80	5.75	77.70	8.75	2.10	11.75	1.20

| CALIB |
| NASHYD (2108) |
ID= 1 DT= 5.0 min

Area (ha)= 1.46 Curve Number (CN)= 60.5
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.67

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10

1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.024 (i)
TIME TO PEAK (hrs)= 6.667
RUNOFF VOLUME (mm)= 13.307
TOTAL RAINFALL (mm)= 59.100
RUNOFF COEFFICIENT = 0.225

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

| CALIB |
| NASHYD (2101) |
ID= 1 DT= 5.0 min

Area (ha)= 1.52 Curve Number (CN)= 67.1
Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.16

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10

0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10
1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.080 (i)

TIME TO PEAK (hrs)= 6.000

RUNOFF VOLUME (mm)= 16.515

TOTAL RAINFALL (mm)= 59.100

RUNOFF COEFFICIENT = 0.279

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

CALIB					
NASHYD (2102)	Area	(ha)=	3.87	Curve Number (CN)=	67.1
ID= 1 DT= 5.0 min	Ia	(mm)=	4.60	# of Linear Res.(N)=	3.00

----- U.H. Tp(hrs)= 0.20

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10
1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.183 (i)

TIME TO PEAK (hrs)= 6.083

RUNOFF VOLUME (mm)= 16.558

TOTAL RAINFALL (mm)= 59.100
RUNOFF COEFFICIENT = 0.280

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

CALIB
NASHYD (2103) Area (ha)= 3.55 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.20

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10
1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20

2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.168 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 16.558
TOTAL RAINFALL (mm)= 59.100
RUNOFF COEFFICIENT = 0.280

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

CALIB
NASHYD (2104) Area (ha)= 3.47 Curve Number (CN)= 67.1
ID= 1 DT= 5.0 min Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.27

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10
1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20

1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.134 (i)
 TIME TO PEAK (hrs)= 6.167
 RUNOFF VOLUME (mm)= 16.580
 TOTAL RAINFALL (mm)= 59.100
 RUNOFF COEFFICIENT = 0.281

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

CALIB			
NASHYD (2105)			
ID= 1 DT= 5.0 min			

Area (ha)=	5.95	Curve Number (CN)=	67.1
Ia (mm)=	4.60	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.37		

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10

1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.185 (i)
 TIME TO PEAK (hrs)= 6.250
 RUNOFF VOLUME (mm)= 16.587
 TOTAL RAINFALL (mm)= 59.100
 RUNOFF COEFFICIENT = 0.281

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

CALIB			
STANDHYD (2106)			
ID= 1 DT= 5.0 min			

Area (ha)=	1.50		
Total Imp(%)=	50.00	Dir. Conn.(%)=	50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10
1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Max.Eff.Inten.(mm/hr)= 77.70 27.99
over (min) 5.00 35.00
Storage Coeff. (min)= 2.68 (ii) 34.91 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.29 0.03

TOTALS
PEAK FLOW (cms)= 0.16 0.04 0.178 (iii)
TIME TO PEAK (hrs)= 6.00 6.42 6.00
RUNOFF VOLUME (mm)= 58.10 32.39 45.23

TOTAL RAINFALL (mm)= 59.10 59.10 59.10
RUNOFF COEFFICIENT = 0.98 0.55 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 (2107)
ID= 1 DT= 5.0 min

Area (ha)= 3.47
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.74 1.74
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.82 1.82
Length (m)= 152.10 685.00
Mannings n = 0.013 0.250

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10
1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20

1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Max.Eff.Inten.(mm/hr)= 77.70 19.59
over (min) 5.00 80.00
Storage Coeff. (min)= 3.04 (ii) 79.65 (ii)
Unit Hyd. Tpeak (min)= 5.00 80.00
Unit Hyd. peak (cms)= 0.27 0.01

TOTALS

PEAK FLOW (cms)= 0.37 0.05 0.383 (iii)
TIME TO PEAK (hrs)= 6.00 7.17 6.00
RUNOFF VOLUME (mm)= 58.10 32.39 45.23
TOTAL RAINFALL (mm)= 59.10 59.10 59.10
RUNOFF COEFFICIENT = 0.98 0.55 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1103) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.49

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10
1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.055 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 17.948
TOTAL RAINFALL (mm)= 59.100
RUNOFF COEFFICIENT = 0.304

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

ADD HYD (0013)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1103):	2.00	0.055	6.42	17.95
+ ID2= 2 (2101):	1.52	0.080	6.00	16.51
=====				
ID = 3 (0013):	3.52	0.116	6.08	17.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	3.52	0.116	6.08	17.33
+ ID2= 2 (2102):	3.87	0.183	6.08	16.56
=====				
ID = 1 (0013):	7.39	0.300	6.08	16.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	7.39	0.300	6.08	16.93
+ ID2= 2 (2103):	3.55	0.168	6.08	16.56
=====				
ID = 3 (0013):	10.94	0.468	6.08	16.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	10.94	0.468	6.08	16.81
+ ID2= 2 (2104):	3.47	0.134	6.17	16.58
=====				
ID = 1 (0013):	14.41	0.599	6.08	16.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	14.41	0.599	6.08	16.75
+ ID2= 2 (2105):	5.95	0.185	6.25	16.59
=====				
ID = 3 (0013):	20.36	0.756	6.08	16.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	20.36	0.756	6.08	16.70
+ ID2= 2 (2106):	1.50	0.178	6.00	45.23
=====				
ID = 1 (0013):	21.86	0.833	6.00	18.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0013):	21.86	0.833	6.00	18.66
+ ID2= 2 (2107):	3.47	0.383	6.00	45.23
=====				
ID = 3 (0013):	25.33	1.216	6.00	22.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0013):	25.33	1.216	6.00	22.30
+ ID2= 2 (2108):	1.46	0.024	6.67	13.31
=====				
ID = 1 (0013):	26.79	1.225	6.00	21.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0001)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	1.1450	0.1930

0.3370	0.0770	1.3850	0.2270
0.6240	0.1200	1.6330	0.2640
0.8460	0.1510	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0013)	26.790	1.225	6.00	21.81
OUTFLOW: ID= 1 (0001)	26.790	0.662	6.42	21.81

PEAK FLOW REDUCTION [Qout/Qin](%)= 54.02
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.1254

CALIB			
NASHYD (1100)	Area (ha)= 24.78	Curve Number (CN)= 75.7	
ID= 1 DT= 5.0 min	Ia (mm)= 6.20	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.70		

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10
1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20

2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.628 (i)
TIME TO PEAK (hrs)= 6.667
RUNOFF VOLUME (mm)= 20.816
TOTAL RAINFALL (mm)= 59.100
RUNOFF COEFFICIENT = 0.352

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

CALIB			
NASHYD (1101)	Area (ha)= 2.00	Curve Number (CN)= 69.4	
ID= 1 DT= 5.0 min	Ia (mm)= 4.40	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.49		

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10
1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20

1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.055 (i)
 TIME TO PEAK (hrs)= 6.417
 RUNOFF VOLUME (mm)= 17.948
 TOTAL RAINFALL (mm)= 59.100
 RUNOFF COEFFICIENT = 0.304

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

ADD HYD (0061)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1100):	24.78	0.628	6.67	20.82
+ ID2= 2 (1101):	2.00	0.055	6.42	17.95
=====				
ID = 3 (0061):	26.78	0.677	6.67	20.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (2100)			
ID= 1 DT= 5.0 min	Area (ha)=	24.78	
	Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	11.15	13.63
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	2.00	2.00
Length	(m)=	406.45	800.00
Mannings n	=	0.013	0.250

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10
1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20
1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Max.Eff.Inten.(mm/hr)= 77.70 19.59
over (min) 5.00 90.00
Storage Coeff. (min)= 5.32 (ii) 87.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 90.00
Unit Hyd. peak (cms)= 0.21 0.01

TOTALS
PEAK FLOW (cms)= 2.31 0.34 2.384 (iii)
TIME TO PEAK (hrs)= 6.00 7.33 6.00
RUNOFF VOLUME (mm)= 58.10 32.39 43.96
TOTAL RAINFALL (mm)= 59.10 59.10 59.10
RUNOFF COEFFICIENT = 0.98 0.55 0.74

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
| NASHYD (1102) | Area (ha)= 2.00 Curve Number (CN)= 69.4
| ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.49

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	1.50	3.083	2.40	6.083	10.60	9.08	2.10
0.167	1.50	3.167	2.40	6.167	10.60	9.17	2.10
0.250	1.50	3.250	2.40	6.250	10.60	9.25	2.10
0.333	1.50	3.333	2.40	6.333	10.60	9.33	2.10
0.417	1.50	3.417	2.40	6.417	10.60	9.42	2.10
0.500	1.50	3.500	2.40	6.500	10.60	9.50	2.10
0.583	1.50	3.583	2.40	6.583	4.70	9.58	2.10
0.667	1.50	3.667	2.40	6.667	4.70	9.67	2.10
0.750	1.50	3.750	2.40	6.750	4.70	9.75	2.10
0.833	1.50	3.833	2.40	6.833	4.70	9.83	2.10
0.917	1.50	3.917	2.40	6.917	4.70	9.92	2.10
1.000	1.50	4.000	2.40	7.000	4.70	10.00	2.10
1.083	1.50	4.083	3.50	7.083	3.50	10.08	1.20
1.167	1.50	4.167	3.50	7.167	3.50	10.17	1.20
1.250	1.50	4.250	3.50	7.250	3.50	10.25	1.20
1.333	1.50	4.333	3.50	7.333	3.50	10.33	1.20
1.417	1.50	4.417	3.50	7.417	3.50	10.42	1.20

1.500	1.50	4.500	3.50	7.500	3.50	10.50	1.20
1.583	1.50	4.583	4.70	7.583	3.50	10.58	1.20
1.667	1.50	4.667	4.70	7.667	3.50	10.67	1.20
1.750	1.50	4.750	4.70	7.750	3.50	10.75	1.20
1.833	1.50	4.833	4.70	7.833	3.50	10.83	1.20
1.917	1.50	4.917	4.70	7.917	3.50	10.92	1.20
2.000	1.50	5.000	4.70	8.000	3.50	11.00	1.20
2.083	1.80	5.083	7.10	8.083	2.10	11.08	1.20
2.167	1.80	5.167	7.10	8.167	2.10	11.17	1.20
2.250	1.80	5.250	7.10	8.250	2.10	11.25	1.20
2.333	1.80	5.333	7.10	8.333	2.10	11.33	1.20
2.417	1.80	5.417	7.10	8.417	2.10	11.42	1.20
2.500	1.80	5.500	7.10	8.500	2.10	11.50	1.20
2.583	1.80	5.583	28.30	8.583	2.10	11.58	1.20
2.667	1.80	5.667	28.30	8.667	2.10	11.67	1.20
2.750	1.80	5.750	28.30	8.750	2.10	11.75	1.20
2.833	1.80	5.833	77.70	8.833	2.10	11.83	1.20
2.917	1.80	5.917	77.70	8.917	2.10	11.92	1.20
3.000	1.80	6.000	77.70	9.000	2.10	12.00	1.20

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.055 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 17.948
TOTAL RAINFALL (mm)= 59.100
RUNOFF COEFFICIENT = 0.304

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

| ADD HYD (0063) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
|-----| (ha) (cms) (hrs) (mm)
ID1= 1 (1102): 2.00 0.055 6.42 17.95
+ ID2= 2 (2100): 24.78 2.384 6.00 43.96
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

=====

V	V	I	SSSSS	U	U	A	L	(v 6.2.2008)
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	

W I SSSS UUUU A A LLLL
000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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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\V02\voin.dat
Output filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\8325
512a-fa74-498c-9087-70ddc04ca15d\scen
Summary filename:
C:\Users\nnapper\AppData\Local\Civica\XH5\5ff0b908-2f8f-423d-a8e6-1139e7496029\8325
512a-fa74-498c-9087-70ddc04ca15d\scen

DATE: 04/05/2023 TIME: 11:32:35

USER:

COMMENTS: _____

** SIMULATION : 5-Year_24 hour SCS **

| READ STORM | Filename: C:\Users\nnapper\AppData
| | ata\Local\Temp\
| | aa485c45-5c41-4f04-b9f7-20c929bcd42e\14234c64
| Ptotal= 65.00 mm | Comments: 5-Year_24 hour SCS

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	0.70	6.00	1.30	12.00	9.40	18.00	1.20
0.25	0.70	6.25	1.30	12.25	9.40	18.25	1.20

0.50	0.70	6.50	1.30	12.50	4.80	18.50	1.20
0.75	0.70	6.75	1.30	12.75	4.80	18.75	1.20
1.00	0.70	7.00	1.30	13.00	0.90	19.00	1.20
1.25	0.70	7.25	1.30	13.25	0.90	19.25	1.20
1.50	0.70	7.50	1.30	13.50	5.30	19.50	1.20
1.75	0.70	7.75	1.30	13.75	5.30	19.75	1.20
2.00	0.80	8.00	1.80	14.00	2.00	20.00	0.80
2.25	0.80	8.25	1.80	14.25	1.90	20.25	0.80
2.50	0.80	8.50	1.80	14.50	1.90	20.50	0.80
2.75	0.80	8.75	1.80	14.75	2.00	20.75	0.80
3.00	0.80	9.00	2.10	15.00	2.00	21.00	0.80
3.25	0.80	9.25	2.10	15.25	1.90	21.25	0.80
3.50	0.80	9.50	2.30	15.50	1.90	21.50	0.80
3.75	0.80	9.75	2.30	15.75	2.00	21.75	0.80
4.00	1.00	10.00	3.00	16.00	1.20	22.00	0.80
4.25	1.00	10.25	3.00	16.25	1.20	22.25	0.80
4.50	1.00	10.50	4.00	16.50	1.20	22.50	0.80
4.75	1.00	10.75	4.00	16.75	1.20	22.75	0.80
5.00	1.00	11.00	6.20	17.00	1.20	23.00	0.80
5.25	1.00	11.25	6.20	17.25	1.20	23.25	0.80
5.50	1.00	11.50	27.00	17.50	1.20	23.50	0.80
5.75	1.00	11.75	71.80	17.75	1.20	23.75	0.80

| CALIB |
| NASHYD (2108) | Area (ha)= 1.46 Curve Number (CN)= 60.5
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.67

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20

1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80

5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Unit Hyd Qpeak (cms)= 0.083

PEAK FLOW (cms)= 0.024 (i)

TIME TO PEAK (hrs)= 12.583

RUNOFF VOLUME (mm)= 15.940

TOTAL RAINFALL (mm)= 65.000

RUNOFF COEFFICIENT = 0.245

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

 | CALIB |
 | NASHYD (2101) | Area (ha)= 1.52 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.16

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20
1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20

1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80
5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80

5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Unit Hyd Qpeak (cms)= 0.363

PEAK FLOW (cms)= 0.080 (i)
 TIME TO PEAK (hrs)= 12.000
 RUNOFF VOLUME (mm)= 19.637
 TOTAL RAINFALL (mm)= 65.000
 RUNOFF COEFFICIENT = 0.302

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

 CALIB
 NASHYD (2102) | Area (ha)= 3.87 Curve Number (CN)= 67.1
 ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
 U.H. Tp(hrs)= 0.20

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20
1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20

1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80
5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80

6.000 1.00 12.000 71.80 18.000 1.20 24.00 0.80

Unit Hyd Qpeak (cms)= 0.739

PEAK FLOW (cms)= 0.181 (i)

TIME TO PEAK (hrs)= 12.083

RUNOFF VOLUME (mm)= 19.689

TOTAL RAINFALL (mm)= 65.000

RUNOFF COEFFICIENT = 0.303

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

 | CALIB |
 | NASHYD (2103) | Area (ha)= 3.55 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.20

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20
1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80

2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80
5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Unit Hyd Qpeak (cms)= 0.678

PEAK FLOW (cms)= 0.166 (i)
 TIME TO PEAK (hrs)= 12.083
 RUNOFF VOLUME (mm)= 19.689
 TOTAL RAINFALL (mm)= 65.000
 RUNOFF COEFFICIENT = 0.303

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

 | CALIB |
 | NASHYD (2104) | Area (ha)= 3.47 Curve Number (CN)= 67.1
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.60 # of Linear Res.(N)= 3.00
 |-----| U.H. Tp(hrs)= 0.27

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20
1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80

2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80
5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Unit Hyd Qpeak (cms)= 0.491

PEAK FLOW (cms)= 0.133 (i)
 TIME TO PEAK (hrs)= 12.167
 RUNOFF VOLUME (mm)= 19.715
 TOTAL RAINFALL (mm)= 65.000

RUNOFF COEFFICIENT = 0.303

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

CALIB			
NASHYD (2105)			
ID= 1 DT= 5.0 min			

Area (ha)=	5.95	Curve Number (CN)=	67.1
Ia (mm)=	4.60	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.37		

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20
1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80

2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80
5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Unit Hyd Qpeak (cms)= 0.614

PEAK FLOW (cms)= 0.185 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 19.723
TOTAL RAINFALL (mm)= 65.000
RUNOFF COEFFICIENT = 0.303

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

CALIB
STANDHYD (2106)
ID= 1 DT= 5.0 min

Area (ha)= 1.50
Total Imp(%)= 50.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.75
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.20	1.20
Length (m)=	100.00	166.70
Mannings n =	0.013	0.250

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20
1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80

2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80
5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Max.Eff.Inten.(mm/hr)=	71.80	27.29
over (min)	5.00	40.00
Storage Coeff. (min)=	2.76 (ii)	35.33 (ii)
Unit Hyd. Tpeak (min)=	5.00	40.00
Unit Hyd. peak (cms)=	0.28	0.03

TOTALS

PEAK FLOW (cms)=	0.15	0.03
TIME TO PEAK (hrs)=	12.00	12.50
		0.164 (iii)
		12.00

RUNOFF VOLUME (mm)=	64.00	37.22	50.60
TOTAL RAINFALL (mm)=	65.00	65.00	65.00
RUNOFF COEFFICIENT =	0.98	0.57	0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 85.0 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	Area (ha)=	3.47
STANDHYD (2107)	Total Imp(%)=	50.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.74	1.74
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.82	1.82
Length (m)=	152.10	685.00
Mannings n =	0.013	0.250

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20
1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20

1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80
5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80

5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Max.Eff.Inten.(mm/hr)=	71.80	18.84
over (min)	5.00	85.00
Storage Coeff. (min)=	3.13 (ii)	80.95 (ii)
Unit Hyd. Tpeak (min)=	5.00	85.00
Unit Hyd. peak (cms)=	0.27	0.01

PEAK FLOW (cms)=	0.34	0.04	*TOTALS*
TIME TO PEAK (hrs)=	12.00	13.25	0.355 (iii)
RUNOFF VOLUME (mm)=	64.00	37.22	50.60
TOTAL RAINFALL (mm)=	65.00	65.00	65.00
RUNOFF COEFFICIENT =	0.98	0.57	0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 85.0 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	
NASHYD (1103)	Area (ha)= 2.00 Curve Number (CN)= 69.4
ID= 1 DT= 5.0 min	Ia (mm)= 4.40 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)=	0.49

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20

1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80

5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.055 (i)
 TIME TO PEAK (hrs)= 12.417
 RUNOFF VOLUME (mm)= 21.276
 TOTAL RAINFALL (mm)= 65.000
 RUNOFF COEFFICIENT = 0.327

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

ADD HYD (0013)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (1103):	2.00	0.055	12.42	21.28
+ ID2= 2 (2101):	1.52	0.080	12.00	19.64
=====				
ID = 3 (0013):	3.52	0.116	12.08	20.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3 + 2 = 1				
ID1= 3 (0013):	3.52	0.116	12.08	20.57
+ ID2= 2 (2102):	3.87	0.181	12.08	19.69
=====				
ID = 1 (0013):	7.39	0.297	12.08	20.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0013)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				

```
ID1= 1 ( 0013):    7.39    0.297    12.08    20.11
+ ID2= 2 ( 2103):    3.55    0.166    12.08    19.69
=====
ID = 3 ( 0013):    10.94    0.463    12.08    19.97
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 3 ( 0013):    10.94    0.463    12.08    19.97
+ ID2= 2 ( 2104):    3.47    0.133    12.17    19.71
=====
ID = 1 ( 0013):    14.41    0.595    12.08    19.91
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 1 + 2 = 3 |
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 1 ( 0013):    14.41    0.595    12.08    19.91
+ ID2= 2 ( 2105):    5.95    0.185    12.25    19.72
=====
ID = 3 ( 0013):    20.36    0.755    12.08    19.86
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 3 ( 0013):    20.36    0.755    12.08    19.86
+ ID2= 2 ( 2106):    1.50    0.164    12.00    50.60
=====
ID = 1 ( 0013):    21.86    0.829    12.00    21.96
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 1 + 2 = 3 |
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 1 ( 0013):    21.86    0.829    12.00    21.96
+ ID2= 2 ( 2107):    3.47    0.355    12.00    50.60
```

```
=====
ID = 3 ( 0013):    25.33    1.184    12.00    25.89
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0013) |
| 3 + 2 = 1 |
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
ID1= 3 ( 0013):    25.33    1.184    12.00    25.89
+ ID2= 2 ( 2108):    1.46    0.024    12.58    15.94
=====
ID = 1 ( 0013):    26.79    1.193    12.00    25.35
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| RESERVOIR( 0001) |
| IN= 2---> OUT= 1 |
| DT= 5.0 min |
=====
OVERFLOW IS OFF
=====
          OUTFLOW    STORAGE    OUTFLOW    STORAGE
          (cms)    (ha.m.)    (cms)    (ha.m.)
0.0000    0.0000    1.1450    0.1930
0.3370    0.0770    1.3850    0.2270
0.6240    0.1200    1.6330    0.2640
0.8460    0.1510    0.0000    0.0000
=====
          AREA    QPEAK    TPEAK    R.V.
          (ha)    (cms)    (hrs)    (mm)
INFLOW : ID= 2 ( 0013)    26.790    1.193    12.00    25.35
OUTFLOW: ID= 1 ( 0001)    26.790    0.645    12.42    25.34
```

```
PEAK FLOW REDUCTION [Qout/Qin](%)= 54.07
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.1233
```

```
| CALIB
| NASHYD ( 1100) |
| ID= 1 DT= 5.0 min |
=====
Area (ha)= 24.78 Curve Number (CN)= 75.7
Ia (mm)= 6.20 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.70
```

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 0.70 | 6.083 1.30 | 12.083 9.41 | 18.08 1.20
```

0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20
1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80

4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80
5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Unit Hyd Qpeak (cms)= 1.352

PEAK FLOW (cms)= 0.625 (i)
 TIME TO PEAK (hrs)= 12.667
 RUNOFF VOLUME (mm)= 24.637
 TOTAL RAINFALL (mm)= 65.000
 RUNOFF COEFFICIENT = 0.379

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

CALIB			
NASHYD (1101)			
ID= 1 DT= 5.0 min			

Area (ha)=	2.00	Curve Number (CN)=	69.4
Ia (mm)=	4.40	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.49		

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20

0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20
1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80

4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80
5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.055 (i)
 TIME TO PEAK (hrs)= 12.417
 RUNOFF VOLUME (mm)= 21.276
 TOTAL RAINFALL (mm)= 65.000
 RUNOFF COEFFICIENT = 0.327

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

ADD HYD (0061)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1100):	24.78	0.625	12.67	24.64
+ ID2= 2 (1101):	2.00	0.055	12.42	21.28
=====				
ID = 3 (0061):	26.78	0.675	12.58	24.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (2100)		
ID= 1 DT= 5.0 min		
Area	(ha)=	24.78
Total Imp(%)=	45.00	Dir. Conn.(%)= 45.00
IMPERVIOUS		
PERVIOUS (i)		
Surface Area	(ha)=	11.15
Dep. Storage	(mm)=	1.00
Average Slope	(%)=	2.00
		13.63
		1.50
		2.00

Length (m)= 406.45 800.00
Mannings n = 0.013 0.250

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20
1.167	0.70	7.167	1.30	13.167	0.90	19.17	1.20
1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80
3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80

3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
4.917	1.00	10.917	4.00	16.917	1.20	22.92	0.80
5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80
5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Max.Eff.Inten.(mm/hr)= 71.80 18.84
over (min) 5.00 90.00
Storage Coeff. (min)= 5.50 (ii) 88.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 90.00
Unit Hyd. peak (cms)= 0.20 0.01

TOTALS

PEAK FLOW (cms)= 2.13 0.33 2.209 (iii)
TIME TO PEAK (hrs)= 12.00 13.33 12.00
RUNOFF VOLUME (mm)= 64.00 37.22 49.27
TOTAL RAINFALL (mm)= 65.00 65.00 65.00
RUNOFF COEFFICIENT = 0.98 0.57 0.76

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 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 |
 | NASHYD (1102) | Area (ha)= 2.00 Curve Number (CN)= 69.4
 | ID= 1 DT= 5.0 min | Ia (mm)= 4.40 # of Linear Res.(N)= 3.00

 U.H. Tp(hrs)= 0.49

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	0.70	6.083	1.30	12.083	9.41	18.08	1.20
0.167	0.70	6.167	1.30	12.167	9.40	18.17	1.20
0.250	0.70	6.250	1.30	12.250	9.40	18.25	1.20
0.333	0.70	6.333	1.30	12.333	9.40	18.33	1.20
0.417	0.70	6.417	1.30	12.417	9.40	18.42	1.20
0.500	0.70	6.500	1.30	12.500	9.40	18.50	1.20
0.583	0.70	6.583	1.30	12.583	4.80	18.58	1.20
0.667	0.70	6.667	1.30	12.667	4.80	18.67	1.20
0.750	0.70	6.750	1.30	12.750	4.80	18.75	1.20
0.833	0.70	6.833	1.30	12.833	4.80	18.83	1.20
0.917	0.70	6.917	1.30	12.917	4.80	18.92	1.20
1.000	0.70	7.000	1.30	13.000	4.80	19.00	1.20
1.083	0.70	7.083	1.30	13.083	0.90	19.08	1.20
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1.250	0.70	7.250	1.30	13.250	0.90	19.25	1.20
1.333	0.70	7.333	1.30	13.333	0.90	19.33	1.20
1.417	0.70	7.417	1.30	13.417	0.90	19.42	1.20
1.500	0.70	7.500	1.30	13.500	0.90	19.50	1.20
1.583	0.70	7.583	1.30	13.583	5.30	19.58	1.20
1.667	0.70	7.667	1.30	13.667	5.30	19.67	1.20
1.750	0.70	7.750	1.30	13.750	5.30	19.75	1.20
1.833	0.70	7.833	1.30	13.833	5.30	19.83	1.20
1.917	0.70	7.917	1.30	13.917	5.30	19.92	1.20
2.000	0.70	8.000	1.30	14.000	5.30	20.00	1.20
2.083	0.80	8.083	1.80	14.083	2.00	20.08	0.80
2.167	0.80	8.167	1.80	14.167	2.00	20.17	0.80
2.250	0.80	8.250	1.80	14.250	2.00	20.25	0.80
2.333	0.80	8.333	1.80	14.333	1.90	20.33	0.80
2.417	0.80	8.417	1.80	14.417	1.90	20.42	0.80
2.500	0.80	8.500	1.80	14.500	1.90	20.50	0.80
2.583	0.80	8.583	1.80	14.583	1.90	20.58	0.80
2.667	0.80	8.667	1.80	14.667	1.90	20.67	0.80
2.750	0.80	8.750	1.80	14.750	1.90	20.75	0.80
2.833	0.80	8.833	1.80	14.833	2.00	20.83	0.80
2.917	0.80	8.917	1.80	14.917	2.00	20.92	0.80
3.000	0.80	9.000	1.80	15.000	2.00	21.00	0.80

3.083	0.80	9.083	2.10	15.083	2.00	21.08	0.80
3.167	0.80	9.167	2.10	15.167	2.00	21.17	0.80
3.250	0.80	9.250	2.10	15.250	2.00	21.25	0.80
3.333	0.80	9.333	2.10	15.333	1.90	21.33	0.80
3.417	0.80	9.417	2.10	15.417	1.90	21.42	0.80
3.500	0.80	9.500	2.10	15.500	1.90	21.50	0.80
3.583	0.80	9.583	2.30	15.583	1.90	21.58	0.80
3.667	0.80	9.667	2.30	15.667	1.90	21.67	0.80
3.750	0.80	9.750	2.30	15.750	1.90	21.75	0.80
3.833	0.80	9.833	2.30	15.833	2.00	21.83	0.80
3.917	0.80	9.917	2.30	15.917	2.00	21.92	0.80
4.000	0.80	10.000	2.30	16.000	2.00	22.00	0.80
4.083	1.00	10.083	3.00	16.083	1.20	22.08	0.80
4.167	1.00	10.167	3.00	16.167	1.20	22.17	0.80
4.250	1.00	10.250	3.00	16.250	1.20	22.25	0.80
4.333	1.00	10.333	3.00	16.333	1.20	22.33	0.80
4.417	1.00	10.417	3.00	16.417	1.20	22.42	0.80
4.500	1.00	10.500	3.00	16.500	1.20	22.50	0.80
4.583	1.00	10.583	4.00	16.583	1.20	22.58	0.80
4.667	1.00	10.667	4.00	16.667	1.20	22.67	0.80
4.750	1.00	10.750	4.00	16.750	1.20	22.75	0.80
4.833	1.00	10.833	4.00	16.833	1.20	22.83	0.80
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5.000	1.00	11.000	4.00	17.000	1.20	23.00	0.80
5.083	1.00	11.083	6.20	17.083	1.20	23.08	0.80
5.167	1.00	11.167	6.20	17.167	1.20	23.17	0.80
5.250	1.00	11.250	6.20	17.250	1.20	23.25	0.80
5.333	1.00	11.333	6.20	17.333	1.20	23.33	0.80
5.417	1.00	11.417	6.20	17.417	1.20	23.42	0.80
5.500	1.00	11.500	6.20	17.500	1.20	23.50	0.80
5.583	1.00	11.583	27.00	17.583	1.20	23.58	0.80
5.667	1.00	11.667	27.00	17.667	1.20	23.67	0.80
5.750	1.00	11.750	27.00	17.750	1.20	23.75	0.80
5.833	1.00	11.833	71.80	17.833	1.20	23.83	0.80
5.917	1.00	11.917	71.80	17.917	1.20	23.92	0.80
6.000	1.00	12.000	71.80	18.000	1.20	24.00	0.80

Unit Hyd Qpeak (cms)= 0.156

PEAK FLOW (cms)= 0.055 (i)
 TIME TO PEAK (hrs)= 12.417
 RUNOFF VOLUME (mm)= 21.276
 TOTAL RAINFALL (mm)= 65.000
 RUNOFF COEFFICIENT = 0.327

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

ADD HYD (0063)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1102):	2.00	0.055	12.42	21.28
+ ID2= 2 (2100):	24.78	2.209	12.00	49.27
=====				
ID = 3 (0063):	26.78	2.238	12.00	47.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

Appendix D

Water Balance Analysis



Water Balance Assessment

Sheet 4 of 4



Project No: 85162
Project Name: 3491 Wallace Point Road
Designed/Checked By: NN / MJH
Date: 6-Apr-23

Characteristic	Existing	Proposed No Mitigation	Change	Proposed With Mitigation	Change
Inputs (m³/yr)					
Precipitation	211,316	211,316	0.0%	211,316	0.0%
Run-On	0	0	0.0%	0	0.0%
Other Inputs	0	0	0.0%	0	0.0%
Total Inputs	211,316	211,316	0.0%	211,316	0.0%
Outputs (m³/yr)					
Precipitation Surplus	0	0	0.0%	0	0.0%
Net Surplus	0	0	0.0%	0	0.0%
Evapotranspiration	88,579	80,256	-9.4%	80,256	-9.4%
Infiltration	54,699	50,659	-7.4%	50,659	-7.4%
Infiltration Features	0	0	0.0%	25,449	0.0%
Total Infiltration	54,699	50,659	-7.4%	76,108	39.1%
Runoff Pervious Areas	0	0	0.0%	0	0.0%
Runoff Impervious Areas	0	0	0.0%	0	0.0%
Total Runoff	67,177	70,723	5.3%	45,274	-32.6%
Total Outputs	210,455	201,638	-4.2%	201,638	-4.2%

Nitrate Dilution Calculations

	Residential	Commercial	Combined
Total Dilution Area (ha)	23.28	1.50	
No. of Lots	50	1	
Sewage Flow per Lot (L/day)	1000	4495	
Total Daily Sewage Loading (L/day)	50,000	4,495	
Nitrate in Septic Effluent (mg/L)	40	40	
Background Nitrates (mg/L)	3.04	3.04	
Stormwater Effluent Nitrates (mg/L)	0	0	
Infiltration Rates			
Infiltration Rate (Clean Water) (mm/year)	212.5	79.9	
Infiltration Rate (Clean Water) (L/day)	135,506	3,286	
Infiltration Rate (Stormwater) (mm/year)	91.5	276.8	
Infiltration Rate (Stormwater) (L/day)	58,349	11,375	
Nitrate Concentrations			
Nitrate Loading - Development (mg/day)	2,000,000	179,800	
Nitrate Loading - Rainfall (mg/day)	411,937	9,988	
Nitrate Loading - Runoff (mg/day)	0	0	
Total Nitrate Loading (mg/day)	2,411,937	189,788	
Dilution - Development (L/day)	50,000	4,495	
Dilution - Groundwater Recharge (L/day)	193,854	14,661	
Total Dilution (L/day)	243,854	19,156	
Boundary Nitrate Concentration (mg/L)	9.89	9.91	

Water Balance Summary (Existing Condition)

Area (ha) 24.78

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	347.7	169.8
1982	897.1	287.2	363.6	250.6
1983	894.5	117.8	386.3	241.9
1984	832.9	296.1	377.5	176.5
1985	1028.4	265.9	363.0	265.3
1986	896.9	300.9	340.5	222.2
1987	731.9	270.5	410.9	108.1
1988	687.0	137.4	304.7	222.8
1989	773.6	162.9	357.4	211.4
1990	1006.0	237.5	364.9	296.8
1991	720.8	184.1	315.6	185.5
1992	908.4	252.5	302.7	278.2
1993	781.0	339.3	340.5	175.9
1994	693.4	186.2	357.3	146.1
1995	1065.2	150.6	400.0	270.2
1996	952.1	279.4	354.5	281.6
1997	727.1	309.2	348.0	146.3
1998	806.2	180.9	424.5	124.3
1999	828.7	186.7	430.6	173.3
2000	897.0	98.0	343.4	277.6
2001	707.9	384.9	329.0	137.6
2002	869.1	168.9	368.1	286.5
2003	886.6	208.2	372.1	229.2
2004	1004.1	174.1	352.7	315.7
2005	759.0	151.7	369.6	172.3
2006	950.9	140.4	389.9	279.2
2007	650.5	124.1	360.4	126.6
2008	1156.5	402.8	264.7	353.9
2009	933.2	135.4	294.2	346.4
2010	655.7	84.6	389.7	150.3
Avg	852.8	211.5	357.5	220.7
Volume	211,319	52,411	88,582	54,700

Water Balance Summary - Aboveground Storage (PR-101 - No Building)

Area (ha) 1.43

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	347.8	155.5
1982	897.1	287.2	363.8	288.8
1983	894.5	117.8	407.0	271.5
1984	832.9	296.1	377.8	215.2
1985	1028.4	265.9	363.0	320.4
1986	896.9	300.9	340.3	275.0
1987	731.9	270.5	411.1	136.1
1988	687.0	137.4	378.3	195.5
1989	773.6	162.9	406.9	212.8
1990	1006.0	237.5	364.7	350.7
1991	720.8	184.1	388.1	196.9
1992	908.4	252.5	302.7	294.9
1993	781.0	339.3	340.4	209.9
1994	693.4	186.2	357.8	182.7
1995	1065.2	150.6	400.4	324.7
1996	952.1	279.4	354.5	328.4
1997	727.1	309.2	355.1	185.6
1998	806.2	180.9	431.6	149.5
1999	828.7	186.7	433.4	203.0
2000	897.0	98.0	343.3	327.9
2001	707.9	384.9	391.0	108.4
2002	869.1	168.9	401.9	314.0
2003	886.6	208.2	373.0	253.4
2004	1004.1	174.1	352.6	374.8
2005	759.0	151.7	442.9	158.4
2006	950.9	140.4	390.1	320.5
2007	650.5	124.1	401.9	144.4
2008	1156.5	402.8	264.6	406.9
2009	933.2	135.4	294.1	396.3
2010	655.7	84.6	390.0	187.5
Avg	852.8	211.5	372.3	249.6
Volume	12,195	3,025	5,325	3,570
Adj Volume*	12,195	3,025	5,325	4,619

**Monthly Infiltration Feature Summary
(PR-101 - No Building)**

Year	LID Inflow (m³)	INFIL (m³)	LID Overflow (m³)
Jan	293.4	140.7	158.4
Feb	427.3	149.0	272.5
Mar	692.0	216.9	462.4
Apr	282.0	159.9	142.0
May	193.9	139.5	50.9
Jun	191.0	133.6	60.7
Jul	144.0	86.3	55.1
Aug	161.7	99.6	60.9
Sep	146.5	111.5	32.8
Oct	142.1	127.2	24.9
Nov	306.3	191.7	94.0
Dec	303.2	187.0	123.3
Avg	273.6	145.2	128.2
Total	3283.3	1742.9	1537.9

**Adjusted Average Annual Totals for
Months with Temperature Below Zero**

m ³ /year	1567.5	1049.3	521.3
mm/yr	109.6	73.4	36.5
Capture Efficiency			66.9%

Water Balance Summary - Underground Storage (PR-101 - Building)

Area (ha) 0.09

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	49.4	0.7
1982	897.1	287.2	44.8	1.1
1983	894.5	117.8	50.1	1.3
1984	832.9	296.1	44.3	0.7
1985	1028.4	265.9	46.4	1.1
1986	896.9	300.9	46.3	0.7
1987	731.9	270.5	48.4	0.7
1988	687.0	137.4	43.0	1.3
1989	773.6	162.9	37.4	0.9
1990	1006.0	237.5	47.3	1.1
1991	720.8	184.1	45.0	1.0
1992	908.4	252.5	46.9	1.1
1993	781.0	339.3	50.7	0.8
1994	693.4	186.2	48.0	0.8
1995	1065.2	150.6	45.8	1.1
1996	952.1	279.4	39.5	1.2
1997	727.1	309.2	46.4	0.7
1998	806.2	180.9	49.2	0.7
1999	828.7	186.7	47.0	0.9
2000	897.0	98.0	45.1	1.0
2001	707.9	384.9	45.2	0.8
2002	869.1	168.9	44.6	1.4
2003	886.6	208.2	43.9	1.2
2004	1004.1	174.1	46.5	1.1
2005	759.0	151.7	46.3	0.9
2006	950.9	140.4	51.8	1.3
2007	650.5	124.1	44.1	0.8
2008	1156.5	402.8	42.8	1.1
2009	933.2	135.4	49.5	1.5
2010	655.7	84.6	43.8	0.7
Avg	852.8	211.5	46.0	1.0
Volume	768	191	42	1
Adj Volume*	768	191	42	677

**Monthly Infiltration Feature Summary
(PR-101 - Building)**

Year	LID Inflow (m³)	INFIL (m³)	LID Overflow (m³)
Jan	35.9	32.8	4.4
Feb	46.2	36.9	8.1
Mar	77.7	61.0	13.2
Apr	66.1	64.2	5.6
May	71.7	64.3	5.2
Jun	71.7	65.4	7.5
Jul	62.8	53.9	7.9
Aug	67.5	59.8	7.7
Sep	70.5	63.8	5.4
Oct	61.6	63.6	2.5
Nov	72.8	65.8	3.4
Dec	44.8	44.6	1.9
Avg	62.4	56.3	6.1
Total	749.3	676.1	72.8

**Average Annual Totals for Underground
Infiltration System**

m ³ /year	749.3	676.1	45.2
mm/yr	52.4	47.3	3.2
Capture Efficiency			90.2%

Water Balance Summary - Aboveground Storage (PR-102 - No Building)

Area (ha) 3.59

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	347.8	155.0
1982	897.1	287.2	363.8	289.5
1983	894.5	117.8	407.0	272.3
1984	832.9	296.1	377.8	215.9
1985	1028.4	265.9	363.0	321.3
1986	896.9	300.9	340.3	275.9
1987	731.9	270.5	411.1	136.6
1988	687.0	137.4	379.8	194.9
1989	773.6	162.9	406.9	213.2
1990	1006.0	237.5	364.7	351.6
1991	720.8	184.1	389.7	197.3
1992	908.4	252.5	302.7	294.7
1993	781.0	339.3	340.4	210.6
1994	693.4	186.2	357.8	183.4
1995	1065.2	150.6	400.4	325.6
1996	952.1	279.4	354.5	329.2
1997	727.1	309.2	355.1	186.4
1998	806.2	180.9	431.6	150.1
1999	828.7	186.7	433.4	203.5
2000	897.0	98.0	343.3	328.8
2001	707.9	384.9	391.0	108.8
2002	869.1	168.9	401.9	314.9
2003	886.6	208.2	373.0	253.9
2004	1004.1	174.1	352.6	375.9
2005	759.0	151.7	444.5	158.2
2006	950.9	140.4	390.1	320.8
2007	650.5	124.1	401.9	144.9
2008	1156.5	402.8	264.6	408.2
2009	933.2	135.4	294.1	397.2
2010	655.7	84.6	390.0	188.2
Avg	852.8	211.5	372.5	250.2
Volume	30,615	7,593	13,373	8,984
Adj Volume*	30,615	7,593	13,373	11,822

**Monthly Infiltration Feature Summary
(PR-102 - No Building)**

Year	LID Inflow (m³)	INFIL (m³)	LID Overflow (m³)
Jan	738.0326	391.377	359.6938
Feb	1076.3018	423.2467	636.8381
Mar	1743.444	621.0153	1086.7662
Apr	709.8197	438.9588	330.2186
May	487.4341	376.5738	101.6408
Jun	481.5213	359.1357	129.5873
Jul	364.3707	233.208	123.2016
Aug	408.8032	270.9313	133.9879
Sep	369.2003	301.182	64.453
Oct	356.7026	335.4035	47.354
Nov	768.7914	522.5829	196.9154
Dec	761.1629	510.4521	264.6377
Avg	688.8	398.7	289.6
Total	8265.6	4784.1	3475.3

**Adjusted Average Annual Totals for
Months with Temperature Below Zero**

m ³ /year	3946.6	2838.0	1127.4
mm/yr	109.9	79.1	31.4
Capture Efficiency			71.9%

Water Balance Summary - Underground Storage (PR-102 - Building)

Area (ha) 0.28

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	49.4	0.7
1982	897.1	287.2	44.8	1.1
1983	894.5	117.8	50.1	1.3
1984	832.9	296.1	44.3	0.7
1985	1028.4	265.9	46.4	1.1
1986	896.9	300.9	46.3	0.7
1987	731.9	270.5	48.4	0.7
1988	687.0	137.4	43.0	1.3
1989	773.6	162.9	37.4	0.9
1990	1006.0	237.5	47.3	1.1
1991	720.8	184.1	45.0	1.0
1992	908.4	252.5	46.9	1.1
1993	781.0	339.3	50.7	0.8
1994	693.4	186.2	48.0	0.8
1995	1065.2	150.6	45.8	1.1
1996	952.1	279.4	39.5	1.2
1997	727.1	309.2	46.4	0.7
1998	806.2	180.9	49.2	0.7
1999	828.7	186.7	47.0	0.9
2000	897.0	98.0	45.1	1.0
2001	707.9	384.9	45.2	0.8
2002	869.1	168.9	44.6	1.4
2003	886.6	208.2	43.9	1.2
2004	1004.1	174.1	46.5	1.1
2005	759.0	151.7	46.3	0.9
2006	950.9	140.4	51.8	1.3
2007	650.5	124.1	44.1	0.8
2008	1156.5	402.8	42.8	1.1
2009	933.2	135.4	49.5	1.5
2010	655.7	84.6	43.8	0.7
Avg	852.8	211.5	46.0	1.0
Volume	2,388	593	129	3
Adj Volume*	2,388	593	129	2,028

**Monthly Infiltration Feature Summary
(PR-102 - Building)**

Year	LID Inflow (m³)	INFIL (m³)	LID Overflow (m³)
Jan	107.4	98.2	13.2
Feb	138.4	110.6	24.1
Mar	232.6	182.7	39.4
Apr	197.8	192.3	16.7
May	214.7	192.6	15.5
Jun	214.5	195.8	22.4
Jul	188.0	161.5	23.5
Aug	202.1	179.2	22.8
Sep	211.1	191.3	16.2
Oct	184.5	190.5	7.4
Nov	217.8	197.0	10.1
Dec	134.0	133.6	5.7
Avg	186.9	168.8	18.1
Total	2242.9	2025.2	217.0

**Average Annual Totals for Underground
Infiltration System**

m ³ /year	2242.9	2025.2	134.7
mm/yr	62.5	56.4	3.8
Capture Efficiency			90.3%

Water Balance Summary - Aboveground Storage (PR-103 - No Building)

Area (ha) 3.36

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	347.8	157.2
1982	897.1	287.2	363.8	286.5
1983	894.5	117.8	407.0	268.6
1984	832.9	296.1	377.8	212.8
1985	1028.4	265.9	363.0	317.1
1986	896.9	300.9	340.3	271.7
1987	731.9	270.5	411.0	134.1
1988	687.0	137.4	372.9	197.7
1989	773.6	162.9	406.8	211.3
1990	1006.0	237.5	364.7	347.4
1991	720.8	184.1	382.7	195.3
1992	908.4	252.5	302.7	295.6
1993	781.0	339.3	340.4	207.8
1994	693.4	186.2	357.7	180.3
1995	1065.2	150.6	400.3	321.5
1996	952.1	279.4	354.5	325.4
1997	727.1	309.2	355.0	182.6
1998	806.2	180.9	431.6	147.4
1999	828.7	186.7	433.3	201.0
2000	897.0	98.0	343.2	324.6
2001	707.9	384.9	390.5	107.5
2002	869.1	168.9	401.9	311.1
2003	886.6	208.2	372.9	251.7
2004	1004.1	174.1	352.6	371.1
2005	759.0	151.7	437.4	159.0
2006	950.9	140.4	390.1	319.3
2007	650.5	124.1	401.8	142.7
2008	1156.5	402.8	264.6	402.4
2009	933.2	135.4	294.1	393.1
2010	655.7	84.6	389.9	185.0
Avg	852.8	211.5	371.8	247.6
Volume	28,654	7,107	12,491	8,321
Adj Volume*	28,654	7,107	12,491	10,636

**Monthly Infiltration Feature Summary
(PR-103 - No Building)**

Year	LID Inflow (m³)	INFIL (m³)	LID Overflow (m³)
Jan	696.1	296.5	411.7
Feb	1011.5	317.0	683.8
Mar	1636.2	451.4	1158.1
Apr	669.7	346.0	363.2
May	463.6	308.6	146.9
Jun	455.6	296.7	166.7
Jul	341.3	191.9	143.8
Aug	383.5	221.1	161.9
Sep	348.9	246.5	93.0
Oct	339.8	287.9	76.8
Nov	730.6	415.8	265.3
Dec	721.7	407.1	335.4
Avg	649.9	315.6	333.9
Total	7798.4	3786.6	4006.5

**Adjusted Average Annual Totals for
Months with Temperature Below Zero**

m ³ /year	3732.9	2314.6	1417.5
mm/yr	111.1	68.9	42.2
Capture Efficiency			62.0%

Water Balance Summary - Underground Storage (PR-103 - Building)

Area (ha) 0.19

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	49.4	0.7
1982	897.1	287.2	44.8	1.1
1983	894.5	117.8	50.1	1.3
1984	832.9	296.1	44.3	0.7
1985	1028.4	265.9	46.4	1.1
1986	896.9	300.9	46.3	0.7
1987	731.9	270.5	48.4	0.7
1988	687.0	137.4	43.0	1.3
1989	773.6	162.9	37.4	0.9
1990	1006.0	237.5	47.3	1.1
1991	720.8	184.1	45.0	1.0
1992	908.4	252.5	46.9	1.1
1993	781.0	339.3	50.7	0.8
1994	693.4	186.2	48.0	0.8
1995	1065.2	150.6	45.8	1.1
1996	952.1	279.4	39.5	1.2
1997	727.1	309.2	46.4	0.7
1998	806.2	180.9	49.2	0.7
1999	828.7	186.7	47.0	0.9
2000	897.0	98.0	45.1	1.0
2001	707.9	384.9	45.2	0.8
2002	869.1	168.9	44.6	1.4
2003	886.6	208.2	43.9	1.2
2004	1004.1	174.1	46.5	1.1
2005	759.0	151.7	46.3	0.9
2006	950.9	140.4	51.8	1.3
2007	650.5	124.1	44.1	0.8
2008	1156.5	402.8	42.8	1.1
2009	933.2	135.4	49.5	1.5
2010	655.7	84.6	43.8	0.7
Avg	852.8	211.5	46.0	1.0
Volume	1,621	402	88	2
Adj Volume*	1,621	402	88	1,354

**Monthly Infiltration Feature Summary
(PR-103 - Building)**

Year	LID Inflow (m³)	INFIL (m³)	LID Overflow (m³)
Jan	71.7	65.5	8.9
Feb	92.5	73.8	16.2
Mar	155.4	121.9	26.4
Apr	132.2	128.4	11.2
May	143.4	128.6	10.4
Jun	143.3	130.7	15.1
Jul	125.6	107.9	15.8
Aug	135.0	119.6	15.3
Sep	141.0	127.7	10.9
Oct	123.2	127.2	5.0
Nov	145.5	131.6	6.8
Dec	89.6	89.3	3.8
Avg	124.9	112.7	12.1
Total	1498.5	1352.3	145.7

**Average Annual Totals for Underground
Infiltration System**

m ³ /year	1498.5	1352.3	90.5
mm/yr	44.6	40.2	2.7
Capture Efficiency			90.2%

Water Balance Summary - Aboveground Storage (PR-104 - No Building)

Area (ha) 3.24

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	347.8	155.5
1982	897.1	287.2	363.8	288.8
1983	894.5	117.8	407.0	271.5
1984	832.9	296.1	377.8	215.2
1985	1028.4	265.9	363.0	320.4
1986	896.9	300.9	340.3	275.0
1987	731.9	270.5	411.1	136.1
1988	687.0	137.4	378.3	195.5
1989	773.6	162.9	406.9	212.8
1990	1006.0	237.5	364.7	350.7
1991	720.8	184.1	388.1	196.9
1992	908.4	252.5	302.7	294.9
1993	781.0	339.3	340.4	209.9
1994	693.4	186.2	357.8	182.7
1995	1065.2	150.6	400.4	324.7
1996	952.1	279.4	354.5	328.4
1997	727.1	309.2	355.1	185.6
1998	806.2	180.9	431.6	149.5
1999	828.7	186.7	433.4	203.0
2000	897.0	98.0	343.3	327.9
2001	707.9	384.9	391.0	108.4
2002	869.1	168.9	401.9	314.0
2003	886.6	208.2	373.0	253.4
2004	1004.1	174.1	352.6	374.8
2005	759.0	151.7	442.9	158.4
2006	950.9	140.4	390.1	320.5
2007	650.5	124.1	401.9	144.4
2008	1156.5	402.8	264.6	406.9
2009	933.2	135.4	294.1	396.3
2010	655.7	84.6	390.0	187.5
Avg	852.8	211.5	372.3	249.6
Volume	27,630	6,853	12,064	8,089
Adj Volume*	27,630	6,853	12,064	10,578

**Monthly Infiltration Feature Summary
(PR-104 - No Building)**

Year	LID Inflow (m³)	INFIL (m³)	LID Overflow (m³)
Jan	667.1	338.0	341.3
Feb	972.0	361.7	595.8
Mar	1573.9	529.9	1013.8
Apr	641.5	382.8	307.8
May	441.3	329.9	103.6
Jun	435.3	316.1	126.5
Jul	328.6	203.9	118.2
Aug	368.8	236.4	128.6
Sep	333.7	264.1	66.1
Oct	323.1	298.0	48.1
Nov	696.0	457.6	193.2
Dec	688.9	445.0	258.4
Avg	622.5	346.9	275.1
Total	7470.2	4163.3	3301.2

**Adjusted Average Annual Totals for
Months with Temperature Below Zero**

m ³ /year	3568.4	2488.7	1092.0
mm/yr	110.1	76.8	33.7
Capture Efficiency			69.7%

Water Balance Summary - Underground Storage (PR-104 - Building)

Area (ha) 0.23

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	49.4	0.7
1982	897.1	287.2	44.8	1.1
1983	894.5	117.8	50.1	1.3
1984	832.9	296.1	44.3	0.7
1985	1028.4	265.9	46.4	1.1
1986	896.9	300.9	46.3	0.7
1987	731.9	270.5	48.4	0.7
1988	687.0	137.4	43.0	1.3
1989	773.6	162.9	37.4	0.9
1990	1006.0	237.5	47.3	1.1
1991	720.8	184.1	45.0	1.0
1992	908.4	252.5	46.9	1.1
1993	781.0	339.3	50.7	0.8
1994	693.4	186.2	48.0	0.8
1995	1065.2	150.6	45.8	1.1
1996	952.1	279.4	39.5	1.2
1997	727.1	309.2	46.4	0.7
1998	806.2	180.9	49.2	0.7
1999	828.7	186.7	47.0	0.9
2000	897.0	98.0	45.1	1.0
2001	707.9	384.9	45.2	0.8
2002	869.1	168.9	44.6	1.4
2003	886.6	208.2	43.9	1.2
2004	1004.1	174.1	46.5	1.1
2005	759.0	151.7	46.3	0.9
2006	950.9	140.4	51.8	1.3
2007	650.5	124.1	44.1	0.8
2008	1156.5	402.8	42.8	1.1
2009	933.2	135.4	49.5	1.5
2010	655.7	84.6	43.8	0.7
Avg	852.8	211.5	46.0	1.0
Volume	1,962	487	106	3
Adj Volume*	1,962	487	106	1,691

**Monthly Infiltration Feature Summary
(PR-104 - Building)**

Year	LID Inflow (m³)	INFIL (m³)	LID Overflow (m³)
Jan	89.5	81.8	11.0
Feb	115.3	92.2	20.1
Mar	193.8	152.2	32.8
Apr	164.9	160.2	13.9
May	178.9	160.5	12.9
Jun	178.8	163.1	18.7
Jul	156.7	134.6	19.6
Aug	168.4	149.3	19.0
Sep	175.9	159.4	13.5
Oct	153.7	158.7	6.2
Nov	181.5	164.2	8.5
Dec	111.7	111.3	4.7
Avg	155.8	140.6	15.1
Total	1869.1	1687.6	180.8

**Average Annual Totals for Underground
Infiltration System**

m ³ /year	1869.1	1687.6	112.2
mm/yr	57.7	52.1	3.5
Capture Efficiency			90.3%

Water Balance Summary - Aboveground Storage (PR-105 - No Building)

Area (ha) 5.58

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	347.8	156.0
1982	897.1	287.2	363.8	288.2
1983	894.5	117.8	407.0	270.7
1984	832.9	296.1	377.8	214.5
1985	1028.4	265.9	363.0	319.4
1986	896.9	300.9	340.3	274.0
1987	731.9	270.5	411.1	135.5
1988	687.0	137.4	376.7	196.1
1989	773.6	162.9	406.9	212.4
1990	1006.0	237.5	364.7	349.8
1991	720.8	184.1	386.5	196.4
1992	908.4	252.5	302.7	295.2
1993	781.0	339.3	340.4	209.3
1994	693.4	186.2	357.7	182.0
1995	1065.2	150.6	400.4	323.8
1996	952.1	279.4	354.5	327.5
1997	727.1	309.2	355.1	184.7
1998	806.2	180.9	431.6	148.9
1999	828.7	186.7	433.4	202.4
2000	897.0	98.0	343.3	326.9
2001	707.9	384.9	391.0	108.0
2002	869.1	168.9	401.9	313.2
2003	886.6	208.2	373.0	252.9
2004	1004.1	174.1	352.6	373.8
2005	759.0	151.7	441.3	158.5
2006	950.9	140.4	390.1	320.2
2007	650.5	124.1	401.9	143.9
2008	1156.5	402.8	264.6	405.6
2009	933.2	135.4	294.1	395.4
2010	655.7	84.6	389.9	186.8
Avg	852.8	211.5	372.2	249.1
Volume	47,585	11,802	20,767	13,899
Adj Volume*	47,585	11,802	20,767	18,060

**Monthly Infiltration Feature Summary
(PR-105 - No Building)**

Year	LID Inflow (m³)	INFIL (m³)	LID Overflow (m³)
Jan	1150.9	559.3	613.8
Feb	1675.6	593.4	1058.9
Mar	2712.4	865.0	1797.1
Apr	1106.9	635.8	550.7
May	762.8	552.8	196.0
Jun	751.7	529.6	235.0
Jul	566.1	341.7	214.1
Aug	635.7	394.8	235.6
Sep	576.1	441.7	126.2
Oct	558.7	503.4	94.8
Nov	1202.9	761.1	361.3
Dec	1189.8	742.1	475.2
Avg	1074.1	576.7	496.6
Total	12889.5	6920.8	5958.7

**Adjusted Average Annual Totals for
Months with Temperature Below Zero**

m ³ /year	6160.8	4160.9	2013.7
mm/yr	110.4	74.6	36.1
Capture Efficiency			67.5%

Water Balance Summary - Underground Storage (PR-105 - Building)

Area (ha) 0.37

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	49.4	0.7
1982	897.1	287.2	44.8	1.1
1983	894.5	117.8	50.1	1.3
1984	832.9	296.1	44.3	0.7
1985	1028.4	265.9	46.4	1.1
1986	896.9	300.9	46.3	0.7
1987	731.9	270.5	48.4	0.7
1988	687.0	137.4	43.0	1.3
1989	773.6	162.9	37.4	0.9
1990	1006.0	237.5	47.3	1.1
1991	720.8	184.1	45.0	1.0
1992	908.4	252.5	46.9	1.1
1993	781.0	339.3	50.7	0.8
1994	693.4	186.2	48.0	0.8
1995	1065.2	150.6	45.8	1.1
1996	952.1	279.4	39.5	1.2
1997	727.1	309.2	46.4	0.7
1998	806.2	180.9	49.2	0.7
1999	828.7	186.7	47.0	0.9
2000	897.0	98.0	45.1	1.0
2001	707.9	384.9	45.2	0.8
2002	869.1	168.9	44.6	1.4
2003	886.6	208.2	43.9	1.2
2004	1004.1	174.1	46.5	1.1
2005	759.0	151.7	46.3	0.9
2006	950.9	140.4	51.8	1.3
2007	650.5	124.1	44.1	0.8
2008	1156.5	402.8	42.8	1.1
2009	933.2	135.4	49.5	1.5
2010	655.7	84.6	43.8	0.7
Avg	852.8	211.5	46.0	1.0
Volume	3,156	783	171	4
Adj Volume*	3,156	783	171	2,709

**Monthly Infiltration Feature Summary
(PR-105 - Building)**

Year	LID Inflow (m³)	INFIL (m³)	LID Overflow (m³)
Jan	143.5	131.1	17.7
Feb	184.9	147.7	32.3
Mar	310.8	243.9	52.8
Apr	264.3	256.8	22.4
May	286.8	257.2	20.8
Jun	286.7	261.4	30.1
Jul	251.2	215.8	31.6
Aug	270.1	239.2	30.6
Sep	282.1	255.4	21.7
Oct	246.5	254.5	10.0
Nov	291.1	263.1	13.7
Dec	179.1	178.5	7.6
Avg	249.8	225.4	24.3
Total	2997.0	2704.6	291.4

**Average Annual Totals for Underground
Infiltration System**

m ³ /year	2997.0	2704.6	180.9
mm/yr	53.7	48.5	3.2
Capture Efficiency			90.2%

Water Balance Summary - Aboveground Storage (PR-106 - No Building)

Area (ha) 1.5

Year	Precipitation (mm)	Snowmelt (mm)	Evapo- Transpiration (mm)	Ground Water Infiltration (mm)
1981	881.8	126.8	197.6	43.8
1982	897.1	287.2	203.3	96.1
1983	894.5	117.8	227.9	91.1
1984	832.9	296.1	210.1	65.6
1985	1028.4	265.9	203.7	100.9
1986	896.9	300.9	192.1	84.9
1987	731.9	270.5	228.8	40.3
1988	687.0	137.4	201.5	73.8
1989	773.6	162.9	221.7	66.4
1990	1006.0	237.5	204.8	111.0
1991	720.8	184.1	207.5	60.8
1992	908.4	252.5	173.8	100.3
1993	781.0	339.3	194.6	68.4
1994	693.4	186.2	202.2	57.0
1995	1065.2	150.6	222.1	100.4
1996	952.1	279.4	195.9	105.2
1997	727.1	309.2	200.0	56.8
1998	806.2	180.9	239.6	45.0
1999	828.7	186.7	239.2	62.0
2000	897.0	98.0	192.9	107.4
2001	707.9	384.9	212.2	36.4
2002	869.1	168.9	222.6	100.3
2003	886.6	208.2	207.6	82.7
2004	1004.1	174.1	198.3	120.9
2005	759.0	151.7	235.2	52.3
2006	950.9	140.4	220.1	102.9
2007	650.5	124.1	222.4	53.0
2008	1156.5	402.8	152.7	115.7
2009	933.2	135.4	170.7	137.5
2010	655.7	84.6	215.9	59.4
Avg	852.8	211.5	207.2	79.9
Volume	12,792	3,173	3,109	1,200
Adj Volume*	12,792	3,173	3,109	5,352

**Monthly Infiltration Feature Summary
(PR-106 - No Building)**

Year	LID Inflow (m³)	INFIL (m³)	LID Overflow (m³)
Jan	485.3	320.8	178.8
Feb	642.0	326.4	301.8
Mar	1060.1	514.9	513.8
Apr	752.7	557.3	226.4
May	764.0	538.6	205.7
Jun	746.9	531.9	231.1
Jul	619.8	435.3	177.2
Aug	665.6	473.2	195.7
Sep	685.0	501.1	172.9
Oct	614.9	545.5	101.1
Nov	826.5	569.0	214.9
Dec	580.5	462.6	142.7
Avg	703.6	481.4	221.8
Total	8443.2	5776.5	2662.2

**Adjusted Average Annual Totals for
Months with Temperature Below Zero**

m ³ /year	5675.3	4151.9	1525.1
mm/yr	378.4	276.8	101.7
Capture Efficiency			73.2%

Appendix E

Oil-Grit Separator Sizing Sheets



Stormceptor® EF Sizing Report

STORMCEPTOR®

ESTIMATED NET ANNUAL SEDIMENT (TSS) LOAD REDUCTION

04/24/2023

Province:	Ontario	Project Name:	3491 Wallace Point Road
City:	Otonabee-South Monaghan	Project Number:	85162
Nearest Rainfall Station:	PETERBOROUGH	Designer Name:	Nate Napper
Climate Station Id:	6166456	Designer Company:	D.M. Wills Associates Limited
Years of Rainfall Data:	15	Designer Email:	nnapper@dmwills.com
		Designer Phone:	705-742-2297
Site Name:	Wallace Point Rd - ETV Updated	EOR Name:	
		EOR Company:	
Drainage Area (ha):	5.47	EOR Email:	
% Imperviousness:	40.00	EOR Phone:	
Runoff Coefficient 'c': 0.54			

Particle Size Distribution:	CA ETV
Target TSS Removal (%):	60.0

Required Water Quality Runoff Volume Capture (%):	90.00
Estimated Water Quality Flow Rate (L/s):	106.60
Oil / Fuel Spill Risk Site?	No
Upstream Flow Control?	No
Peak Conveyance (maximum) Flow Rate (L/s):	1626.00
Site Sediment Transport Rate (kg/ha/yr):	480.00
Estimated Average Annual Sediment Load (kg/yr):	1417.82

Net Annual Sediment (TSS) Load Reduction Sizing Summary

Stormceptor Model	TSS Removal Provided (%)
EF4	37
EF6	46
EF8	52
EF10	56
EF12	59

Recommended Stormceptor EF Model: **Parallel Models**

Estimated Net Annual Sediment (TSS) Load Reduction (%): **Parallel Models**

Water Quality Runoff Volume Capture (%): **N/A**

Stormceptor® EF Sizing Report

THIRD-PARTY TESTING AND VERIFICATION

► **Stormceptor® EF and Stormceptor® EFO** are the latest evolutions in the Stormceptor® oil-grit separator (OGS) technology series, and are designed to remove a wide variety of pollutants from stormwater and snowmelt runoff. These technologies have been third-party tested in accordance with the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators** and performance has been third-party verified in accordance with the **ISO 14034 Environmental Technology Verification (ETV)** protocol.

PERFORMANCE

► **Stormceptor® EF and EFO** remove stormwater pollutants through gravity separation and floatation, and feature a patent-pending design that generates positive removal of total suspended solids (TSS) throughout each storm event, including high-intensity storms. Captured pollutants include sediment, free oils, and sediment-bound pollutants such as nutrients, heavy metals, and petroleum hydrocarbons. Stormceptor is sized to remove a high level of TSS from the frequent rainfall events that contribute the vast majority of annual runoff volume and pollutant load. The technology incorporates an internal bypass to convey excessive stormwater flows from high-intensity storms through the device without resuspension and washout (scour) of previously captured pollutants. Proper routine maintenance ensures high pollutant removal performance and protection of downstream waterways.

PARTICLE SIZE DISTRIBUTION (PSD)

► The **Canadian ETV PSD** shown in the table below was used, or in part, for this sizing. This is the identical PSD that is referenced in the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators** for both sediment removal testing and scour testing. The Canadian ETV PSD contains a wide range of particle sizes in the sand and silt fractions, and is considered reasonably representative of the particle size fractions found in typical urban stormwater runoff.

Particle Size (µm)	Percent Less Than	Particle Size Fraction (µm)	Percent
1000	100	500-1000	5
500	95	250-500	5
250	90	150-250	15
150	75	100-150	15
100	60	75-100	10
75	50	50-75	5
50	45	20-50	10
20	35	8-20	15
8	20	5-8	10
5	10	2-5	5
2	5	<2	5

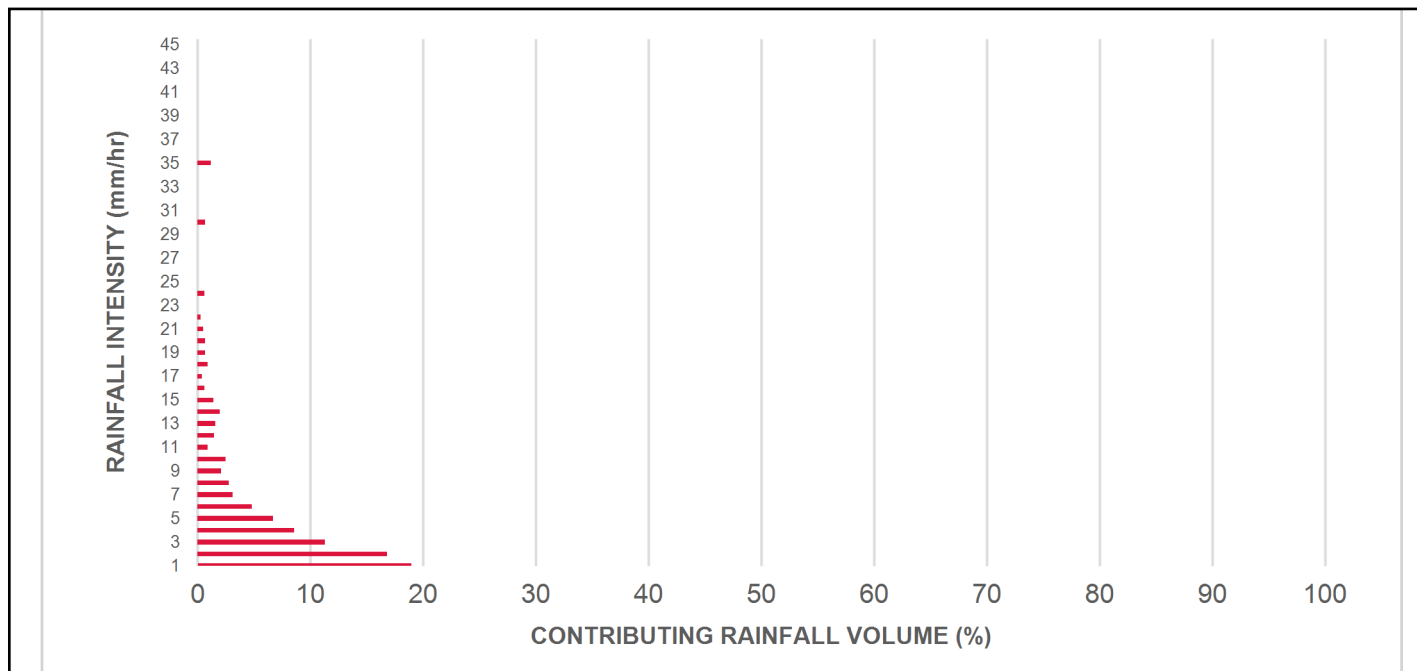
Stormceptor®EF Sizing Report

Rainfall Intensity (mm / hr)	Percent Rainfall Volume (%)	Cumulative Rainfall Volume (%)	Flow Rate (L/s)	Flow Rate (L/min)	Surface Loading Rate (L/min/m²)	Removal Efficiency (%)	Incremental Removal (%)	Cumulative Removal (%)
0.5	8.5	8.5	4.11	246.0	N/A	N/A	N/A	N/A
1	19.0	27.5	8.21	493.0	N/A	N/A	N/A	N/A
2	16.8	44.3	16.42	985.0	N/A	N/A	N/A	N/A
3	11.3	55.6	24.63	1478.0	N/A	N/A	N/A	N/A
4	8.6	64.2	32.85	1971.0	N/A	N/A	N/A	N/A
5	6.7	70.9	41.06	2463.0	N/A	N/A	N/A	N/A
6	4.8	75.6	49.27	2956.0	N/A	N/A	N/A	N/A
7	3.1	78.7	57.48	3449.0	N/A	N/A	N/A	N/A
8	2.8	81.5	65.69	3942.0	N/A	N/A	N/A	N/A
9	2.1	83.6	73.90	4434.0	N/A	N/A	N/A	N/A
10	2.5	86.1	82.12	4927.0	N/A	N/A	N/A	N/A
11	0.9	87.0	90.33	5420.0	N/A	N/A	N/A	N/A
12	1.5	88.5	98.54	5912.0	N/A	N/A	N/A	N/A
13	1.6	90.0	106.75	6405.0	N/A	N/A	N/A	N/A
14	2.0	92.0	114.96	6898.0	N/A	N/A	N/A	N/A
15	1.4	93.5	123.17	7390.0	N/A	N/A	N/A	N/A
16	0.6	94.1	131.39	7883.0	N/A	N/A	N/A	N/A
17	0.4	94.5	139.60	8376.0	N/A	N/A	N/A	N/A
18	0.9	95.3	147.81	8868.0	N/A	N/A	N/A	N/A
19	0.7	96.0	156.02	9361.0	N/A	N/A	N/A	N/A
20	0.7	96.7	164.23	9854.0	N/A	N/A	N/A	N/A
21	0.5	97.2	172.44	10347.0	N/A	N/A	N/A	N/A
22	0.3	97.5	180.65	10839.0	N/A	N/A	N/A	N/A
23	0.0	97.5	188.87	11332.0	N/A	N/A	N/A	N/A
24	0.6	98.1	197.08	11825.0	N/A	N/A	N/A	N/A
25	0.0	98.1	205.29	12317.0	N/A	N/A	N/A	N/A
30	0.7	98.8	246.35	14781.0	N/A	N/A	N/A	N/A
35	1.2	100.0	287.40	17244.0	N/A	N/A	N/A	N/A
40	0.0	100.0	328.46	19708.0	N/A	N/A	N/A	N/A
45	0.0	100.0	369.52	22171.0	N/A	N/A	N/A	N/A
Estimated Net Annual Sediment (TSS) Load Reduction =								0 %

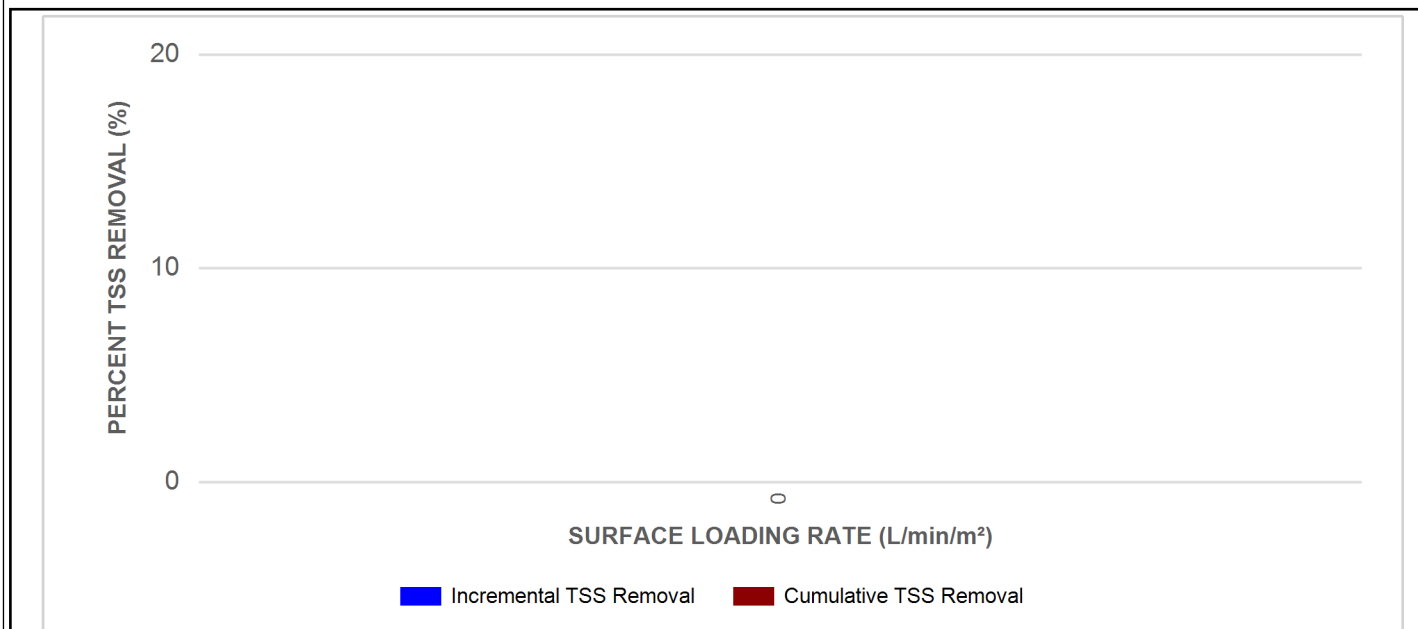
Climate Station ID: 6166456 Years of Rainfall Data: 15

Stormceptor®EF Sizing Report

RAINFALL DATA FROM PETERBOROUGH RAINFALL STATION



INCREMENTAL AND CUMULATIVE TSS REMOVAL FOR THE RECOMMENDED STORMCEPTOR® MODEL



Stormceptor® EF Sizing Report

Maximum Pipe Diameter / Peak Conveyance

Stormceptor EF / EFO	Model Diameter		Min Angle Inlet / Outlet Pipes	Max Inlet Pipe Diameter		Max Outlet Pipe Diameter		Peak Conveyance Flow Rate	
	(m)	(ft)		(mm)	(in)	(mm)	(in)	(L/s)	(cfs)
EF4 / EFO4	1.2	4	90	609	24	609	24	425	15
EF6 / EFO6	1.8	6	90	914	36	914	36	990	35
EF8 / EFO8	2.4	8	90	1219	48	1219	48	1700	60
EF10 / EFO10	3.0	10	90	1828	72	1828	72	2830	100
EF12 / EFO12	3.6	12	90	1828	72	1828	72	2830	100

SCOUR PREVENTION AND ONLINE CONFIGURATION

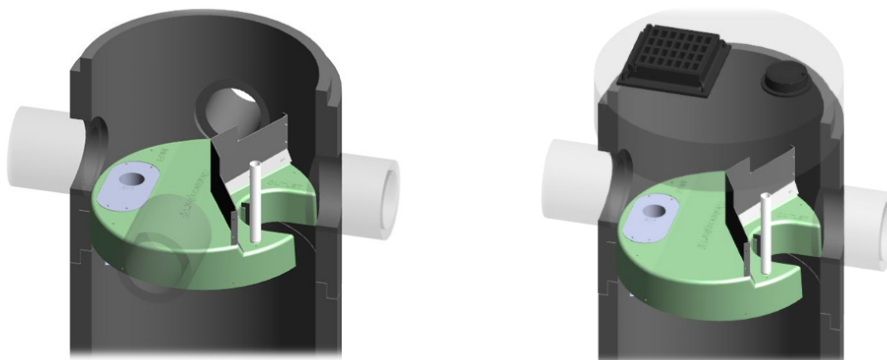
► **Stormceptor® EF and EFO** feature an internal bypass and superior scour prevention technology that have been demonstrated in third-party testing according to the scour testing provisions of the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators**, and the exceptional scour test performance has been third-party verified in accordance with the ISO 14034 ETV protocol. As a result, Stormceptor EF and EFO are approved for online installation, eliminating the need for costly additional bypass structures, piping, and installation expense.

DESIGN FLEXIBILITY

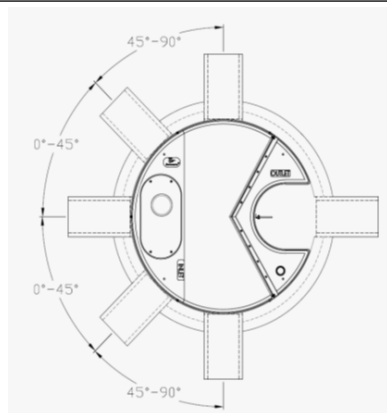
► **Stormceptor® EF and EFO** offers design flexibility in one simplified platform, accepting stormwater flow from a single inlet pipe or multiple inlet pipes, and/or surface runoff through an inlet grate. The device can also serve as a junction structure, accommodate a 90-degree inlet-to-outlet bend angle, and can be modified to ensure performance in submerged conditions.

OIL CAPTURE AND RETENTION

► While Stormceptor® EF will capture and retain oil from dry weather spills and low intensity runoff, **Stormceptor® EFO** has demonstrated superior oil capture and greater than 99% oil retention in third-party testing according to the light liquid re-entrainment testing provisions of the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators**. Stormceptor EFO is recommended for sites where oil capture and retention is a requirement.



Stormceptor® EF Sizing Report



INLET-TO-OUTLET DROP

Elevation differential between inlet and outlet pipe inverts is dictated by the angle at which the inlet pipe(s) enters the unit.

0° - 45° : The inlet pipe is 1-inch (25mm) higher than the outlet pipe.

45° - 90° : The inlet pipe is 2-inches (50mm) higher than the outlet pipe.

HEAD LOSS

The head loss through Stormceptor EF is similar to that of a 60-degree bend structure. The applicable K value for calculating minor losses through the unit is 1.1.

For submerged conditions the applicable K value is 3.0.

Pollutant Capacity

Stormceptor EF / EFO	Model Diameter		Depth (Outlet Pipe Invert to Sump Floor)		Oil Volume		Recommended Sediment Maintenance Depth *		Maximum Sediment Volume *		Maximum Sediment Mass **	
	(m)	(ft)	(m)	(ft)	(L)	(Gal)	(mm)	(in)	(L)	(ft³)	(kg)	(lb)
EF4 / EFO4	1.2	4	1.52	5.0	265	70	203	8	1190	42	1904	5250
EF6 / EFO6	1.8	6	1.93	6.3	610	160	305	12	3470	123	5552	15375
EF8 / EFO8	2.4	8	2.59	8.5	1070	280	610	24	8780	310	14048	38750
EF10 / EFO10	3.0	10	3.25	10.7	1670	440	610	24	17790	628	28464	78500
EF12 / EFO12	3.6	12	3.89	12.8	2475	655	610	24	31220	1103	49952	137875

*Increased sump depth may be added to increase sediment storage capacity

** Average density of wet packed sediment in sump = 1.6 kg/L (100 lb/ft³)

Feature	Benefit	Feature Appeals To
Patent-pending enhanced flow treatment and scour prevention technology	Superior, verified third-party performance	Regulator, Specifying & Design Engineer
Third-party verified light liquid capture and retention for EFO version	Proven performance for fuel/oil hotspot locations	Regulator, Specifying & Design Engineer, Site Owner
Functions as bend, junction or inlet structure	Design flexibility	Specifying & Design Engineer
Minimal drop between inlet and outlet	Site installation ease	Contractor
Large diameter outlet riser for inspection and maintenance	Easy maintenance access from grade	Maintenance Contractor & Site Owner

STANDARD STORMCEPTOR EF/EFO DRAWINGS

For standard details, please visit <http://www.imbriumsystems.com/stormwater-treatment-solutions/stormceptor-ef>

STANDARD STORMCEPTOR EF/EFO SPECIFICATION

For specifications, please visit <http://www.imbriumsystems.com/stormwater-treatment-solutions/stormceptor-ef>

Stormceptor® EF Sizing Report

**Table of TSS Removal vs Surface Loading Rate Based on Third-Party Test Results
Stormceptor® EF**

SLR (L/min/m²)	TSS % REMOVAL	SLR (L/min/m²)	TSS % REMOVAL	SLR (L/min/m²)	TSS % REMOVAL	SLR (L/min/m²)	TSS % REMOVAL
1	70	660	46	1320	48	1980	35
30	70	690	46	1350	48	2010	34
60	67	720	45	1380	49	2040	34
90	63	750	45	1410	49	2070	33
120	61	780	45	1440	48	2100	33
150	58	810	45	1470	47	2130	32
180	56	840	45	1500	46	2160	32
210	54	870	45	1530	45	2190	31
240	53	900	45	1560	44	2220	31
270	52	930	44	1590	43	2250	30
300	51	960	44	1620	42	2280	30
330	50	990	44	1650	42	2310	30
360	49	1020	44	1680	41	2340	29
390	48	1050	45	1710	40	2370	29
420	48	1080	45	1740	39	2400	29
450	48	1110	45	1770	39	2430	28
480	47	1140	46	1800	38	2460	28
510	47	1170	46	1830	37	2490	28
540	47	1200	47	1860	37	2520	27
570	46	1230	47	1890	36	2550	27
600	46	1260	47	1920	36	2580	27
630	46	1290	48	1950	35		

Stormceptor® EF Sizing Report

STANDARD PERFORMANCE SPECIFICATION FOR “OIL GRIT SEPARATOR” (OGS) STORMWATER QUALITY TREATMENT DEVICE

PART 1 – GENERAL

1.1 WORK INCLUDED

This section specifies requirements for selecting, sizing, and designing an underground Oil Grit Separator (OGS) device for stormwater quality treatment, with third-party testing results and a Statement of Verification in accordance with ISO 14034 Environmental Management – Environmental Technology Verification (ETV).

1.2 REFERENCE STANDARDS & PROCEDURES

ISO 14034:2016 Environmental management – Environmental technology verification (ETV)

Canadian Environmental Technology Verification (ETV) Program’s **Procedure for Laboratory Testing of Oil-Grit Separators**.

1.3 SUBMITTALS

1.3.1 All submittals, including sizing reports & shop drawings, shall be submitted upon request with each order to the contractor then forwarded to the Engineer of Record for review and acceptance. Shop drawings shall detail all OGS components, elevations, and sequence of construction.

1.3.2 Alternative devices shall have features identical to or greater than the specified device, including: treatment chamber diameter, treatment chamber wet volume, sediment storage volume, and oil storage volume.

1.3.3 Unless directed otherwise by the Engineer of Record, OGS stormwater quality treatment product substitutions or alternatives submitted within ten days prior to project bid shall not be accepted. All alternatives or substitutions submitted shall be signed and sealed by a local registered Professional Engineer, based on the exact same criteria detailed in Section 3, in entirety, subject to review and approval by the Engineer of Record.

PART 2 – PRODUCTS

2.1 OGS POLLUTANT STORAGE

The OGS device shall include a sump for sediment storage, and a protected volume for the capture and storage of petroleum hydrocarbons and buoyant gross pollutants. The **minimum** sediment & petroleum hydrocarbon storage capacity shall be as follows:

2.1.1	4 ft (1219 mm) Diameter OGS Units:	1.19 m ³ sediment / 265 L oil
	6 ft (1829 mm) Diameter OGS Units:	3.48 m ³ sediment / 609 L oil
	8 ft (2438 mm) Diameter OGS Units:	8.78 m ³ sediment / 1,071 L oil
	10 ft (3048 mm) Diameter OGS Units:	17.78 m ³ sediment / 1,673 L oil
	12 ft (3657 mm) Diameter OGS Units:	31.23 m ³ sediment / 2,476 L oil

PART 3 – PERFORMANCE & DESIGN

3.1 GENERAL

Stormceptor®EF Sizing Report

The OGS stormwater quality treatment device shall be verified in accordance with ISO 14034:2016 Environmental management – Environmental technology verification (ETV). The OGS stormwater quality treatment device shall remove oil, sediment and gross pollutants from stormwater runoff during frequent wet weather events, and retain these pollutants during less frequent high flow wet weather events below the insert within the OGS for later removal during maintenance. The Manufacturer shall have at least ten (10) years of local experience, history and success in engineering design, manufacturing and production and supply of OGS stormwater quality treatment device systems, acceptable to the Engineer of Record.

3.2 SIZING METHODOLOGY

The OGS device shall be engineered, designed and sized to provide stormwater quality treatment based on treating a minimum of 90 percent of the average annual runoff volume and a minimum removal of an annual average 60% of the sediment (TSS) load based on the Particle Size Distribution (PSD) specified in the sizing report for the specified device. Sizing of the OGS shall be determined by use of a minimum ten (10) years of local historical rainfall data provided by Environment Canada. Sizing shall also be determined by use of the sediment removal performance data derived from the ISO 14034 ETV third-party verified laboratory testing data from testing conducted in accordance with the Canadian ETV protocol Procedure for Laboratory Testing of Oil-Grit Separators, as follows:

3.2.1 Sediment removal efficiency for a given surface loading rate and its associated flow rate shall be based on sediment removal efficiency demonstrated at the seven (7) tested surface loading rates specified in the protocol, ranging 40 L/min/m² to 1400 L/min/m², and as stated in the ISO 14034 ETV Verification Statement for the OGS device.

3.2.2 Sediment removal efficiency for surface loading rates between 40 L/min/m² and 1400 L/min/m² shall be based on linear interpolation of data between consecutive tested surface loading rates.

3.2.3 Sediment removal efficiency for surface loading rates less than the lowest tested surface loading rate of 40 L/min/m² shall be assumed to be identical to the sediment removal efficiency at 40 L/min/m². No extrapolation shall be allowed that results in a sediment removal efficiency that is greater than that demonstrated at 40 L/min/m².

3.2.4 Sediment removal efficiency for surface loading rates greater than the highest tested surface loading rate of 1400 L/min/m² shall assume zero sediment removal for the portion of flow that exceeds 1400 L/min/m², and shall be calculated using a simple proportioning formula, with 1400 L/min/m² in the numerator and the higher surface loading rate in the denominator, and multiplying the resulting fraction times the sediment removal efficiency at 1400 L/min/m².

The OGS device shall also have sufficient annual sediment storage capacity as specified and calculated in Section 2.1.

3.3 CANADIAN ETV or ISO 14034 ETV VERIFICATION OF SCOUR TESTING

The OGS device shall have Canadian ETV or ISO 14034 ETV Verification of third-party scour testing conducted in accordance with the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators**.

3.3.1 To be acceptable for on-line installation, the OGS device must demonstrate an average scour test effluent concentration less than 10 mg/L at each surface loading rate tested, up to and including 2600 L/min/m².

Stormceptor®EF Sizing Report

assess whether light liquids captured after a spill are effectively retained at high flow rates.

3.4.1 For an OGS device to be an acceptable stormwater treatment device on a site where vehicular traffic occurs and the potential for an oil or fuel spill exists, the OGS device must have reported verified performance results of greater than 99% cumulative retention of LDPE plastic beads for the five specified surface loading rates (ranging 200 L/min/m² to 2600 L/min/m²) in accordance with the Light Liquid Re-entrainment Simulation Testing within the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators**. However, an OGS device shall not be allowed if the Light Liquid Re-entrainment Simulation Testing was performed with screening components within the OGS device that are effective at retaining the LDPE plastic beads, but would not be expected to retain light liquids such as oil and fuel.

Stormceptor®EF Sizing Report

STORMCEPTOR®

ESTIMATED NET ANNUAL SEDIMENT (TSS) LOAD REDUCTION

04/06/2023

Province:	Ontario	Project Name:	3491 Wallace Point Road
City:	Otonabee-South Monaghan	Project Number:	85162
Nearest Rainfall Station:	PETERBOROUGH	Designer Name:	Nate Napper
Climate Station Id:	6166456	Designer Company:	D.M. Wills Associates Limited
Years of Rainfall Data:	15	Designer Email:	nnapper@dmwills.com
Site Name:		Designer Phone:	705-742-2297
Drainage Area (ha):	5.47	EOR Name:	
% Imperviousness:	40.00	EOR Company:	
Runoff Coefficient 'c': 0.54		EOR Email:	
Particle Size Distribution:	Fine	EOR Phone:	
Target TSS Removal (%):	80.0		

Required Water Quality Runoff Volume Capture (%):	90.00
Estimated Water Quality Flow Rate (L/s):	106.60
Oil / Fuel Spill Risk Site?	No
Upstream Flow Control?	No
Peak Conveyance (maximum) Flow Rate (L/s):	1626.00
Site Sediment Transport Rate (kg/ha/yr):	480.00
Estimated Average Annual Sediment Load (kg/yr):	1417.82

Net Annual Sediment (TSS) Load Reduction Sizing Summary

Stormceptor Model	TSS Removal Provided (%)
EF4	57
EF6	71
EF8	79
EF10	85
EF12	88

Recommended Stormceptor EF Model: **EF10**
 Estimated Net Annual Sediment (TSS) Load Reduction (%): **85**
 Water Quality Runoff Volume Capture (%): **> 90**

Stormceptor® EF Sizing Report

THIRD-PARTY TESTING AND VERIFICATION

► **Stormceptor® EF and Stormceptor® EFO** are the latest evolutions in the Stormceptor® oil-grit separator (OGS) technology series, and are designed to remove a wide variety of pollutants from stormwater and snowmelt runoff. These technologies have been third-party tested in accordance with the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators** and performance has been third-party verified in accordance with the **ISO 14034 Environmental Technology Verification (ETV)** protocol.

PERFORMANCE

► **Stormceptor® EF and EFO** remove stormwater pollutants through gravity separation and floatation, and feature a patent-pending design that generates positive removal of total suspended solids (TSS) throughout each storm event, including high-intensity storms. Captured pollutants include sediment, free oils, and sediment-bound pollutants such as nutrients, heavy metals, and petroleum hydrocarbons. Stormceptor is sized to remove a high level of TSS from the frequent rainfall events that contribute the vast majority of annual runoff volume and pollutant load. The technology incorporates an internal bypass to convey excessive stormwater flows from high-intensity storms through the device without resuspension and washout (scour) of previously captured pollutants. Proper routine maintenance ensures high pollutant removal performance and protection of downstream waterways.

PARTICLE SIZE DISTRIBUTION (PSD)

► The **Canadian ETV PSD** shown in the table below was used, or in part, for this sizing. This is the identical PSD that is referenced in the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators** for both sediment removal testing and scour testing. The Canadian ETV PSD contains a wide range of particle sizes in the sand and silt fractions, and is considered reasonably representative of the particle size fractions found in typical urban stormwater runoff.

Particle Size (µm)	Percent Less Than	Particle Size Fraction (µm)	Percent
1000	100	500-1000	5
500	95	250-500	5
250	90	150-250	15
150	75	100-150	15
100	60	75-100	10
75	50	50-75	5
50	45	20-50	10
20	35	8-20	15
8	20	5-8	10
5	10	2-5	5
2	5	<2	5

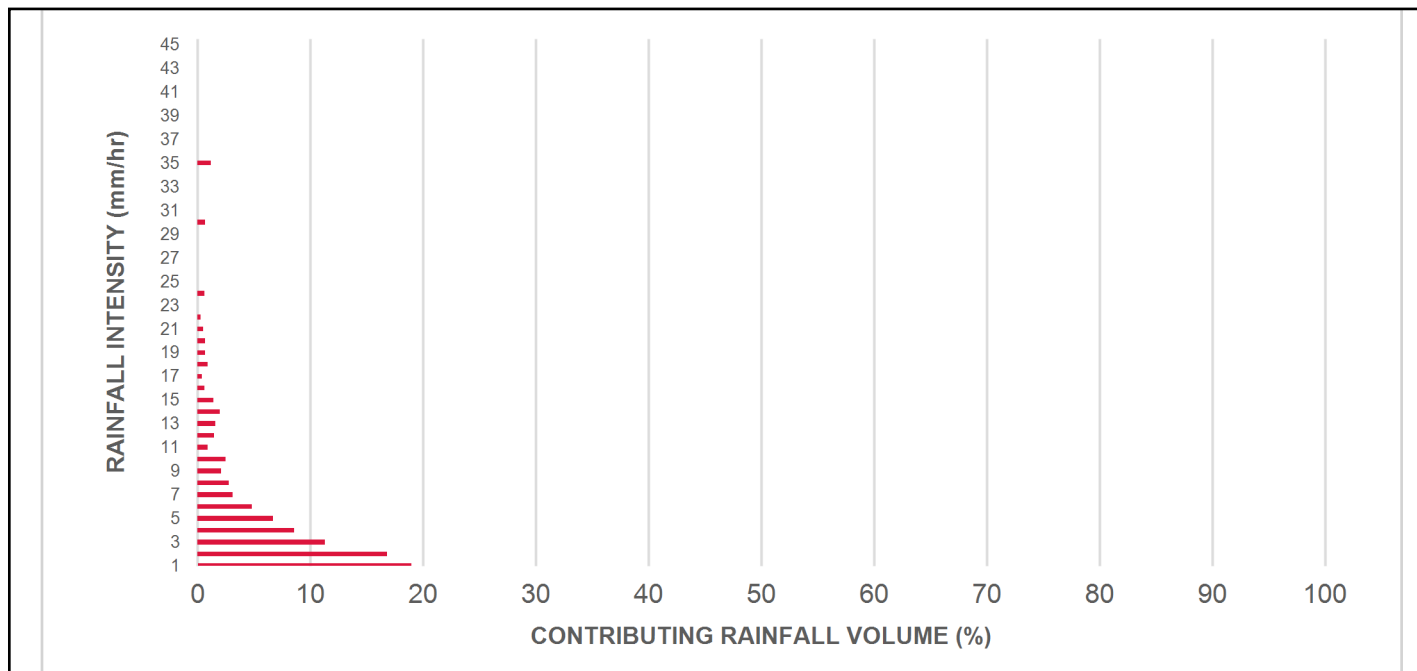
Stormceptor®EF Sizing Report

Rainfall Intensity (mm / hr)	Percent Rainfall Volume (%)	Cumulative Rainfall Volume (%)	Flow Rate (L/s)	Flow Rate (L/min)	Surface Loading Rate (L/min/m²)	Removal Efficiency (%)	Incremental Removal (%)	Cumulative Removal (%)
0.5	8.5	8.5	4.11	246.0	34.0	100	8.5	8.5
1	19.0	27.5	8.21	493.0	67.0	100	19.0	27.5
2	16.8	44.3	16.42	985.0	135.0	92	15.5	43.0
3	11.3	55.6	24.63	1478.0	202.0	83	9.4	52.4
4	8.6	64.2	32.85	1971.0	270.0	80	6.8	59.2
5	6.7	70.9	41.06	2463.0	337.0	77	5.2	64.4
6	4.8	75.6	49.27	2956.0	405.0	74	3.5	67.9
7	3.1	78.7	57.48	3449.0	472.0	73	2.2	70.1
8	2.8	81.5	65.69	3942.0	540.0	72	2.0	72.1
9	2.1	83.6	73.90	4434.0	607.0	71	1.5	73.6
10	2.5	86.1	82.12	4927.0	675.0	70	1.8	75.4
11	0.9	87.0	90.33	5420.0	742.0	70	0.6	76.0
12	1.5	88.5	98.54	5912.0	810.0	69	1.0	77.0
13	1.6	90.0	106.75	6405.0	877.0	69	1.1	78.1
14	2.0	92.0	114.96	6898.0	945.0	68	1.4	79.5
15	1.4	93.5	123.17	7390.0	1012.0	68	1.0	80.4
16	0.6	94.1	131.39	7883.0	1080.0	69	0.4	80.8
17	0.4	94.5	139.60	8376.0	1147.0	70	0.3	81.1
18	0.9	95.3	147.81	8868.0	1215.0	72	0.6	81.7
19	0.7	96.0	156.02	9361.0	1282.0	73	0.5	82.2
20	0.7	96.7	164.23	9854.0	1350.0	74	0.5	82.8
21	0.5	97.2	172.44	10347.0	1417.0	75	0.4	83.1
22	0.3	97.5	180.65	10839.0	1485.0	71	0.2	83.3
23	0.0	97.5	188.87	11332.0	1552.0	68	0.0	83.3
24	0.6	98.1	197.08	11825.0	1620.0	65	0.4	83.7
25	0.0	98.1	205.29	12317.0	1687.0	63	0.0	83.7
30	0.7	98.8	246.35	14781.0	2025.0	52	0.4	84.1
35	1.2	100.0	287.40	17244.0	2362.0	45	0.5	84.6
40	0.0	100.0	328.46	19708.0	2700.0	39	0.0	84.6
45	0.0	100.0	369.52	22171.0	3037.0	35	0.0	84.6
Estimated Net Annual Sediment (TSS) Load Reduction =								85 %

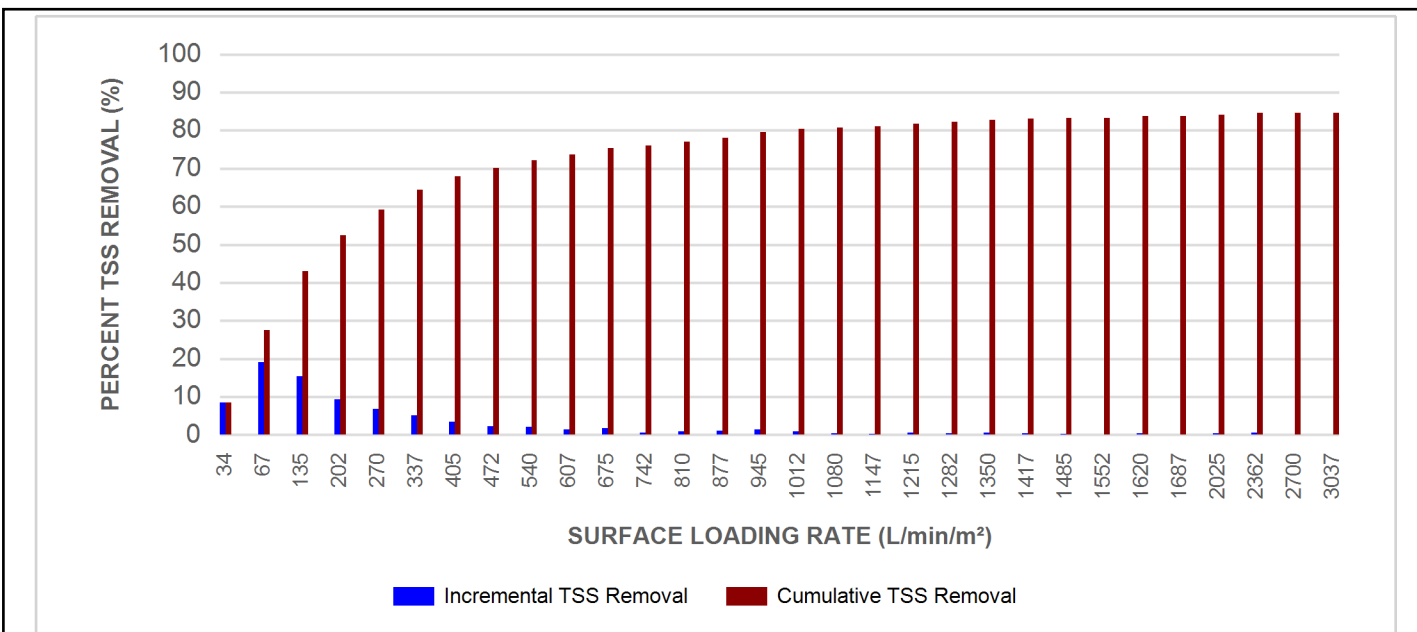
Climate Station ID: 6166456 Years of Rainfall Data: 15

Stormceptor®EF Sizing Report

RAINFALL DATA FROM PETERBOROUGH RAINFALL STATION



INCREMENTAL AND CUMULATIVE TSS REMOVAL FOR THE RECOMMENDED STORMCEPTOR® MODEL



Stormceptor® EF Sizing Report

Maximum Pipe Diameter / Peak Conveyance

Stormceptor EF / EFO	Model Diameter		Min Angle Inlet / Outlet Pipes	Max Inlet Pipe Diameter		Max Outlet Pipe Diameter		Peak Conveyance Flow Rate	
	(m)	(ft)		(mm)	(in)	(mm)	(in)	(L/s)	(cfs)
EF4 / EFO4	1.2	4	90	609	24	609	24	425	15
EF6 / EFO6	1.8	6	90	914	36	914	36	990	35
EF8 / EFO8	2.4	8	90	1219	48	1219	48	1700	60
EF10 / EFO10	3.0	10	90	1828	72	1828	72	2830	100
EF12 / EFO12	3.6	12	90	1828	72	1828	72	2830	100

SCOUR PREVENTION AND ONLINE CONFIGURATION

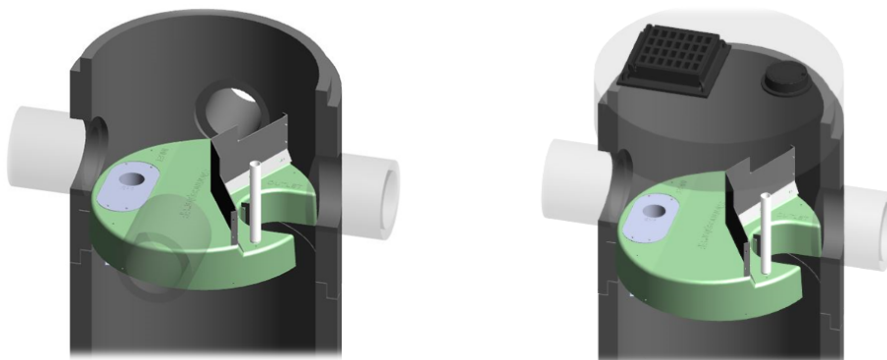
► **Stormceptor® EF and EFO** feature an internal bypass and superior scour prevention technology that have been demonstrated in third-party testing according to the scour testing provisions of the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators**, and the exceptional scour test performance has been third-party verified in accordance with the ISO 14034 ETV protocol. As a result, Stormceptor EF and EFO are approved for online installation, eliminating the need for costly additional bypass structures, piping, and installation expense.

DESIGN FLEXIBILITY

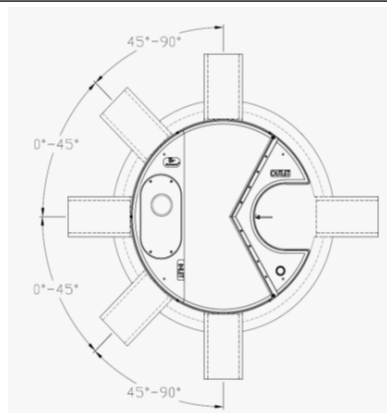
► **Stormceptor® EF and EFO** offers design flexibility in one simplified platform, accepting stormwater flow from a single inlet pipe or multiple inlet pipes, and/or surface runoff through an inlet grate. The device can also serve as a junction structure, accommodate a 90-degree inlet-to-outlet bend angle, and can be modified to ensure performance in submerged conditions.

OIL CAPTURE AND RETENTION

► While Stormceptor® EF will capture and retain oil from dry weather spills and low intensity runoff, **Stormceptor® EFO** has demonstrated superior oil capture and greater than 99% oil retention in third-party testing according to the light liquid re-entrainment testing provisions of the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators**. Stormceptor EFO is recommended for sites where oil capture and retention is a requirement.



Stormceptor® EF Sizing Report



INLET-TO-OUTLET DROP

Elevation differential between inlet and outlet pipe inverts is dictated by the angle at which the inlet pipe(s) enters the unit.

0° - 45° : The inlet pipe is 1-inch (25mm) higher than the outlet pipe.

45° - 90° : The inlet pipe is 2-inches (50mm) higher than the outlet pipe.

HEAD LOSS

The head loss through Stormceptor EF is similar to that of a 60-degree bend structure. The applicable K value for calculating minor losses through the unit is 1.1.

For submerged conditions the applicable K value is 3.0.

Pollutant Capacity

Stormceptor EF / EFO	Model Diameter		Depth (Outlet Pipe Invert to Sump Floor)		Oil Volume		Recommended Sediment Maintenance Depth *		Maximum Sediment Volume *		Maximum Sediment Mass **	
	(m)	(ft)	(m)	(ft)	(L)	(Gal)	(mm)	(in)	(L)	(ft³)	(kg)	(lb)
EF4 / EFO4	1.2	4	1.52	5.0	265	70	203	8	1190	42	1904	5250
EF6 / EFO6	1.8	6	1.93	6.3	610	160	305	12	3470	123	5552	15375
EF8 / EFO8	2.4	8	2.59	8.5	1070	280	610	24	8780	310	14048	38750
EF10 / EFO10	3.0	10	3.25	10.7	1670	440	610	24	17790	628	28464	78500
EF12 / EFO12	3.6	12	3.89	12.8	2475	655	610	24	31220	1103	49952	137875

*Increased sump depth may be added to increase sediment storage capacity

** Average density of wet packed sediment in sump = 1.6 kg/L (100 lb/ft³)

Feature	Benefit	Feature Appeals To
Patent-pending enhanced flow treatment and scour prevention technology	Superior, verified third-party performance	Regulator, Specifying & Design Engineer
Third-party verified light liquid capture and retention for EFO version	Proven performance for fuel/oil hotspot locations	Regulator, Specifying & Design Engineer, Site Owner
Functions as bend, junction or inlet structure	Design flexibility	Specifying & Design Engineer
Minimal drop between inlet and outlet	Site installation ease	Contractor
Large diameter outlet riser for inspection and maintenance	Easy maintenance access from grade	Maintenance Contractor & Site Owner

STANDARD STORMCEPTOR EF/EFO DRAWINGS

For standard details, please visit <http://www.imbriumsystems.com/stormwater-treatment-solutions/stormceptor-ef>

STANDARD STORMCEPTOR EF/EFO SPECIFICATION

For specifications, please visit <http://www.imbriumsystems.com/stormwater-treatment-solutions/stormceptor-ef>

Stormceptor®EF Sizing Report

STANDARD PERFORMANCE SPECIFICATION FOR “OIL GRIT SEPARATOR” (OGS) STORMWATER QUALITY TREATMENT DEVICE

PART 1 – GENERAL

1.1 WORK INCLUDED

This section specifies requirements for selecting, sizing, and designing an underground Oil Grit Separator (OGS) device for stormwater quality treatment, with third-party testing results and a Statement of Verification in accordance with ISO 14034 Environmental Management – Environmental Technology Verification (ETV).

1.2 REFERENCE STANDARDS & PROCEDURES

ISO 14034:2016 Environmental management – Environmental technology verification (ETV)

Canadian Environmental Technology Verification (ETV) Program's **Procedure for Laboratory Testing of Oil-Grit Separators**.

1.3 SUBMITTALS

1.3.1 All submittals, including sizing reports & shop drawings, shall be submitted upon request with each order to the contractor then forwarded to the Engineer of Record for review and acceptance. Shop drawings shall detail all OGS components, elevations, and sequence of construction.

1.3.2 Alternative devices shall have features identical to or greater than the specified device, including: treatment chamber diameter, treatment chamber wet volume, sediment storage volume, and oil storage volume.

1.3.3 Unless directed otherwise by the Engineer of Record, OGS stormwater quality treatment product substitutions or alternatives submitted within ten days prior to project bid shall not be accepted. All alternatives or substitutions submitted shall be signed and sealed by a local registered Professional Engineer, based on the exact same criteria detailed in Section 3, in entirety, subject to review and approval by the Engineer of Record.

PART 2 – PRODUCTS

2.1 OGS POLLUTANT STORAGE

The OGS device shall include a sump for sediment storage, and a protected volume for the capture and storage of petroleum hydrocarbons and buoyant gross pollutants. The **minimum** sediment & petroleum hydrocarbon storage capacity shall be as follows:

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	6 ft (1829 mm) Diameter OGS Units:	3.48 m ³ sediment / 609 L oil
	8 ft (2438 mm) Diameter OGS Units:	8.78 m ³ sediment / 1,071 L oil
	10 ft (3048 mm) Diameter OGS Units:	17.78 m ³ sediment / 1,673 L oil
	12 ft (3657 mm) Diameter OGS Units:	31.23 m ³ sediment / 2,476 L oil

PART 3 – PERFORMANCE & DESIGN

3.1 GENERAL

Stormceptor®EF Sizing Report

The OGS stormwater quality treatment device shall be verified in accordance with ISO 14034:2016 Environmental management – Environmental technology verification (ETV). The OGS stormwater quality treatment device shall remove oil, sediment and gross pollutants from stormwater runoff during frequent wet weather events, and retain these pollutants during less frequent high flow wet weather events below the insert within the OGS for later removal during maintenance. The Manufacturer shall have at least ten (10) years of local experience, history and success in engineering design, manufacturing and production and supply of OGS stormwater quality treatment device systems, acceptable to the Engineer of Record.

3.2 SIZING METHODOLOGY

The OGS device shall be engineered, designed and sized to provide stormwater quality treatment based on treating a minimum of 90 percent of the average annual runoff volume and a minimum removal of an annual average 60% of the sediment (TSS) load based on the Particle Size Distribution (PSD) specified in the sizing report for the specified device. Sizing of the OGS shall be determined by use of a minimum ten (10) years of local historical rainfall data provided by Environment Canada. Sizing shall also be determined by use of the sediment removal performance data derived from the ISO 14034 ETV third-party verified laboratory testing data from testing conducted in accordance with the Canadian ETV protocol Procedure for Laboratory Testing of Oil-Grit Separators, as follows:

3.2.1 Sediment removal efficiency for a given surface loading rate and its associated flow rate shall be based on sediment removal efficiency demonstrated at the seven (7) tested surface loading rates specified in the protocol, ranging 40 L/min/m² to 1400 L/min/m², and as stated in the ISO 14034 ETV Verification Statement for the OGS device.

3.2.2 Sediment removal efficiency for surface loading rates between 40 L/min/m² and 1400 L/min/m² shall be based on linear interpolation of data between consecutive tested surface loading rates.

3.2.3 Sediment removal efficiency for surface loading rates less than the lowest tested surface loading rate of 40 L/min/m² shall be assumed to be identical to the sediment removal efficiency at 40 L/min/m². No extrapolation shall be allowed that results in a sediment removal efficiency that is greater than that demonstrated at 40 L/min/m².

3.2.4 Sediment removal efficiency for surface loading rates greater than the highest tested surface loading rate of 1400 L/min/m² shall assume zero sediment removal for the portion of flow that exceeds 1400 L/min/m², and shall be calculated using a simple proportioning formula, with 1400 L/min/m² in the numerator and the higher surface loading rate in the denominator, and multiplying the resulting fraction times the sediment removal efficiency at 1400 L/min/m².

The OGS device shall also have sufficient annual sediment storage capacity as specified and calculated in Section 2.1.

3.3 CANADIAN ETV or ISO 14034 ETV VERIFICATION OF SCOUR TESTING

The OGS device shall have Canadian ETV or ISO 14034 ETV Verification of third-party scour testing conducted in accordance with the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators**.

3.3.1 To be acceptable for on-line installation, the OGS device must demonstrate an average scour test effluent concentration less than 10 mg/L at each surface loading rate tested, up to and including 2600 L/min/m².