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Camperdown Residential Development

STORMWATER MANAGEMENT REPORT

Eden Oak (Raglan) Inc.

Document Control

File:

117304

Date:

November
22, 2021

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Issue	Date	Description
1	June 9, 2020	Draft Plan Submission
2	October 8, 2020	Draft Plan Submission
3	April 29, 2021	Draft Plan Submission
4	November 22, 2021	Draft Plan Submission

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SG-1: Preliminary Overall Site Grading Plan

DP-1: Pre-Development Drainage Plan

DP-2: Post-Development Drainage Plan



1 Introduction

Tatham Engineering Limited has been retained by Eden Oak (Raglan) Inc. to provide engineering services in support of a proposed residential development located on Old Lakeshore Road and Camperdown Road in the Town of The Blue Mountains. Specifically, this report has been prepared to demonstrate the preferred site servicing strategy and provide information relating to stormwater management and drainage.

1.1 SITE DESCRIPTION

The site is located on Old Lakeshore Road within the Craighleith Camperdown sub-watershed study area in the Town of The Blue Mountains. Currently, the site is zoned Residential (R3-H), Public Open Space (OS1) and Hazard (H) in accordance with Town By-law 2006-22. It is legally described as Part Lot 26 Concession 6 in the former Collingwood Township. A portion of the proposed development resides within the Nipissing Ridge geological region of the Georgian Bay Peninsula. We have enclosed a Site Location Plan (Fig.1) for your reference.

1.2 GEOTECHNICAL INVESTIGATION & REPORTS

Based on the Soil Survey of Grey County Map No. 17 (North), the on-site soils are Tecumseth Sand Loam (TS), Waterloo Sand Loam (Wsl) and Dunedin Clay (Duc). The soil material is characterized as poorly sorted outwash sand and clay. Tecumseth Sand Loam, Waterloo Sand Loam and Dunedin Clay have hydrologic soil group classifications of 'AB', 'A' and 'D' respectively. Soils of this nature are categorized as having 'good to imperfect' drainage which results in moderate infiltration.

Background reports prepared by C.F. Crozier & Associates Inc. obtained from the Grey County and Town of The Blue Mountains website suggests that Peto MacCallum Ltd. completed five test pit investigations on site to review the existing soil conditions in June of 2004. The report suggests that a uniform layer of topsoil (0.10 m depth) generally covers the site with underlying subsurface soil material consisting of native silty-clay overlaying weathered bedrock at a depth of between 0.8 m to 2.0 m.

Further geotechnical investigations were completed on May 10, 2019 by Central Earth Engineering. The investigation included excavating 8 test pits across the site to provide recommendations for foundations, slab on grade, pavement structure, soil excavation, compaction and ground water control.

The test pits encountered a topsoil layer at the ground surface between 250 mm to 400 mm thick. Underlying the topsoil, the test pits encountered undisturbed native soils that extended down to the bedrock surface. The undisturbed soil primarily consisted of silt and clay with trace sand



extending to elevations ranging from 190.1 to 188.8 m. Bedrock was encountered beneath the overburden soils in each test pit at elevations ranging from 188.5 to 190.1 m. The upper 0.3 to 1.0 m of the bedrock is considered rippable, and the excavations were advanced until bucket refusal on bedrock at elevations of 189.5 to 188.2 m.

The geotechnical report has been submitted under separate cover.

1.3 EXISTING LAND USE

The site is located at the base of the Nipissing Ridge formation on a flat plateau containing forested and open space areas with the land sloping from southwest to northeast between 2% and 5%.

1.4 PROPOSED LAND USE

The current site plan prepared by Innovative Planning Solutions (IPS) illustrates the proposed development consisting of 33 residential lots, a 20.0 m ROW, open space (non-developable land) and a stormwater management block.



2 Stormwater Management

2.1 STORMWATER MANAGEMENT OBJECTIVES AND BACKGROUND

The primary objective of the Stormwater Management Plan is to identify the existing and future drainage conditions in the area of the site to develop a plan that will mitigate the impact of the development of the local drainage systems. In addition, this plan will demonstrate that the development can be completed in accordance with applicable Municipal, Regional and Provincial guidelines.

This will be accomplished by evaluating the effect of the development on the local drainage conditions, constructing on-site quality control measures, and providing solutions to mitigate siltation and erosion during and after construction.

The stormwater management strategy for the proposed development site has been prepared recognizing the pertinent Conservation Authority, Municipal and Provincial guidelines on water resources including the following:

- *Policies for the Administration of the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (Ontario Regulation 151/06)*, Grey Sauble Conservation Authority, (January 2010);
- *The Blue Mountains Engineering Standards*, Town of The Blue Mountains, (April 2009); and
- *Stormwater Management Planning and Design Manual*, Ministry of the Environment, (March 2003).

2.2 STORMWATER MANAGEMENT CRITERIA

Several environmental factors and site conditions govern the design of the stormwater management plan for the residential development. The SWM criteria to be adhered to during detailed design are as follows:

- Pre-to -post peak runoff flow rate matching for the 2 through 100-year design storm event;
- Safe conveyance of the Regional Storm Event through the development into the township's right-of-way; and
- Level 1 'Enhanced' water quality treatment will be designed to meet or exceed Municipal and Provincial standards. The plan must achieve 80% total suspended solids (TSS) removal prior to off-site discharge.



3 Pre-Development Conditions

3.1 EXISTING SITE CONDITIONS

The subject property, which consists of parts of Catchment 101 and Catchment 102 (see DP-1), currently contains forested and open space areas and slopes from the southwest to northeast towards Old Lakeshore Road between 2% and 5%.

Catchment 101 contains external drainage from the rear-yards of the existing residential properties on the north side of Camperdown Court. This external drainage flows northeast through the subject property and crosses Old Lakeshore Road through an existing 900 mm x 900 mm concrete box culvert.

Catchment 102 contains external drainage from the rear-yards of a portion of the existing residential properties on the north side of Barton Boulevard. This external drainage flows northeast through the subject property and crosses Old Lakeshore Road through an existing 1500 mm x 1500 mm concrete box culvert.

Stormwater from Catchments 101 and 102 travels east after crossing Old Lakeshore Road, and eventually crosses Highway 26 through existing culverts where it outlets to an existing watercourse, and ultimately discharges into Nottawasaga Bay.

A Visual OTTHYMO model has been developed based on the current concept plan to quantify the pre-development peak runoff flow rates from the site. The model has been developed utilizing the Ministry of Transportation IDF Curve Lookup rainfall data and existing information from the Camperdown East 1 Limited Residential Development Preliminary Servicing and Stormwater Management Report (February 2009). Table 1 summarizes the hydrological parameters for the existing site.

Table 1: Pre-Development Hydrologic Parameters

CATCHMENT ID	CATCHMENT AREA (HA)	CN NUMBER	INITIAL ABSTRACTION (MM)	RUNOFF COEFFICIENT	TIME OF CONCENTRATION (MIN)	TIME TO PEAK (HR)
101	4.36	52.5	7.7	0.26	15.4	0.17
102	4.65	59.7	7.23	0.36	13.5	0.15



3.2 PRE-DEVELOPMENT PEAK RUNOFF FLOW RATE ANALYSIS

Table 2 summarizes the pre-development peak runoff flow rates from each catchment (catchment 101 outletting to the 900 mm culvert and catchment 102 outletting to the 1500 mm culvert). We have enclosed the Pre-Development Drainage Plan (DP-1) for reference.

Table 2: Pre-Development Peak Runoff Flow Rate Summary

DESIGN STORM	900 mm CULVERT (CATCHMENT 101)		1500 mm CULVERT (CATCHMENT 102)	
	4-HR CHICAGO (m ³ /s)	24-HR SCS TYPE II	4-HR CHICAGO (m ³ /s)	24-HR SCS TYPE II
25 mm	0.019	-	0.030	-
2-Year	0.022	0.087	0.035	0.131
5-Year	0.048	0.161	0.075	0.237
10-Year	0.071	0.220	0.110	0.320
25-Year	0.105	0.303	0.160	0.436
50-Year	0.134	0.370	0.202	0.527
100-Year	0.165	0.441	0.247	0.623
Regional	0.264	-	0.333	-

Detailed pre-development Visual OTTHYMO modeling results have been enclosed in Appendix A.



4 Post-Development Water Quantity Control

4.1 PROPOSED SITE CONDITIONS

The proposed stormwater management plan for the development will ensure the post-development peak runoff flow rates from the site are attenuated to pre-development levels while providing 'Enhanced' Level 1 stormwater quality control.

The proposed 33-lot development will have a combination of impervious areas consisting of houses, driveways and the proposed lanes, while the remaining areas will consist of the SWM Pond block, open space (non-developable land) and grassed/lawn areas (see DP-2).

The proposed drainage conditions will include an enhanced low flow cut off swale along the south limit of the development. This swale will intercept drainage from the rear-yards above the Nipissing Ridge and the open space south of the development (Catchments 202 & 203) and convey the runoff around the proposed development directly to the Old Lakeshore Road roadside ditch. Catchment 201 consists of the lots on the south side of the internal road, the majority of the internal roads and also accounts for the driveways and front half of the houses on lots 22, 24 and 26 through 33. Runoff from Catchment 201 will be directed to an end of pipe stormwater management facility via an internal storm sewer system (minor system) and overland flow through the roadway (major system). Controlled discharge from the SWM facility will be conveyed eastward via the roadside ditch along Old Lakeshore Road, ultimately discharging to the existing 900 mm concrete box culvert, combining with the intermittent watercourse further downstream.

Uncontrolled drainage from catchments 204, 205, 206 & 207-1 will be intercepted by the Old Lakeshore Road ditch and will outlet to the existing 900 mm culvert, ultimately discharging to an intermittent watercourse downstream.

Uncontrolled drainage from catchments 206 & 207-2 will be intercepted by the Old Lakeshore Road ditch and will outlet to the existing 1500 mm culvert at the east side of the property, ultimately discharging to the same intermittent watercourse downstream.

The Old Lakeshore Road ditch and culverts have been sized to convey the 100-year post development runoff from the site to the existing 900 mm and 1500 mm culverts. The 750 mm dia. driveway culvert has a conveyance capacity of $0.43 \text{ m}^3/\text{s}$ and the 900 mm dia. driveway culvert has a conveyance capacity of $0.69 \text{ m}^3/\text{s}$.



4.2 POST-DEVELOPMENT PEAK RUNOFF FLOW RATE ANALYSIS

Detailed impervious calculations for each catchment are enclosed in Appendix B. Table 3 summarizes the hydrologic parameters for the proposed development.

Table 3: Post-Development Catchment Parameters

CATCHMENT ID	CATCHMENT AREA (HA)	CURVE NUMBER (CN)	% IMPERVIOUS	% IMPERVIOUS DIRECTLY CONNECT
Catchment 201	2.20	-	43.4	20.9
Catchment 202	1.63	44.1	-	-
Catchment 203	2.89	42.9	-	-
Catchment 204	0.64	48.1	-	-
Catchment 205	0.03	-	56.0	28.0
Catchment 206	0.73	-	31.8	12.7
Catchment 207-1	0.52	66.3	-	-
Catchment 207-2	0.34	66.3	-	-

Table 4 summarizes the post-development total peak flow rates from the development site.

Table 4: Post-Development Peak Runoff Flow Rate Summary

DESIGN STORM	900 mm CULVERT (ADDHYD 61)		1500 mm CULVERT (ADDHYD 62)	
	4-HR CHICAGO (m ³ /s)	24-HR SCS TYPE II	4-HR CHICAGO (m ³ /s)	24-HR SCS TYPE II
25 mm	0.017 [0.019]	-	0.023 [0.030]	-
2-Year	0.020 [0.022]	0.085 [0.087]	0.035 [0.035]	0.078 [0.131]
5-Year	0.045 [0.048]	0.158 [0.161]	0.065 [0.075]	0.147 [0.237]
10-Year	0.067 [0.071]	0.217 [0.220]	0.104 [0.110]	0.183 [0.320]
25-Year	0.101 [0.105]	0.302 [0.303]	0.137 [0.160]	0.228 [0.436]
50-Year	0.128 [0.134]	0.367 [0.370]	0.161 [0.202]	0.261 [0.527]
100-Year	0.159 [0.165]	0.439 [0.441]	0.186 [0.247]	0.294 [0.623]
Regional	0.292 [0.264]	-	0.104 [0.333]	-

[0.010] - Pre-development Flow Rates



We have enclosed the Post-Development Drainage Plan (DP-2), storm sewer design sheet and detailed post-development Visual OTTHYMO modelling results in Appendix B for reference.

4.3 STORMWATER MANAGEMENT FACILITY

The development will contain an extended detention wet pond constructed in accordance with the MECP Stormwater Management Planning and Design Manual (March 2003).

The outlet control structure will be located at the northeast corner of the SWM facility. Discharge from the facility will be released by an outlet structure to the roadside ditch on Old Lakeshore Road where it will be conveyed to the existing 900 mm culvert crossing Old Lakeshore Road.

Extended detention will be achieved utilizing a 300 mm diameter orifice. All flows up to and including the 100-year event will be safely conveyed through the outlet control chamber facility. The Regional storm event will be safely conveyed to Old Lakeshore Road via overland flow.

The Visual OTTHYMO hydrologic model has been used to evaluate the function of the proposed wet pond. A summary of the storage volumes and water levels for the facility are provided in Table 5.

Table 5: Post-Development SWM Facility Volume Summary

DESIGN STORM	STORAGE VOLUME USED (M ³)	WATER SURFACE ELEVATION (M)
25 mm	41	188.99
2-year	219	189.58
5-year	339	189.84
10-year	422	190.04
25-year	614	190.24
50-year	711	190.38
100-year	813	190.47
Regional	1898	191.46

Detailed modelling results have been included in Appendix B for reference.

4.4 WATER QUALITY CONTROL

The primary outlet receiver for the site is the existing intermittent watercourse on the east side of the site and ultimately drains to Nottawasaga Bay which is a cold-water fishery. Level 1 'Enhanced' water quality treatment is required in the form of 80% total suspended solids (TSS)



removal prior to off-site discharge. This will be achieved on-site through lot level controls and an oil/grit separator that will be sized during final design.



5 Siltation and Erosion Controls

Siltation and erosion controls will be implemented for all construction activities within the development site, including vegetation clearing, topsoil stripping, material stockpiling, road construction activities and grading operations. The detailed erosion and sediment control measures proposed will be implemented during and after construction and will be provided during final design and may include the following:

- heavy duty silt fence will be erected around the perimeter of the site before any grading operations commence to control sediment movement;
- a construction vehicle entrance will be constructed and maintained consisting of a stone mud mat to reduce off-site tracking of material; and
- rock check flow dams and straw bale check flow dams will be installed prior to construction and will be maintained and inspected throughout the course of construction as required to prevent the transportation of sediment and delirious materials offsite.



6 Summary

The proposed Stormwater Management Plan demonstrates that the development will meet the established criteria with respect to stormwater management set forth in governing documents and can proceed without negatively impacting the local drainage systems. Level 1 'Enhanced' water quality control in the form of 80% TSS removal and water quantity control in the form of post to pre-development peak flow matching will be satisfied through the use of internal storm sewers and overland flow culminating in an end-of-pipe stormwater management pond.

In conclusion, the proposed stormwater management plan supports the concept of an environmentally sustainable development and will mitigate anticipated stormwater impacts associated with the construction of the proposed development.



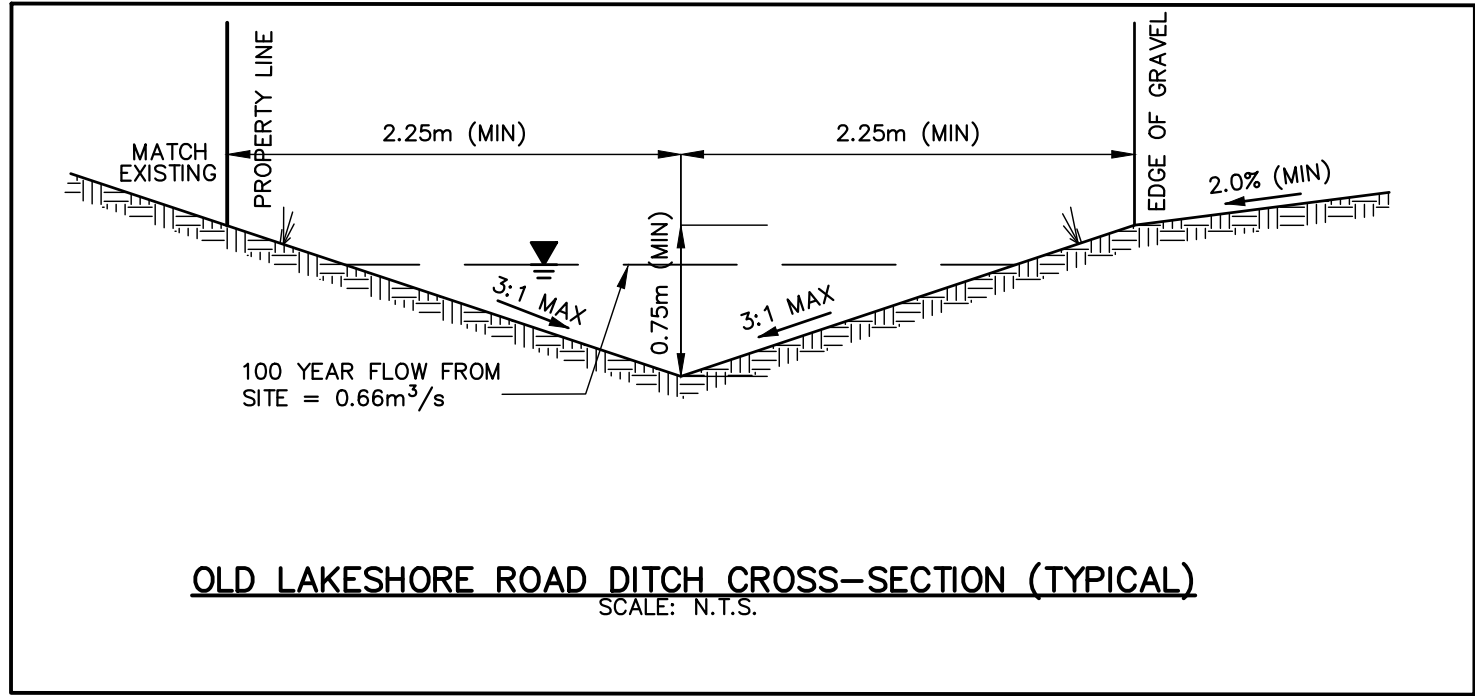
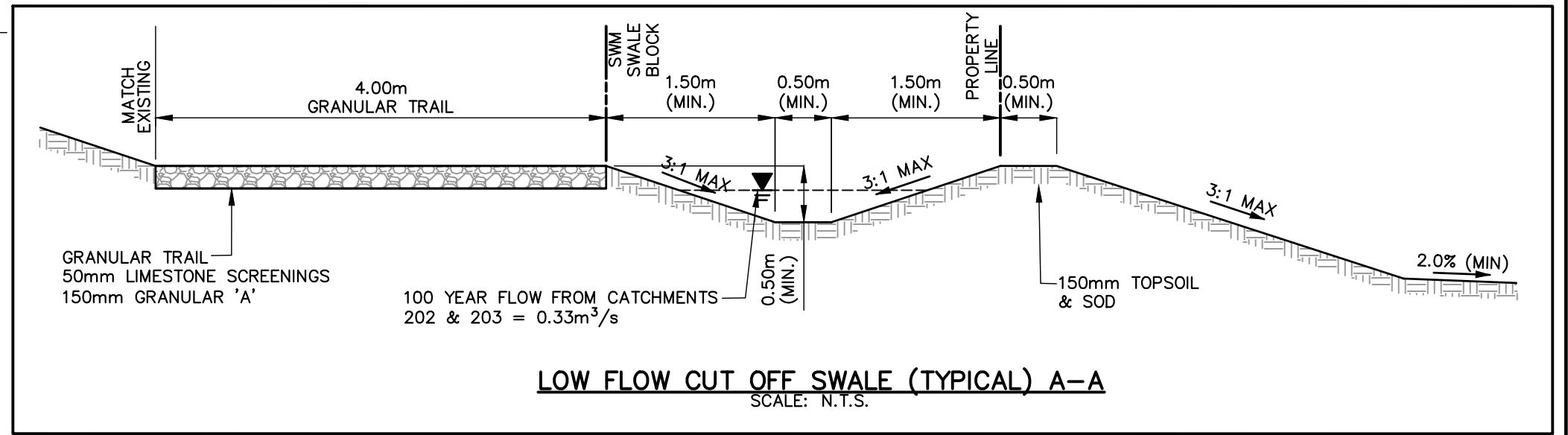
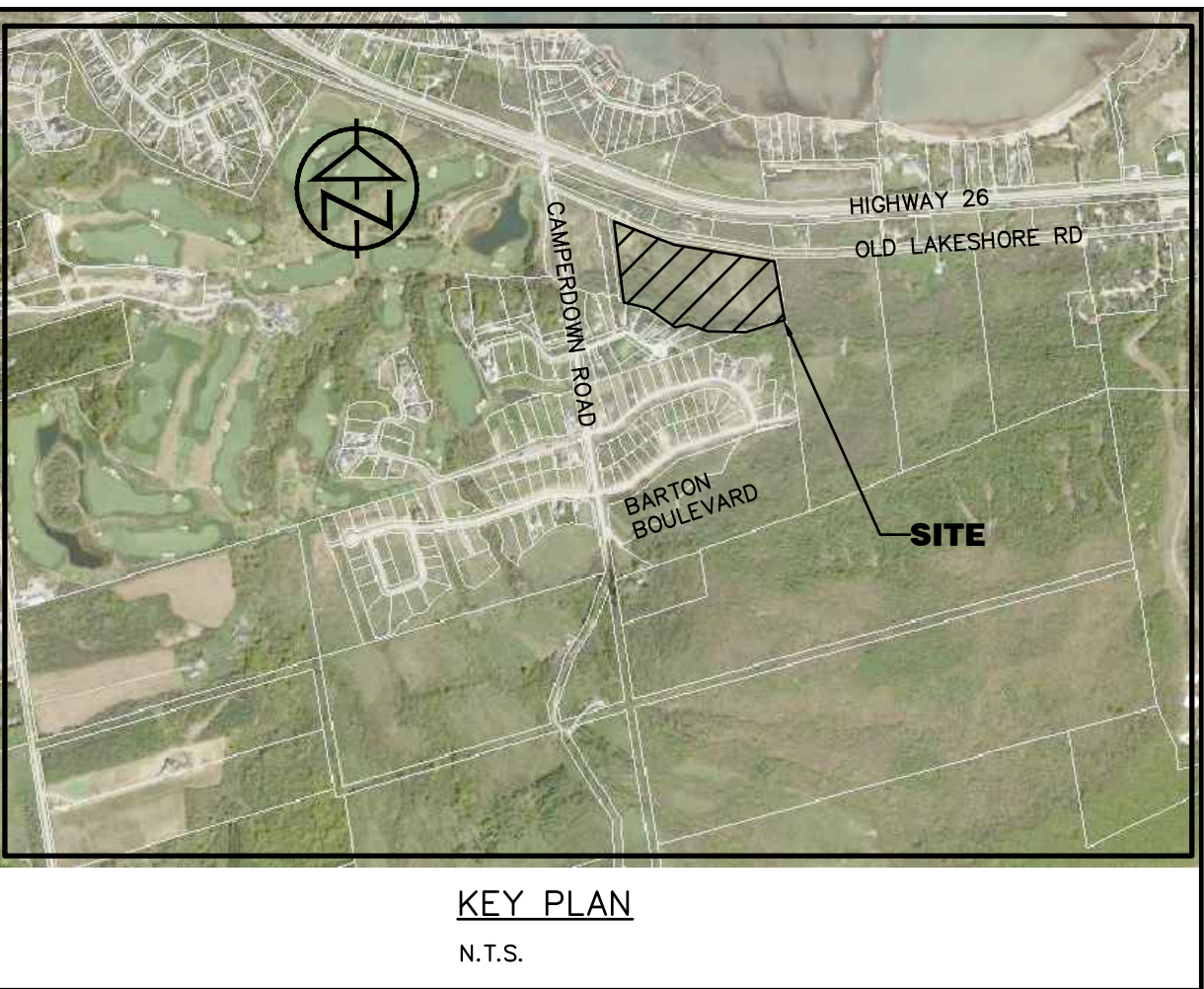


CAMPERDOWN CONDOMINIUMS
SITE LOCATION PLAN

SCALE: N.T.S.

DATE: NOV/19

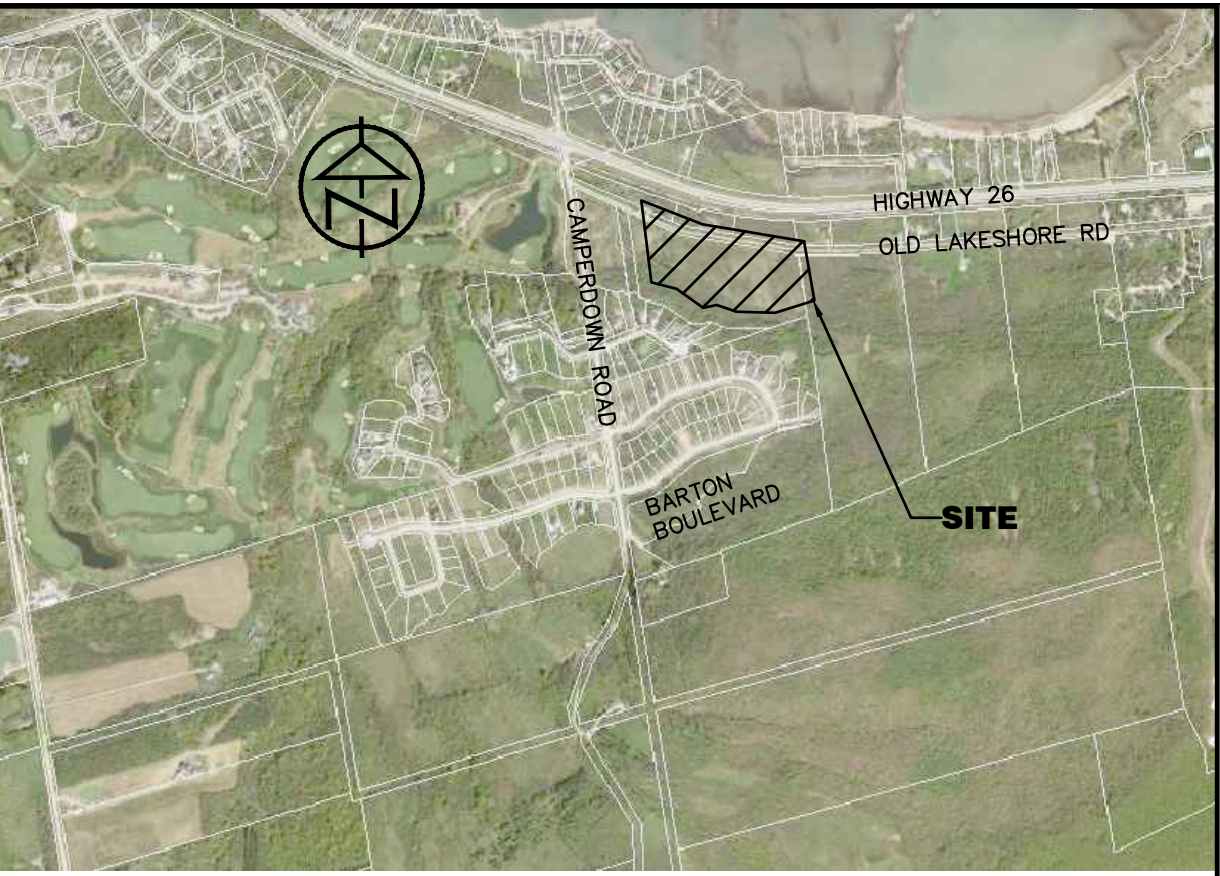
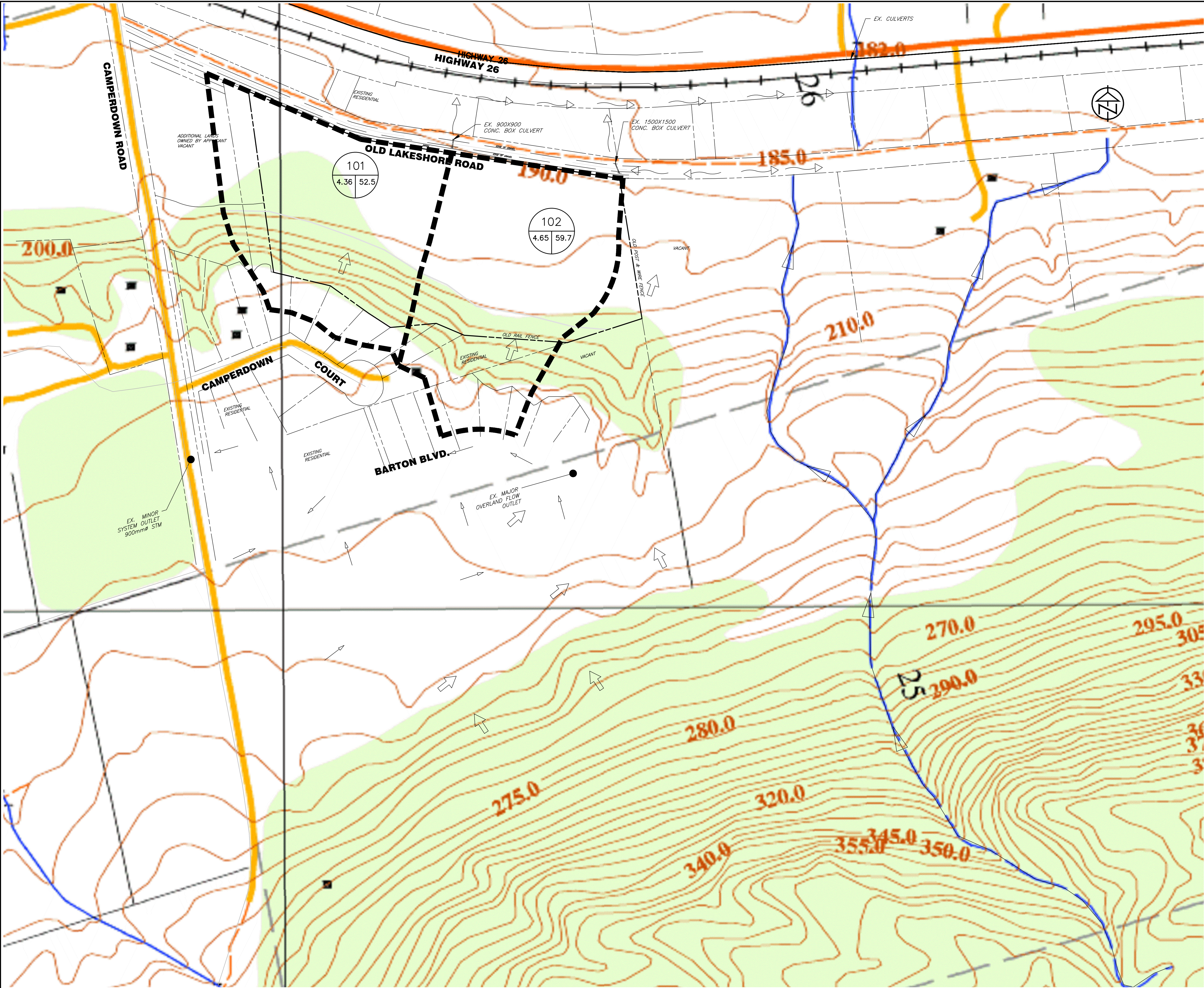
DWG NO. FIG. 1



LEGEND

- PROPERTY LINE
- PROPOSED CENTERLINE ROAD
- EXISTING EDGE OF GRAVEL ROAD
- PROPOSED OVERLAND FLOW DIRECTION
- PROPOSED/EXISTING ELEVATIONS
- PROPOSED SWALE
- PROPOSED GRADE/DIRECTION

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			3.	TOWN COMMENTS	OCT/2020						
			4.	TOWN COMMENTS	FEB/2021						
5.	DRAFT PLAN	MAY/2021									
6.	DRAFT PLAN	NOV/2021									
7.	DRAFT PLAN	NOV/2021									
SITE GRADING PLAN							DESIGN: AS	FILE: 117304	DWG:		
							DRAWN: RD/AC	DATE: DEC., 2017	SG-1		
							CHECK: RS	SCALE: 1:1000			



KEY PLAN
N.T.S.

- LEGEND**
- PROPERTY LINE
 - EXISTING EDGE OF ASPHALT
 - EXISTING DRAINAGE BOUNDARY
 - EXISTING DRAINAGE AREA ID
 - EXISTING DRAINAGE AREA (ha)
 - EXISTING CN
 - EXISTING MAJOR/OVERLAND FLOW DIRECTION
 - EXISTING SWALE/DITCH
 - EXISTING WATER COURSE
 - EXISTING MINOR STORM FLOW DIRECTION

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BENCHMARKS

TBM1 – ELEVATION 211.950
TOP NUT FIRE HYDRANT LOCATED AT THE SOUTH WEST CORNER OF LOT 11.

NOTES

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No.	REVISION DESCRIPTION	DATE	ENGINEER STAMP
3.	TOWN COMMENTS	OCT/2020	
4.	TOWN COMMENTS	FEB/2021	
5.	DRAFT PLAN	MAY/2021	
6.	DRAFT PLAN	NOV/2021	
7.	DRAFT PLAN	NOV/2021	

CAMPERDOWN CONDOMINIUMS
TOWN OF THE BLUE MOUNTAINS

PRE-DEVELOPMENT DRAINAGE PLAN

DESIGN: AS

DRAWN: RD/AC

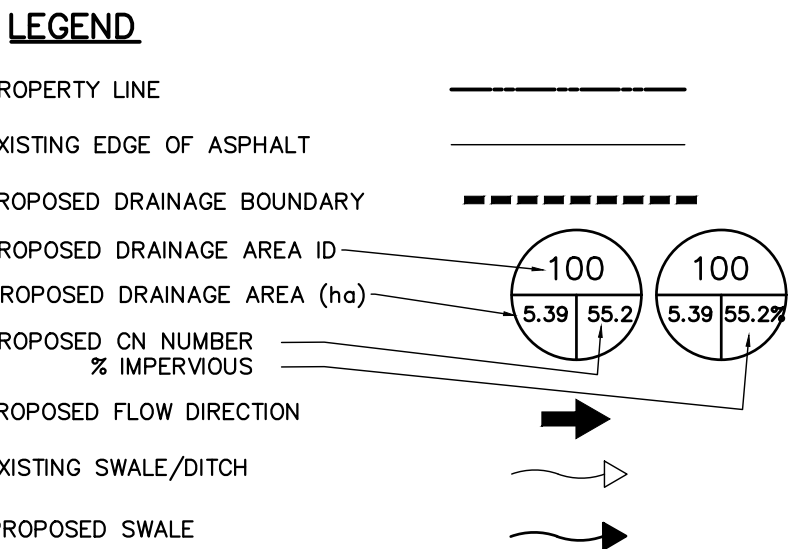
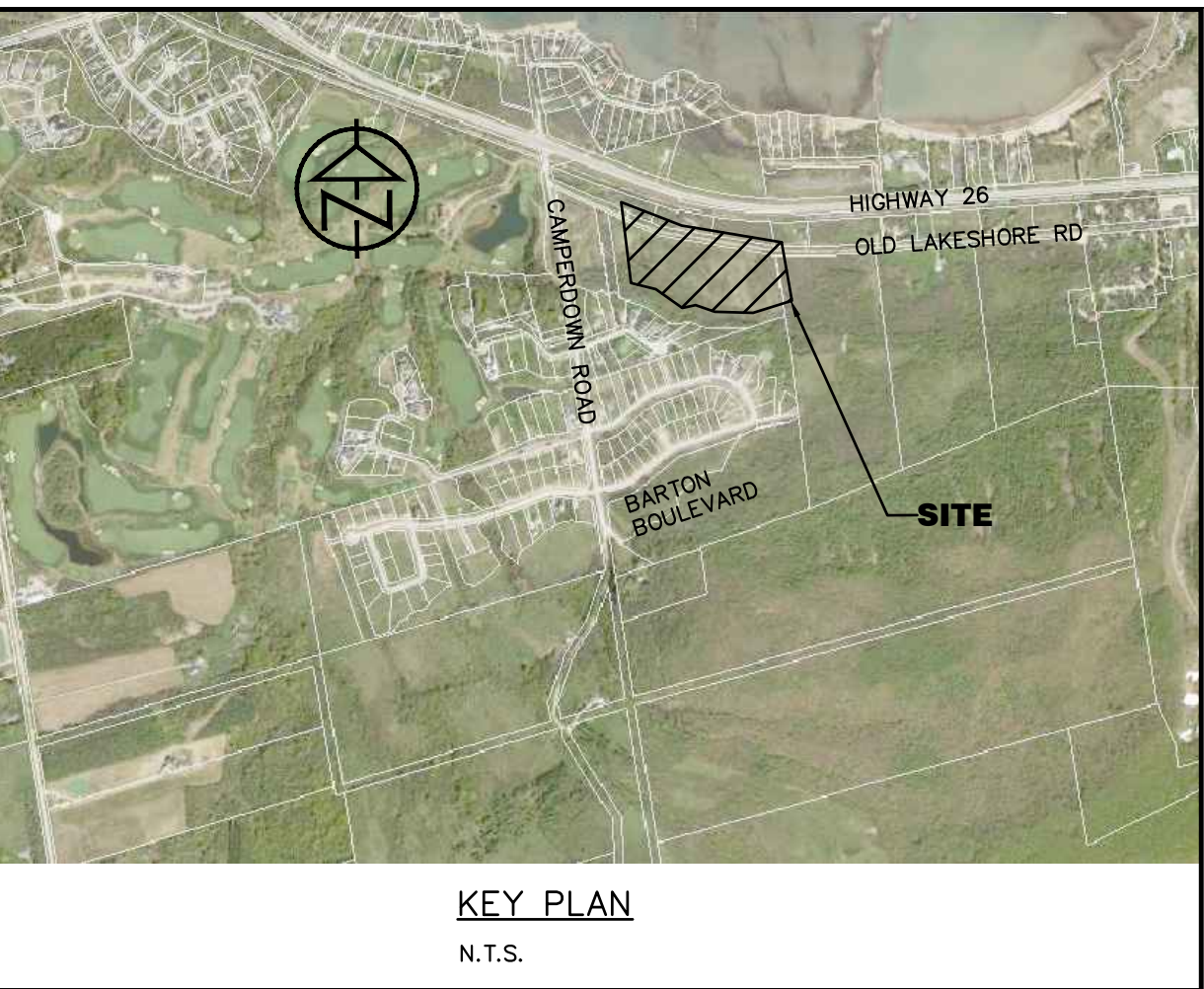
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FILE: 117304

DATE: DEC., 2017

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			3.	TOWN COMMENTS	OCT/2020							
			4.	TOWN COMMENTS	FEB/2021							
			5.	DRAFT PLAN	MAY/2021							
			6.	DRAFT PLAN	NOV/2021							
			7.	DRAFT PLAN	NOV/2021							
			POST-DEVELOPMENT DRAINAGE PLAN							DESIGN: AS	FILE: 117304	DWG:
							DRAWN: RD/AC	DATE: DEC., 2017	DP-2			
							CHECK: RS	SCALE: 1:1000				

Appendix A: Pre-Development Hydrological Analysis

	Project:	Camperdown Condominiums
	File No.:	117304
	Date:	March 2018
	Designed By:	AS
	Checked By:	RS
Subject:		CN Calculator

CURVE NUMBER, INITIAL ABSTRACTION & TIME TO PEAK CALCULATIONS

Catchment 101 Area 4.36 ha

WEIGHTED CN VALUE																										
Soil Series	Soil Series	Hydrologic Soil Group	Soil Texture	Runoff Coefficient Type	Catchment Soil Characteristics		Forest/Woodland			Pasture/Lawns			Meadows			Cultivated			Impervious			Wetland/Lakes/SWMF			Average CN for Soil Type	
					Area	Percent	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN		
TS	TECUMSETH	AB	Sand Loam	1	3.05	0.7	1.83	0.6	46	0.61	0.2	59	0.61	0.2	51	0		68	0		100	0		50	49.6	
WSL	WATERLOO	A	Sand Loam	1	1.31	0.3	0.39	0.30	32	0.52	0.40	49	0	0	38	0		62	0.392	0.3	100	0		50	59.2	
	#N/A	#N/A	#N/A	#N/A	0		0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0	
	#N/A	#N/A	#N/A	#N/A	0		0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0	
	#N/A	#N/A	#N/A	#N/A	0		0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0	
Totals					4.36	1	2.2236	0.51		1.1336	0.26		0.6104	0.14		0	0		0.3924	0.09		0	0		52.48	

Time of Concentration Calculations

For Runoff Coefficients greater than 0.4

Bransby-Williams Formula

Maximum Catchment Elevation 223 m
 Minimum Catchment Elevation 190.5 m
 Catchment length 200 m
 Catchment Slope 16%
 Catchment Area 4.36 ha

Time of Concentration (Minutes) 5.63
 Time of Concentration (Hours) 0.09
 Time to Peak (2/3 x Time of Concentration) 0.06

Time to Peak 0.17 hrs

For Runoff Coefficients less than 0.4

Airport Method

Maximum Catchment Elevation 223 m
 Minimum Catchment Elevation 190.5 m
 Catchment length 200 m
 Catchment Slope 16%
 Catchment Area 4.36 ha

Time of Concentration (Minutes) 15.39
 Time of Concentration (Hours) 0.26
 Time to Peak (2/3 x Time of Concentration) 0.17

Initial Abstraction 7.7 mm

Wetlands	12
Woods	10
Meadows	8
Cultivated	7
Lawns	5
Impervious	2

Runoff Coefficient 0.26

Landuse Type	Soil Series				
	TS	WSL	0	0	0
Forest/Woodland	0.18	0.18	#N/A	#N/A	#N/A
Cultivated	0.4	0.4	#N/A	#N/A	#N/A
Pasture/Lawn	0.22	0.22	#N/A	#N/A	#N/A
Impervious	0.95	0.95	#N/A	#N/A	#N/A
Wetland/Lake/SWMF	0.05	0.05	#N/A	#N/A	#N/A
Meadows	0.20	0.20	#N/A	#N/A	#N/A
Soil Series Total	0.192	0.427	#N/A	#N/A	#N/A

	Project:	Camperdown Condominiums
	File No.:	117304
	Date:	March 2018
	Designed By:	AS
	Checked By:	RS
Subject:		CN Calculator

CURVE NUMBER, INITIAL ABSTRACTION & TIME TO PEAK CALCULATIONS

Catchment 102 Area 4.48 ha

WEIGHTED CN VALUE																										
Soil Series	Soil Series	Hydrologic Soil Group	Soil Texture	Runoff Coefficient Type	Catchment Soil Characteristics			Forest/Woodland			Pasture/Lawns			Meadows			Cultivated			Impervious			Wetland/Lakes/SWMF			Average CN for Soil Type
					Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	
TS	TECUMSETH	AB	Sand Loam	1	1.79	0.40	1.43	0.8	46	0.358	0.2	59	0			51	0		68	0		100	0		50	48.6
WSL	WATERLOO	A	Sand Loam	1	1.12	0.25	0.90	0.8	32	0.22	0.2	49	0			38	0		62	0		100	0		50	35.4
DUC	DUNEDIN	D	Clay Loam or Clay	3	1.57	0.35	0.00	0	79	1.02	0.65	84	0			81	0		86	0.549	0.35	100	0		50	89.6
	#N/A	#N/A	#N/A	#N/A	0				#N/A	0		#N/A	0			#N/A	0		#N/A	0		#N/A	0		#N/A	0
	#N/A	#N/A	#N/A	#N/A	0				#N/A	0		#N/A	0			#N/A	0		#N/A	0		#N/A	0		#N/A	0
Totals					4.48	1.00	2.33	0.52		1.60	0.36		0	0		0	0		0.5488	0.1225		0	0		59.65	

Time of Concentration Calculations

For Runoff Coefficients greater than 0.4

Bransby-Williams Formula

Maximum Catchment Elevation 223 m
 Minimum Catchment Elevation 190.5 m
 Catchment length 200 m
 Catchment Slope 16%
 Catchment Area 4.48 ha

Time of Concentration (Minutes) 5.62
 Time of Concentration (Hours) 0.09
 Time to Peak (2/3 x Time of Concentration) 0.06

Time to Peak 0.15 hrs

For Runoff Coefficients less than 0.4

Airport Method

Maximum Catchment Elevation 223 m
 Minimum Catchment Elevation 190.5 m
 Catchment length 200 m
 Catchment Slope 16%
 Catchment Area 4.48 ha

Time of Concentration (Minutes) 13.53
 Time of Concentration (Hours) 0.23
 Time to Peak (2/3 x Time of Concentration) 0.15

Initial Abstraction 7.2325 mm

Wetlands	12
Woods	10
Meadows	8
Cultivated	7
Lawns	5
Impervious	2

Runoff Coefficient 0.36

Landuse Type	Soil Series				
	TS	WSL	DUC	0	0
Forest/Woodland	0.18	0.18	0.52	#N/A	#N/A
Cultivated	0.4	0.4	0.7	#N/A	#N/A
Pasture/Lawn	0.22	0.22	0.55	#N/A	#N/A
Impervious	0.95	0.95	0.95	#N/A	#N/A
Wetland/Lake/SWMF	0.05	0.05	0.05	#N/A	#N/A
Meadows	0.20	0.20	0.54	#N/A	#N/A
Soil Series Total	0.188	0.188	0.69	#N/A	#N/A

Active coordinate

44° 32' 15" N, 80° 23' 45" W (44.537500,-80.395833)

Retrieved: Fri, 05 Jan 2018 21:16:03 GMT



Location summary

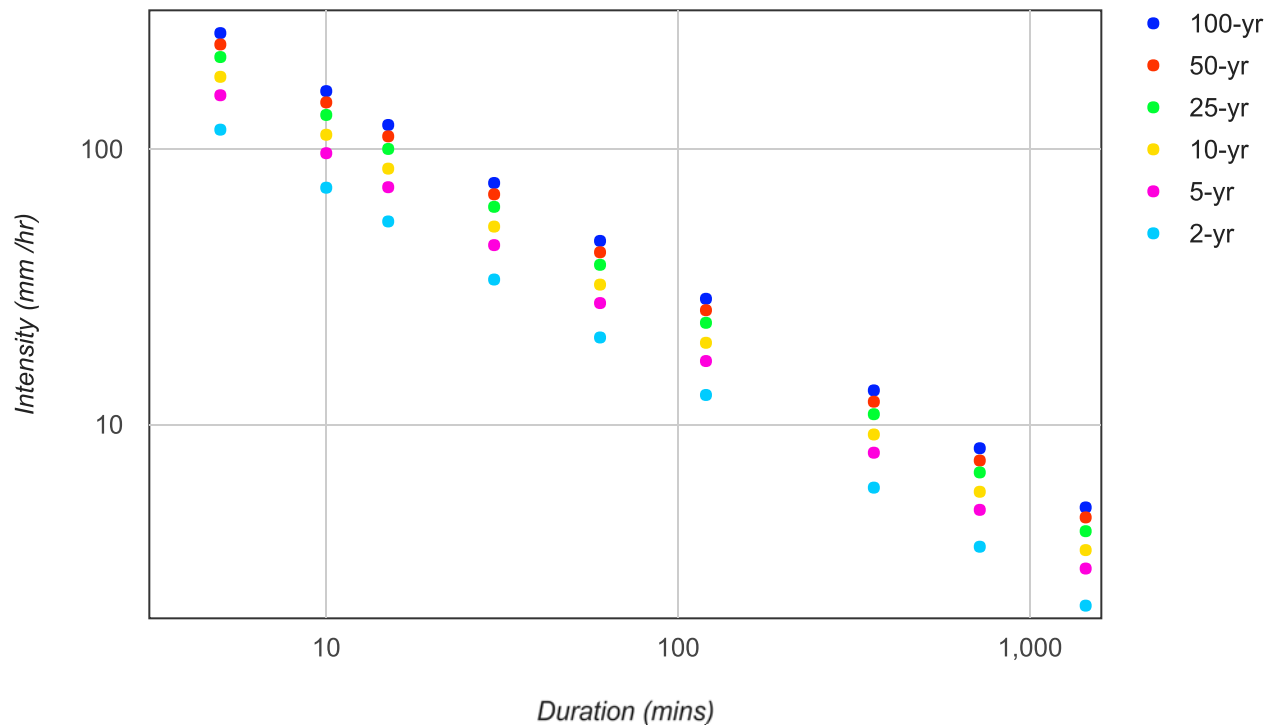
These are the locations in the selection.

IDF Curve: 44° 32' 15" N, 80° 23' 45" W (44.537500,-80.395833)

Results

An IDF curve was found.

Coordinate: 44.537500, -80.395833
IDF curve year: 2010



Coefficient summary

IDF Curve: 44° 32' 15" N, 80° 23' 45" W (44.537500,-80.395833)

Retrieved: Fri, 05 Jan 2018 21:16:03 GMT

Data year: 2010

IDF curve year: 2010

Return period	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
A	20.7	27.6	32.2	38.0	42.2	46.4
B	-0.699	-0.699	-0.699	-0.699	-0.699	-0.699

Statistics

Rainfall intensity (mm hr⁻¹)

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	117.6	72.4	54.6	33.6	20.7	12.8	5.9	3.6	2.2
5-yr	156.8	96.6	72.7	44.8	27.6	17.0	7.9	4.9	3.0
10-yr	182.9	112.7	84.9	52.3	32.2	19.8	9.2	5.7	3.5
25-yr	215.8	133.0	100.1	61.7	38.0	23.4	10.9	6.7	4.1
50-yr	239.7	147.7	111.2	68.5	42.2	26.0	12.1	7.4	4.6
100-yr	263.6	162.3	122.3	75.3	46.4	28.6	13.3	8.2	5.0

Rainfall depth (mm)

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	9.8	12.1	13.6	16.8	20.7	25.5	35.5	43.7	53.9
5-yr	13.1	16.1	18.2	22.4	27.6	34.0	47.3	58.3	71.8
10-yr	15.2	18.8	21.2	26.1	32.2	39.7	55.2	68.0	83.8
25-yr	18.0	22.2	25.0	30.8	38.0	46.8	65.2	80.3	98.9
50-yr	20.0	24.6	27.8	34.3	42.2	52.0	72.4	89.2	109.8
100-yr	22.0	27.1	30.6	37.7	46.4	57.2	79.6	98.0	120.8

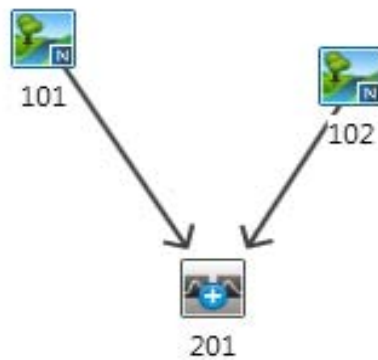
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Last Modified: September 2016

CAMPERDOWN CONDOMINIUM
PRE-DEVELOPMENT CONDITIONS



Nashyd

1



Route Pipe

1



Duhyd

1



Standhyd

1



Route Channel

1



Diverthyd

1



Addhyd

1



Route Reservoir

1



Project: Camperdown Condominium

File No.: 117304

Subject: Otthymo Flow Schematic

Date: Nov 2019 **Figure:** 1

V V I SSSSS U U A L (v 6.0.2006)
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 UUUU A A LLLL
000 TTTT TTTT H H Y V M M 000 TM
O O T T H H Y V M 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 6.0\VO2\voin.dat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eaf04675c3\b1af013e-ba9d-447d-9db7-e1d65bdac882\scen
Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eaf04675c3\b1af013e-ba9d-447d-9db7-e1d65bdac882\scen

DATE: 02-08-2021 TIME: 10:58:27

USER:

CHI 25mm (PRE)

COMMENTS:

** SIMULATION - Run 01 **

READ STORM		Filename: C:\Users\ASchoof\AppData\Local\Temp\92cec21b-93f3-437c-a788-chacb9f248ee\395184f1	
Total= 24.97 mm		Comments: OWEN SOUND 25 mm (from a 2 year-4hr stor	
TIME		TIME	
hrs	mm/hr	hrs	mm/hr
0.10	1.29	1.10	2.81
0.20	1.36	1.20	3.22
0.30	1.44	1.30	3.77
0.40	1.53	1.40	4.55
0.50	1.63	1.50	5.77
0.60	1.75	1.60	7.86
0.70	1.89	1.70	12.27
0.80	2.06	1.80	26.17
0.90	2.26	1.90	72.58
1.00	2.50	2.00	26.96

CALIB	
NASHYO (0101)	Area (ha)= 4.36 Curve Number (CN)= 52.5
ID= 1 DT= 2.0 min	Ia (mm)= 7.70 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)=	0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME		RAIN		TIME		RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.29	1.033	2.81	2.033	13.05	3.03	2.04
0.067	1.29	1.067	2.81	2.067	13.05	3.07	2.04
0.100	1.29	1.100	2.81	2.100	13.05	3.10	2.04
0.133	1.36	1.133	3.22	2.133	8.44	3.13	1.89
0.167	1.36	1.167	3.22	2.167	8.44	3.17	1.89
0.200	1.36	1.200	3.22	2.200	8.44	3.20	1.89
0.233	1.44	1.233	3.77	2.233	6.21	3.23	1.76
0.267	1.44	1.267	3.77	2.267	6.21	3.27	1.76
0.300	1.44	1.300	3.77	2.300	6.21	3.30	1.76
0.333	1.53	1.333	4.55	2.333	4.91	3.33	1.65
0.367	1.53	1.367	4.55	2.367	4.91	3.37	1.65
0.400	1.53	1.400	4.55	2.400	4.91	3.40	1.65
0.433	1.63	1.433	5.77	2.433	4.06	3.43	1.55
0.467	1.63	1.467	5.77	2.467	4.06	3.47	1.55
0.500	1.63	1.500	5.77	2.500	4.06	3.50	1.55
0.533	1.75	1.533	7.86	2.533	3.47	3.53	1.46
0.567	1.75	1.567	7.86	2.567	3.47	3.57	1.46
0.600	1.75	1.600	7.86	2.600	3.47	3.60	1.46
0.633	1.89	1.633	12.27	2.633	3.03	3.63	1.39
0.667	1.89	1.667	12.27	2.667	3.03	3.67	1.39
0.700	1.89	1.700	12.27	2.700	3.03	3.70	1.39
0.733	2.06	1.733	26.17	2.733	2.70	3.73	1.32
0.767	2.06	1.767	26.17	2.767	2.70	3.77	1.32
0.800	2.06	1.800	26.17	2.800	2.70	3.80	1.32
0.833	2.26	1.833	72.58	2.833	2.43	3.83	1.26
0.867	2.26	1.867	72.58	2.867	2.43	3.87	1.26
0.900	2.26	1.900	72.58	2.900	2.43	3.90	1.26
0.933	2.50	1.933	26.96	2.933	2.22	3.93	1.20
0.967	2.50	1.967	26.96	2.967	2.22	3.97	1.20
1.000	2.50	2.000	26.96	3.000	2.22	4.00	1.20

Unit Hyd Qpeak (cms)= 0.980

PEAK FLOW (cms)= 0.019 (1)
TIME TO PEAK (hrs)= 2.133
RUNOFF VOLUME (mm)= 1.206
TOTAL RAINFALL (mm)= 24.971
RUNOFF COEFFICIENT = 0.048

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

CALIB	
NASHYO (0102)	Area (ha)= 4.65 Curve Number (CN)= 59.7
ID= 1 DT= 2.0 min	Ia (mm)= 7.23 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)=	0.15

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME		RAIN		TIME		RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.29	1.033	2.81	2.033	13.05	3.03	2.04
0.067	1.29	1.067	2.81	2.067	13.05	3.07	2.04
0.100	1.29	1.100	2.81	2.100	13.05	3.10	2.04
0.133	1.36	1.133	3.22	2.133	8.44	3.13	1.89
0.167	1.36	1.167	3.22	2.167	8.44	3.17	1.89
0.200	1.36	1.200	3.22	2.200	8.44	3.20	1.89
0.233	1.44	1.233	3.77	2.233	6.21	3.23	1.76
0.267	1.44	1.267	3.77	2.267	6.21	3.27	1.76
0.300	1.44	1.300	3.77	2.300	6.21	3.30	1.76
0.333	1.53	1.333	4.55	2.333	4.91	3.33	1.65
0.367	1.53	1.367	4.55	2.367	4.91	3.37	1.65
0.400	1.53	1.400	4.55	2.400	4.91	3.40	1.65
0.433	1.63	1.433	5.77	2.433	4.06	3.43	1.55
0.467	1.63	1.467	5.77	2.467	4.06	3.47	1.55
0.500	1.63	1.500	5.77	2.500	4.06	3.50	1.55
0.533	1.75	1.533	7.86	2.533	3.47	3.53	1.46
0.567	1.75	1.567	7.86	2.567	3.47	3.57	1.46
0.600	1.75	1.600	7.86	2.600	3.47	3.60	1.46
0.633	1.89	1.633	12.27	2.633	3.03	3.63	1.39
0.667	1.89	1.667	12.27	2.667	3.03	3.67	1.39
0.700	1.89	1.700	12.27	2.700	3.03	3.70	1.39
0.733	2.06	1.733	26.17	2.733	2.70	3.73	1.32
0.767	2.06	1.767	26.17	2.767	2.70	3.77	1.32
0.800	2.06	1.800	26.17	2.800	2.70	3.80	1.32
0.833	2.26	1.833	72.58	2.833	2.43	3.83	1.26
0.867	2.26	1.867	72.58	2.867	2.43	3.87	1.26
0.900	2.26	1.900	72.58	2.900	2.43	3.90	1.26
0.933	2.50	1.933	26.96	2.933	2.22	3.93	1.20
0.967	2.50	1.967	26.96	2.967	2.22	3.97	1.20
1.000	2.50	2.000	26.96	3.000	2.22	4.00	1.20

Unit Hyd Qpeak (cms)= 1.184

PEAK FLOW (cms)= 0.030 (1)
TIME TO PEAK (hrs)= 2.180
RUNOFF VOLUME (mm)= 1.660
TOTAL RAINFALL (mm)= 24.971
RUNOFF COEFFICIENT = 0.066

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

ADD HYD (0201)	
ID= 1 + 2 = 3	AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID= 1 (0101):	4.36 0.019 2.13 2.21
+ ID2= 2 (0102):	4.65 0.030 2.10 1.66
ID = 3 (0201):	9.01 0.048 2.10 1.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.0.2006)
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 UUUU A A LLLL
000 TTTT TTTT H H Y V M M 000 TM
O O T T H H Y V M M M O O
O O T T H H Y V 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 6.0\VO2\voin.dat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eaf04675c3\2e0f8c09-1d54-4aa5-98f1-81657331dcc2\scen
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DATE: 02-08-2021 TIME: 10:58:26

USER:

COMMENTS: CHI 2 year (PRE)

** SIMULATION : Run 02 **

CHICAGO STORM
Ptotal= 31.36 mm
IDF curve parameters: A= 362.158
B= 0.000
C= 0.699
used in: INTENSITY = A / (t + B)^C
Duration of storm = 4.00 hrs
Storm time step = 15.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	2.99	1.25	54.55	2.25	4.58	3.25	2.85
0.50	3.70	1.50	11.55	2.50	3.93	3.50	2.63
0.75	5.06	1.75	7.28	2.75	3.47	3.75	2.45
1.00	9.41	2.00	5.55	3.00	3.13	4.00	2.29

CALIB
NASHVD (0101)
ID= 1 DT= 2.0 min
Area (ha)= 4.36
Ia (mm)= 7.70
U.H. Tp(hrs)= 0.17
Curve Number (CN)= 52.5
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	2.99	1.033	54.55	2.033	4.58	3.03	2.85
0.067	2.99	1.067	54.55	2.067	4.58	3.07	2.85
0.100	2.99	1.100	54.55	2.100	4.58	3.10	2.85
0.133	2.99	1.133	54.55	2.133	4.58	3.13	2.85
0.167	2.99	1.167	54.55	2.167	4.58	3.17	2.85
0.200	2.99	1.200	54.55	2.200	4.58	3.20	2.85
0.233	2.99	1.233	54.55	2.233	4.58	3.23	2.85
0.267	3.34	1.267	33.05	2.267	4.25	3.27	2.74
0.300	3.70	1.300	11.55	2.300	3.93	3.30	2.63
0.333	3.70	1.333	11.55	2.333	3.93	3.33	2.63
0.367	3.70	1.367	11.55	2.367	3.93	3.37	2.63
0.400	3.70	1.400	11.55	2.400	3.93	3.40	2.63
0.433	3.70	1.433	11.55	2.433	3.93	3.43	2.63
0.467	3.70	1.467	11.55	2.467	3.93	3.47	2.63
0.500	3.70	1.500	11.55	2.500	3.93	3.50	2.63
0.533	5.06	1.533	7.28	2.533	3.47	3.53	2.45
0.567	5.06	1.567	7.28	2.567	3.47	3.57	2.45
0.600	5.06	1.600	7.28	2.600	3.47	3.60	2.45
0.633	5.06	1.633	7.28	2.633	3.47	3.63	2.45
0.667	5.06	1.667	7.28	2.667	3.47	3.67	2.45
0.700	5.06	1.700	7.28	2.700	3.47	3.70	2.45
0.733	5.06	1.733	7.28	2.733	3.47	3.73	2.45
0.767	7.24	1.767	6.42	2.767	3.30	3.77	2.37
0.800	9.41	1.800	5.55	2.800	3.13	3.80	2.29
0.833	9.41	1.833	5.55	2.833	3.13	3.83	2.29
0.867	9.41	1.867	5.55	2.867	3.13	3.87	2.29
0.900	9.41	1.900	5.55	2.900	3.13	3.90	2.29
0.933	9.41	1.933	5.55	2.933	3.13	3.93	2.29
0.967	9.41	1.967	5.55	2.967	3.13	3.97	2.29
1.000	9.41	2.000	5.55	3.000	3.13	4.00	2.29

Unit Hyd Qpeak (cms)= 0.980

PEAK FLOW (cms)= 0.022 (1)
TIME TO PEAK (hrs)= 1.400
RUNOFF VOLUME (mm)= 2.206
TOTAL RAINFALL (mm)= 31.358
RUNOFF COEFFICIENT = 0.070

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

CALIB
NASHVD (0102)
ID= 1 DT= 2.0 min
Area (ha)= 4.65
Ia (mm)= 7.23
U.H. Tp(hrs)= 0.15
Curve Number (CN)= 59.7
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.033	2.99	1.033	54.55	2.033	4.58	3.03	2.85
0.067	2.99	1.067	54.55	2.067	4.58	3.07	2.85
0.100	2.99	1.100	54.55	2.100	4.58	3.10	2.85
0.133	2.99	1.133	54.55	2.133	4.58	3.13	2.85
0.167	2.99	1.167	54.55	2.167	4.58	3.17	2.85
0.200	2.99	1.200	54.55	2.200	4.58	3.20	2.85
0.233	2.99	1.233	54.55	2.233	4.58	3.23	2.85

0.267	3.34	1.267	33.05	2.267	4.25	3.27	2.74
0.300	3.70	1.300	11.55	2.300	3.93	3.30	2.63
0.333	3.70	1.333	11.55	2.333	3.93	3.33	2.63
0.367	3.70	1.367	11.55	2.367	3.93	3.37	2.63
0.400	3.70	1.400	11.55	2.400	3.93	3.40	2.63
0.433	3.70	1.433	11.55	2.433	3.93	3.43	2.63
0.467	3.70	1.467	11.55	2.467	3.93	3.47	2.63
0.500	3.70	1.500	11.55	2.500	3.93	3.50	2.63
0.533	5.06	1.533	7.28	2.533	3.47	3.53	2.45
0.567	5.06	1.567	7.28	2.567	3.47	3.57	2.45
0.600	5.06	1.600	7.28	2.600	3.47	3.60	2.45
0.633	5.06	1.633	7.28	2.633	3.47	3.63	2.45
0.667	5.06	1.667	7.28	2.667	3.47	3.67	2.45
0.700	5.06	1.700	7.28	2.700	3.47	3.70	2.45
0.733	5.06	1.733	7.28	2.733	3.47	3.73	2.45
0.767	7.24	1.767	6.42	2.767	3.30	3.77	2.37
0.800	9.41	1.800	5.55	2.800	3.13	3.80	2.29
0.833	9.41	1.833	5.55	2.833	3.13	3.83	2.29
0.867	9.41	1.867	5.55	2.867	3.13	3.87	2.29
0.900	9.41	1.900	5.55	2.900	3.13	3.90	2.29
0.933	9.41	1.933	5.55	2.933	3.13	3.93	2.29
0.967	9.41	1.967	5.55	2.967	3.13	3.97	2.29
1.000	9.41	2.000	5.55	3.000	3.13	4.00	2.29

Unit Hyd Qpeak (cms)= 1.184

PEAK FLOW (cms)= 0.035 (1)
TIME TO PEAK (hrs)= 1.367
RUNOFF VOLUME (mm)= 2.970
TOTAL RAINFALL (mm)= 31.358
RUNOFF COEFFICIENT = 0.095

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

ADD HYD (0201)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0101): 4.36 0.022 1.40 2.21
+ ID2= 2 (0102): 4.65 0.035 1.37 2.97
ID = 3 (0203): 9.01 0.056 1.37 2.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.0.2006)
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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***** DETAILED OUTPUT *****

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Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eafb675c3\543c546b-77c6-40d2-a844-67dd60ad7cc\scen

DATE: 02-08-2021 TIME: 10:58:26

USER:

COMMENTS: CHI 5 year (PRE)

** SIMULATION : Run 03 **

CHICAGO STORM
Ptotal= 41.81 mm
IDF curve parameters: A= 482.877
B= 0.000
C= 0.699
used in: INTENSITY = A / (t + B)^C
Duration of storm = 4.00 hrs
Storm time step = 15.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	3.98	1.25	72.74	2.25	6.10	3.25	3.80
0.50	4.93	1.50	15.40	2.50	5.24	3.50	3.51
0.75	6.75	1.75	9.71	2.75	4.63	3.75	3.26
1.00	12.55	2.00	7.41	3.00	4.17	4.00	3.06

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
	mm/hr		mm/hr		mm/hr		mm/hr		mm/hr
0.033	3.98	1.033	2.74	2.083	6.10	3.083	3.98	4.083	3.98
0.067	3.98	1.067	72.74	2.067	6.10	3.067	3.98	4.067	3.98
0.100	3.98	1.100	72.74	2.100	6.10	3.100	3.98	4.100	3.98
0.133	3.98	1.133	72.74	2.133	6.10	3.133	3.98	4.133	3.98
0.167	3.98	1.167	72.74	2.167	6.10	3.167	3.98	4.167	3.98
0.200	3.98	1.200	72.74	2.200	6.10	3.200	3.98	4.200	3.98
0.233	3.98	1.233	72.74	2.233	6.10	3.233	3.98	4.233	3.98
0.267	4.46	1.267	15.40	2.267	6.67	3.267	4.46	4.267	4.46
0.300	4.93	1.300	15.40	2.300	5.24	3.300	4.93	4.300	4.93
0.333	4.93	1.333	15.40	2.333	5.24	3.333	4.93	4.333	4.93
0.367	4.93	1.367	15.40	2.367	5.24	3.367	4.93	4.367	4.93
0.400	4.93	1.400	15.40	2.400	5.24	3.400	4.93	4.400	4.93
0.433	4.93	1.433	15.40	2.433	5.24	3.433	4.93	4.433	4.93
0.467	4.93	1.467	15.40	2.467	5.24	3.467	4.93	4.467	4.93
0.500	4.93	1.500	15.40	2.500	5.24	3.500	4.93	4.500	4.93
0.533	6.75	1.533	9.71	2.533	4.63	3.533	6.75	4.533	6.75
0.567	6.75	1.567	9.71	2.567	4.63	3.567	6.75	4.567	6.75
0.600	6.75	1.600	9.71	2.600	4.63	3.600	6.75	4.600	6.75
0.633	6.75	1.633	9.71	2.633	4.63	3.633	6.75	4.633	6.75
0.667	6.75	1.667	9.71	2.667	4.63	3.667	6.75	4.667	6.75
0.700	6.75	1.700	9.71	2.700	4.63	3.700	6.75	4.700	6.75
0.733	6.75	1.733	9.71	2.733	4.63	3.733	6.75	4.733	6.75
0.767	6.5	1.767	8.56	2.767	4.40	3.773	6.5	4.773	6.5
0.800	12.55	1.800	7.41	2.800	4.17	3.800	12.55	4.800	12.55
0.833	12.55	1.833	7.41	2.833	4.17	3.833	12.55	4.833	12.55
0.867	12.55	1.867	7.41	2.867	4.17	3.867	12.55	4.867	12.55
0.900	12.55	1.900	7.41	2.900	4.17	3.900	12.55	4.900	12.55
0.933	12.55	1.933	7.41	2.933	4.17	3.933	12.55	4.933	12.55
0.967	12.55	1.967	7.41	2.967	4.17	3.967	12.55	4.967	12.55
1.000	12.55	2.000	7.41	3.000	4.17	4.000	12.55	5.000	12.55

Unit Hyd Opeak (cms) = 0.988

PEAK FLOW (cms) = 0.048 (l)

TIME TO PEAK (hrs) = 1.367

RUNOFF VOLUME (mm) = 1.367

TOTAL RAINFALL (mm) = 41.818

RUNOFF COEFFICIENT = 0.105

```

NOTE:      RAINFALL WAS TRANSFORMED TO      2.0 H.M. TIME STEP.

      ----- TRANSFORMED HETEOGRAPHY -----
      TIME      RAIN      TIME      RAIN      TIME      RAIN      TIME      RAIN
      hrs      mm/hr      hrs      mm/hr      hrs      mm/hr      hrs      mm/hr
0.033  3.98  1.033  72.74  2.083  6.10  3.03  3.80
0.067  3.98  1.067  72.74  2.167  6.10  3.07  3.80
0.100  3.98  1.100  72.74  2.250  6.10  3.10  3.80
0.133  3.98  1.133  72.74  2.333  6.10  3.13  3.80
0.167  3.98  1.167  72.74  2.417  6.10  3.17  3.80
0.200  3.98  1.200  72.74  2.500  6.10  3.20  3.80
0.233  3.98  1.233  72.74  2.583  6.10  3.23  3.80
0.267  4.46  1.267  44.07  2.667  5.67  3.27  3.66
0.300  4.93  1.300  15.40  2.750  5.24  3.30  3.51
0.333  4.93  1.333  15.40  2.833  5.24  3.33  3.51
0.367  4.93  1.367  15.40  2.917  5.24  3.37  3.51
0.400  4.93  1.400  15.40  3.000  5.24  3.40  3.51
0.433  4.93  1.433  15.40  3.083  5.24  3.43  3.51
0.467  4.93  1.467  15.40  3.167  5.24  3.47  3.51
0.500  4.93  1.500  15.40  3.250  5.24  3.50  3.51
0.533  6.75  1.533  7.21  3.333  4.63  3.53  3.26
0.567  6.75  1.567  9.71  3.500  4.63  3.57  3.26
0.600  6.75  1.600  9.71  3.683  4.63  3.60  3.26
0.633  6.75  1.633  9.71  3.767  4.63  3.63  3.26
0.667  6.75  1.667  9.71  3.850  4.63  3.67  3.26
0.700  6.75  1.700  9.71  3.933  4.63  3.70  3.26
0.733  6.75  1.733  9.71  4.017  4.63  3.73  3.26
0.767  9.65  1.767  8.56  4.100  4.00  3.77  3.16
0.800  12.55  1.800  7.41  4.283  4.00  3.80  3.06
0.833  12.55  1.833  7.41  4.283  4.17  3.87  3.06
0.867  12.55  1.867  7.41  4.283  4.17  3.87  3.06
0.900  12.55  1.900  7.41  4.290  4.17  3.90  3.06
0.933  12.55  1.933  7.41  4.293  4.17  3.93  3.06
0.967  12.55  1.967  7.41  4.297  4.17  3.97  3.06
1.000  12.55  2.000  7.41  4.300  4.17  4.00  3.06

Unit Hyd Gpeak      (cms) = 1.184
PEAK FLOW      (cms) = 0.075 (I)
TIME TO PEAK      (hrs) = 1.833
RUNOFF VOLUME      (cm) = 0.993
TOTAL RAINFALL      (cm) = 4.119

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

```

NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-----
V      V      I      SSSSS      U      U      A      L      (v 6.0.2006)
V      V      I      SS      U      U      A      L
V      V      I      SS      U      U      AAAAA      L
V      V      I      SS      U      U      A      L
VV      I      SSSSS      UUUUU      A      LLLLL
-----
O      O      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      Y      M      M      000      O
O      O      T      T      H      H      Y      Y      M      M      000      O
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USER :

COMMENTS: CHI 10 year (PRE)

CALIB			
NASHYD (0101)	Area (ha)=	4.36	Curve Number (CN)= 52.5
ID= 1 DT= 2.0 min	Ia (mm)=	7.70	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.17	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

--- TRANSFORMED HYDROGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hr	mm/hr	hr	mm/hr	hr	mm/hr	hr	mm/hr	hr	mm/hr
0.033	4.65	1.033	84.86	2.033	7.12	3.03	4.44		
0.067	0.65	1.067	84.86	2.067	7.12	3.07	4.44		
0.100	0.65	1.100	84.86	2.100	7.12	3.10	4.44		
0.133	0.65	1.133	84.86	2.133	7.12	3.13	4.44		
0.167	0.65	1.167	84.86	2.167	7.12	3.17	4.44		
0.200	0.65	1.200	84.86	2.200	7.12	3.20	4.44		
0.233	0.65	1.233	84.86	2.233	7.12	3.23	4.44		
0.267	5.28	1.267	51.41	2.267	6.62	3.27	4.26		
0.300	5.75	1.300	17.97	2.300	6.12	3.30	4.09		
0.333	5.75	1.333	17.97	2.333	6.12	3.33	4.09		
0.367	5.75	1.367	17.97	2.367	6.12	3.37	4.09		
0.400	5.75	1.400	17.97	2.400	6.12	3.40	4.09		
0.433	5.75	1.433	17.97	2.433	6.12	3.43	4.09		
0.467	5.75	1.467	17.97	2.467	6.12	3.47	4.09		
0.500	5.75	1.500	17.97	2.500	6.12	3.50	4.09		
0.533	5.75	1.533	17.97	2.533	6.12	3.53	4.09		
0.567	7.87	1.567	11.33	2.567	5.40	3.57	3.81		

0.600 7.87 | 1.600 11.33 | 2.600 5.40 | 3.60 3.81
0.633 7.87 | 1.633 11.33 | 2.633 5.40 | 3.63 3.81
0.667 7.87 | 1.667 11.33 | 2.667 5.40 | 3.67 3.81
0.700 7.87 | 1.700 11.33 | 2.700 5.40 | 3.70 3.81
0.733 7.87 | 1.733 11.33 | 2.733 5.40 | 3.73 3.81
0.767 11.26 | 1.767 9.99 | 2.767 5.13 | 3.77 3.69
0.800 14.64 | 1.800 8.64 | 2.800 4.86 | 3.80 3.56
0.833 14.64 | 1.833 8.64 | 2.833 4.86 | 3.83 3.56
0.867 14.64 | 1.867 8.64 | 2.867 4.86 | 3.87 3.56
0.900 14.64 | 1.900 8.64 | 2.900 4.86 | 3.90 3.56
0.933 14.64 | 1.933 8.64 | 2.933 4.86 | 3.93 3.56
0.967 14.64 | 1.967 8.64 | 2.967 4.86 | 3.97 3.56
1.000 14.64 | 2.000 8.64 | 3.000 4.86 | 4.00 3.56

Unit Hyd Qpeak (cms)= 0.980

PEAK FLOW (cms)= 0.071 (1)
TIME TO PEAK (hrs)= 1.367
RUNOFF VOLUME (mm)= 6.224
TOTAL RAINFALL (mm)= 48.779
RUNOFF COEFFICIENT = 0.128

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

CALIB
NASHYD (0102) | Area (ha)= 4.65 Curve Number (CN)= 59.7
ID= 1 DT= 2.0 min | Ia (mm)= 7.23 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.15

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN | TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr | hrs mm/hr hrs mm/hr
0.033 4.65 | 1.033 84.86 | 2.033 7.12 | 3.03 4.44
0.067 4.65 | 1.067 84.86 | 2.067 7.12 | 3.07 4.44
0.100 4.65 | 1.100 84.86 | 2.100 7.12 | 3.10 4.44
0.133 4.65 | 1.133 84.86 | 2.133 7.12 | 3.13 4.44
0.167 4.65 | 1.167 84.86 | 2.167 7.12 | 3.17 4.44
0.200 4.65 | 1.200 84.86 | 2.200 7.12 | 3.20 4.44
0.233 4.65 | 1.233 84.86 | 2.233 7.12 | 3.23 4.44
0.267 5.20 | 1.267 51.41 | 2.267 6.62 | 3.27 4.26
0.300 5.75 | 1.300 17.97 | 2.300 6.12 | 3.30 4.09
0.333 5.75 | 1.333 17.97 | 2.333 6.12 | 3.33 4.09
0.367 5.75 | 1.367 17.97 | 2.367 6.12 | 3.37 4.09
0.400 5.75 | 1.400 17.97 | 2.400 6.12 | 3.40 4.09
0.433 5.75 | 1.433 17.97 | 2.433 6.12 | 3.43 4.09
0.467 5.75 | 1.467 17.97 | 2.467 6.12 | 3.47 4.09
0.500 5.75 | 1.500 17.97 | 2.500 6.12 | 3.50 4.09
0.533 7.87 | 1.533 11.33 | 2.533 5.40 | 3.53 3.81
0.567 7.87 | 1.567 11.33 | 2.567 5.40 | 3.57 3.81
0.600 7.87 | 1.600 11.33 | 2.600 5.40 | 3.60 3.81
0.633 7.87 | 1.633 11.33 | 2.633 5.40 | 3.63 3.81
0.667 7.87 | 1.667 11.33 | 2.667 5.40 | 3.67 3.81
0.700 7.87 | 1.700 11.33 | 2.700 5.40 | 3.70 3.81
0.733 7.87 | 1.733 11.33 | 2.733 5.40 | 3.73 3.81
0.767 11.26 | 1.767 9.99 | 2.767 5.13 | 3.77 3.69
0.800 14.64 | 1.800 8.64 | 2.800 4.86 | 3.80 3.56
0.833 14.64 | 1.833 8.64 | 2.833 4.86 | 3.83 3.56
0.867 14.64 | 1.867 8.64 | 2.867 4.86 | 3.87 3.56
0.900 14.64 | 1.900 8.64 | 2.900 4.86 | 3.90 3.56
0.933 14.64 | 1.933 8.64 | 2.933 4.86 | 3.93 3.56
0.967 14.64 | 1.967 8.64 | 2.967 4.86 | 3.97 3.56
1.000 14.64 | 2.000 8.64 | 3.000 4.86 | 4.00 3.56

Unit Hyd Qpeak (cms)= 1.184

PEAK FLOW (cms)= 0.110 (1)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 8.089
TOTAL RAINFALL (mm)= 48.779
RUNOFF COEFFICIENT = 0.166

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

| ADD HYD (0201) |
1 + 2 = 3
ID= 1 (0101): 4.36 0.071 1.37 6.22
+ ID= 2 (0102): 4.65 0.110 1.33 8.09
=====

ID = 3 (0201): 9.01 0.180 1.37 7.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.0.2006)
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 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 M O O
O O T T H H Y Y M M O O
000 T T H H Y Y M M 000

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DATE: 02-08-2021 TIME: 10:58:27

USER:

COMMENTS: CHI 25 year (PRE)

** SIMULATION : Run 05 **

CHICAGO STORM | IDF curve parameters: A= 664.831
| Ptotal= 57.56 mm | B= 0.000
C= 0.699
used in: INTENSITY = A / (t + B)^C
Duration of storm = 4.00 hrs
Storm time step = 15.00 min
Time to peak ratio = 0.33

TIME RAIN TIME RAIN | TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr | hrs mm/hr hrs mm/hr
0.25 5.48 | 1.25 100.14 | 2.25 8.40 | 3.25 5.24
0.50 6.79 | 1.50 21.21 | 2.50 7.22 | 3.50 4.83
0.75 9.20 | 1.75 13.37 | 2.75 6.38 | 3.75 4.49
1.00 17.28 | 2.00 10.20 | 3.00 5.74 | 4.00 4.21

CALIB
NASHYD (0101) | Area (ha)= 4.36 Curve Number (CN)= 52.5
ID= 1 DT= 2.0 min | Ia (mm)= 7.70 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN | TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr | hrs mm/hr hrs mm/hr
0.033 5.48 | 1.033 100.14 | 2.033 8.40 | 3.03 5.24
0.067 5.48 | 1.067 100.14 | 2.067 8.40 | 3.07 5.24
0.100 5.48 | 1.100 100.14 | 2.100 8.40 | 3.10 5.24
0.133 5.48 | 1.133 100.14 | 2.133 8.40 | 3.13 5.24
0.167 5.48 | 1.167 100.14 | 2.167 8.40 | 3.17 5.24
0.200 5.48 | 1.200 100.14 | 2.200 8.40 | 3.20 5.24
0.233 5.48 | 1.233 100.14 | 2.233 8.40 | 3.23 5.24
0.267 6.14 | 1.267 60.67 | 2.267 7.81 | 3.27 5.03
0.300 6.79 | 1.300 21.21 | 2.300 7.22 | 3.30 4.83
0.333 6.79 | 1.333 21.21 | 2.333 7.22 | 3.33 4.83
0.367 6.79 | 1.367 21.21 | 2.367 7.22 | 3.37 4.83
0.400 6.79 | 1.400 21.21 | 2.400 7.22 | 3.40 4.83
0.433 6.79 | 1.433 21.21 | 2.433 7.22 | 3.43 4.83
0.467 6.79 | 1.467 21.21 | 2.467 7.22 | 3.47 4.83
0.500 6.79 | 1.500 21.21 | 2.500 7.22 | 3.50 4.83
0.533 9.29 | 1.533 13.37 | 2.533 6.38 | 3.53 4.49
0.567 9.29 | 1.567 13.37 | 2.567 6.38 | 3.57 4.49
0.600 9.29 | 1.600 13.37 | 2.600 6.38 | 3.60 4.49
0.633 9.29 | 1.633 13.37 | 2.633 6.38 | 3.63 4.49
0.667 9.29 | 1.667 13.37 | 2.667 6.38 | 3.67 4.49
0.700 9.29 | 1.700 13.37 | 2.700 6.38 | 3.70 4.49
0.733 9.29 | 1.733 13.37 | 2.733 6.38 | 3.73 4.49
0.767 13.28 | 1.767 11.78 | 2.767 6.06 | 3.77 4.35
0.800 17.28 | 1.800 10.20 | 2.800 5.74 | 3.80 4.21
0.833 17.28 | 1.833 10.20 | 2.833 5.74 | 3.83 4.21
0.867 17.28 | 1.867 10.20 | 2.867 5.74 | 3.87 4.21
0.900 17.28 | 1.900 10.20 | 2.900 5.74 | 3.90 4.21
0.933 17.28 | 1.933 10.20 | 2.933 5.74 | 3.93 4.21
0.967 17.28 | 1.967 10.20 | 2.967 5.74 | 3.97 4.21
1.000 17.28 | 2.000 10.20 | 3.000 5.74 | 4.00 4.21

Unit Hyd Qpeak (cms)= 0.980

PEAK FLOW (cms)= 0.105 (1)
TIME TO PEAK (hrs)= 1.367
RUNOFF VOLUME (mm)= 8.884
TOTAL RAINFALL (mm)= 57.565
RUNOFF COEFFICIENT = 0.154

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

CALIB
NASHYD (0102) | Area (ha)= 4.65 Curve Number (CN)= 59.7
ID= 1 DT= 2.0 min | Ia (mm)= 7.23 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.15

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	5.48	1.033	100.14	2.033	8.40	3.03	5.24	0.067	5.48	1.067	100.14
0.100	5.48	1.100	100.14	2.100	8.40	3.10	5.24	0.133	5.48	1.133	100.14
0.167	5.48	1.167	100.14	2.167	8.40	3.17	5.24	0.200	5.48	1.200	100.14
0.233	5.48	1.233	100.14	2.233	8.40	3.23	5.24	0.267	6.14	1.267	60.67
0.300	6.79	1.300	21.21	2.300	7.22	3.30	4.83	0.333	6.79	1.333	21.21
0.367	6.79	1.367	21.21	2.367	7.22	3.37	4.83	0.400	6.79	1.400	21.21
0.433	6.79	1.433	21.21	2.433	7.22	3.43	4.83	0.467	6.79	1.467	21.21
0.500	6.79	1.500	21.21	2.500	7.22	3.50	4.83	0.533	9.29	1.533	13.37
0.567	9.29	1.567	13.37	2.567	6.38	3.57	4.49	0.600	9.29	1.600	13.37
0.633	9.29	1.633	13.37	2.633	6.38	3.63	4.49	0.667	9.29	1.667	13.37
0.700	9.29	1.700	13.37	2.700	6.38	3.70	4.49	0.733	9.29	1.733	13.37
0.767	13.28	1.767	11.78	2.767	6.06	3.77	4.15	0.800	17.28	1.800	10.20
0.833	17.28	1.833	10.20	2.833	5.74	3.83	4.21	0.867	17.28	1.867	10.20
0.900	17.28	1.900	10.20	2.900	5.74	3.90	4.21	0.933	17.28	1.933	10.20
0.967	17.28	1.967	10.20	2.967	5.74	3.97	4.21	1.000	17.28	2.000	10.20

Unit Hyd Qpeak (cms)= 1.184

PEAK FLOW (cms)= 0.160 (1)

TIME TO PEAK (hrs)= 1.333

RUNOFF VOLUME (mm)= 11.403

TOTAL RAINFALL (mm)= 57.565

RUNOFF COEFFICIENT = 0.198

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

ADD HYD (0201)				
1 + 2 = 3				
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0101):	4.36	0.105	1.37	8.88
+ ID2= 2 (0102):	4.65	0.160	1.33	11.40
=====				
ID = 3 (0201):	9.01	0.264	1.33	10.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.0.2006)

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 SSSSS UUUU A A LLLL

OOO TTTT TTTT H H Y Y M M OOO TM

O O T T H H Y Y M M O O

O O T T H H Y Y M M O O

OOO T T T H H Y Y M M OOO

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat

Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-9ef7-c4eaf64675c3\88a54702-b4e9-41e7-bb3d-fc1e56efad0\scen

Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-9ef7-c4eaf64675c3\88a54702-b4e9-41e7-bb3d-fc1e56efad0\scen

DATE: 02-08-2021 TIME: 10:58:27

USER:

COMMENTS: CHI 50 year (PRE)

***** SIMULATION : Run 06 *****

CHICAGO STORM	
IDF curve parameters:	A= 738.312
Ptotal= 63.93 mm	B= 0.000
	C= 0.699

used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs

Storm time step = 15.00 min

Time to peak ratio = 0.33

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	6.09	1.25	111.21	2.25	9.33	3.25	5.82
0.50	7.54	1.50	23.55	2.50	8.02	3.50	5.36
0.75	10.32	1.75	14.85	2.75	7.08	3.75	4.99
1.00	19.19	2.00	11.32	3.00	6.37	4.00	4.67

CALIB	
NASHYD (0101)	Area (ha)= 4.36
ID= 1 DT= 2.0 min	Ia (mm)= 7.70
U.H. Tp(hrs)= 0.17	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	6.09	1.033	111.21	2.033	9.33	3.03	5.82	0.067	6.09	1.067	111.21
0.100	6.09	1.100	111.21	2.100	9.33	3.10	5.82	0.133	6.09	1.133	111.21
0.167	6.09	1.167	111.21	2.167	9.33	3.17	5.82	0.200	6.09	1.200	111.21
0.233	6.09	1.233	111.21	2.233	9.33	3.23	5.82	0.267	6.82	1.267	67.38
0.300	7.54	1.300	23.55	2.300	8.02	3.30	5.36	0.333	7.54	1.333	23.55
0.367	7.54	1.367	23.55	2.367	8.02	3.37	5.36	0.400	7.54	1.400	23.55
0.433	7.54	1.433	23.55	2.433	8.02	3.43	5.36	0.467	7.54	1.467	23.55
0.500	7.54	1.500	23.55	2.500	8.02	3.50	5.36	0.533	10.32	1.533	14.85
0.567	10.32	1.567	14.85	2.567	7.08	3.57	4.99	0.600	10.32	1.600	14.85
0.633	10.32	1.633	14.85	2.633	7.08	3.63	4.99	0.667	10.32	1.667	14.85
0.700	10.32	1.700	14.85	2.700	7.08	3.70	4.99	0.733	10.32	1.733	14.85
0.767	14.75	1.767	13.09	2.767	6.73	3.77	4.83	0.800	19.19	1.800	11.32
0.833	19.19	1.833	11.32	2.833	6.37	3.83	4.67	0.867	19.19	1.867	11.32
0.900	19.19	1.900	11.32	2.900	6.37	3.90	4.67	0.933	19.19	1.933	11.32
0.967	19.19	1.967	11.32	2.967	6.37	3.97	4.67	1.000	19.19	2.000	11.32

Unit Hyd Qpeak (cms)= 0.980

PEAK FLOW (cms)= 0.134 (1)

TIME TO PEAK (hrs)= 1.367

RUNOFF VOLUME (mm)= 11.044

TOTAL RAINFALL (mm)= 63.927

RUNOFF COEFFICIENT = 0.173

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

CALIB	
NASHYD (0102)	Area (ha)= 4.65
ID= 1 DT= 2.0 min	Ia (mm)= 7.23
U.H. Tp(hrs)= 0.15	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	6.09	1.033	111.21	2.033	9.33	3.03	5.82	0.067	6.09	1.067	111.21
0.100	6.09	1.100	111.21	2.100	9.33	3.10	5.82	0.133	6.09	1.133	111.21
0.167	6.09	1.167	111.21	2.167	9.33	3.17	5.82	0.200	6.09	1.200	111.21
0.233	6.09	1.233	111.21	2.233	9.33	3.23	5.82	0.267	6.82	1.267	67.38
0.300	7.54	1.300	23.55	2.300	8.02	3.30	5.36	0.333	7.54	1.333	23.55
0.367	7.54	1.367	23.55	2.367	8.02	3.37	5.36	0.400	7.54	1.400	23.55
0.433	7.54	1.433	23.55	2.433	8.02	3.43	5.36	0.467	7.54	1.467	23.55
0.500	7.54	1.500	23.55	2.500	8.02	3.50	5.36	0.533	10.32	1.533	14.85
0.567	10.32	1.567	14.85	2.567	7.08	3.57	4.99	0.600	10.32	1.600	14.85
0.633	10.32	1.633	14.85	2.633	7.08	3.63	4.99	0.667	10.32	1.667	14.85
0.700	10.32	1.700	14.85	2.700	7.08	3.70	4.99	0.733	10.32	1.733	14.85
0.767	14.75	1.767	13.09	2.767	6.73	3.77	4.83				

0.800 19.19 | 1.800 11.32 | 2.800 6.37 | 3.80 4.67
0.833 19.19 | 1.833 11.32 | 2.833 6.37 | 3.83 4.67
0.867 19.19 | 1.867 11.32 | 2.867 6.37 | 3.87 4.67
0.900 19.19 | 1.900 11.32 | 2.900 6.37 | 3.90 4.67
0.933 19.19 | 1.933 11.32 | 2.933 6.37 | 3.93 4.67
0.967 19.19 | 1.967 11.32 | 2.967 6.37 | 3.97 4.67
1.000 19.19 | 2.000 11.32 | 3.000 6.37 | 4.00 4.67

Unit Hyd Qpeak (cms)= 1.184

PEAK FLOW (cms)= 0.202 (1)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 14.065
TOTAL RAINFALL (mm)= 63.927
RUNOFF COEFFICIENT = 0.220

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

ADD HYD (0201)
1 + 2 = 3

ID1= 1 (0101): 4.36 0.134 1.37 11.04
+ ID2= 2 (0102): 4.65 0.202 1.33 14.06
=====

ID = 3 (0201): 9.01 0.333 1.33 12.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.0.2006)
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 SSSSS UUUU A A LLLLL

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

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

Input filename: C:\Program Files (x86)\Visual OTHYMO 6.0\VO2\voindat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eaf6475c3\c8196df2-180f-42a4-82c1-7201ef9151eb\scen
Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eaf6475c3\c8196df2-180f-42a4-82c1-7201ef9151eb\scen

DATE: 02-08-2021 TIME: 10:58:27

USER:

COMMENTS: CHI 100 year (PRE)

** SIMULATION : Run 07 **

CHICAGO STORM IDF curve parameters: A= 811.794
Ptotal= 70.29 mm B= 0.000
C= 0.699

used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 15.00 min
Time to peak ratio = 0.33

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.25	6.69	1.25	122.28	2.25	10.26	3.25	6.39
0.50	8.29	1.50	25.89	2.50	8.82	3.50	5.90
0.75	11.34	1.75	16.33	2.75	7.79	3.75	5.48
1.00	21.10	2.00	12.45	3.00	7.01	4.00	5.14

CALIB
NASHVD (0101)
ID= 1 DT= 2.0 min
Area (ha)= 4.36 Curve Number (CN)= 52.5
Ia (mm)= 7.70 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.033	6.69	1.033	122.28	2.033	10.26	3.03	6.39
0.067	6.69	1.067	122.28	2.067	10.26	3.07	6.39
0.100	6.69	1.100	122.28	2.100	10.26	3.10	6.39

0.133	6.69	1.133	122.28	2.133	10.26	3.13	6.39
0.167	6.69	1.167	122.28	2.167	10.26	3.17	6.39
0.200	6.69	1.200	122.28	2.200	10.26	3.20	6.39
0.233	6.69	1.233	122.28	2.233	10.26	3.23	6.39
0.267	7.49	1.267	74.09	2.267	9.54	3.27	6.15
0.300	8.29	1.300	25.89	2.300	8.82	3.30	5.90
0.333	8.29	1.333	25.89	2.333	8.82	3.33	5.90
0.367	8.29	1.367	25.89	2.367	8.82	3.37	5.90
0.400	8.29	1.400	25.89	2.400	8.82	3.40	5.90
0.433	8.29	1.433	25.89	2.433	8.82	3.43	5.90
0.467	8.29	1.467	25.89	2.467	8.82	3.47	5.90
0.500	8.29	1.500	25.89	2.500	8.82	3.50	5.90
0.533	11.34	1.533	16.33	2.533	7.79	3.53	5.48
0.567	11.34	1.567	16.33	2.567	7.79	3.57	5.48
0.600	11.34	1.600	16.33	2.600	7.79	3.60	5.48
0.633	11.34	1.633	16.33	2.633	7.79	3.63	5.48
0.667	11.34	1.667	16.33	2.667	7.79	3.67	5.48
0.700	11.34	1.700	16.33	2.700	7.79	3.70	5.48
0.733	11.34	1.733	16.33	2.733	7.79	3.73	5.48
0.767	16.22	1.767	14.39	2.767	7.40	3.77	5.31
0.800	21.10	1.800	12.45	2.800	7.01	3.80	5.14
0.833	21.10	1.833	12.45	2.833	7.01	3.83	5.14
0.867	21.10	1.867	12.45	2.867	7.01	3.87	5.14
0.900	21.10	1.900	12.45	2.900	7.01	3.90	5.14
0.933	21.10	1.933	12.45	2.933	7.01	3.93	5.14
0.967	21.10	1.967	12.45	2.967	7.01	3.97	5.14
1.000	21.10	2.000	12.45	3.000	7.01	4.00	5.14

Unit Hyd Qpeak (cms)= 0.980

PEAK FLOW (cms)= 0.165 (1)
TIME TO PEAK (hrs)= 1.367
RUNOFF VOLUME (mm)= 13.388
TOTAL RAINFALL (mm)= 70.290
RUNOFF COEFFICIENT = 0.190

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

CALIB
NASHVD (0102)
ID= 1 DT= 2.0 min
Area (ha)= 4.65 Curve Number (CN)= 59.7
Ia (mm)= 7.23 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.15

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.033	6.69	1.033	122.28	2.033	10.26	3.03	6.39
0.067	6.69	1.067	122.28	2.067	10.26	3.07	6.39
0.100	6.69	1.100	122.28	2.100	10.26	3.10	6.39
0.133	6.69	1.133	122.28	2.133	10.26	3.13	6.39
0.167	6.69	1.167	122.28	2.167	10.26	3.17	6.39
0.200	6.69	1.200	122.28	2.200	10.26	3.20	6.39
0.233	6.69	1.233	122.28	2.233	10.26	3.23	6.39
0.267	7.49	1.267	74.09	2.267	9.54	3.27	6.15
0.300	8.29	1.300	25.89	2.300	8.82	3.30	5.90
0.333	8.29	1.333	25.89	2.333	8.82	3.33	5.90
0.367	8.29	1.367	25.89	2.367	8.82	3.37	5.90
0.400	8.29	1.400	25.89	2.400	8.82	3.40	5.90
0.433	8.29	1.433	25.89	2.433	8.82	3.43	5.90
0.467	8.29	1.467	25.89	2.467	8.82	3.47	5.90
0.500	8.29	1.500	25.89	2.500	8.82	3.50	5.90
0.533	11.34	1.533	16.33	2.533	7.79	3.53	5.48
0.567	11.34	1.567	16.33	2.567	7.79	3.57	5.48
0.600	11.34	1.600	16.33	2.600	7.79	3.60	5.48
0.633	11.34	1.633	16.33	2.633	7.79	3.63	5.48
0.667	11.34	1.667	16.33	2.667	7.79	3.67	5.48
0.700	11.34	1.700	16.33	2.700	7.79	3.70	5.48
0.733	11.34	1.733	16.33	2.733	7.79	3.73	5.48
0.767	16.22	1.767	14.39	2.767	7.40	3.77	5.31
0.800	21.10	1.800	12.45	2.800	7.01	3.80	5.14
0.833	21.10	1.833	12.45	2.833	7.01	3.83	5.14
0.867	21.10	1.867	12.45	2.867	7.01	3.87	5.14
0.900	21.10	1.900	12.45	2.900	7.01	3.90	5.14
0.933	21.10	1.933	12.45	2.933	7.01	3.93	5.14
0.967	21.10	1.967	12.45	2.967	7.01	3.97	5.14
1.000	21.10	2.000	12.45	3.000	7.01	4.00	5.14

Unit Hyd Qpeak (cms)= 1.184

PEAK FLOW (cms)= 0.247 (1)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 16.927
TOTAL RAINFALL (mm)= 70.290
RUNOFF COEFFICIENT = 0.241

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

ADD HYD (0201)
1 + 2 = 3

ID1= 1 (0101): 4.36 0.165 1.37 13.39
+ ID2= 2 (0102): 4.65 0.247 1.33 16.93
=====

ID = 3 (0203): 9.01 0.410 1.33 15.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

0.733 0.65 6.700 1.08 12.667 3.88 18.63 0.86
0.767 0.65 6.733 1.08 12.700 3.88 18.67 0.86
0.800 0.65 6.767 1.08 12.733 3.88 18.70 0.86
0.833 0.65 6.800 1.08 12.767 3.45 18.73 0.86
0.867 0.65 6.833 1.08 12.800 3.02 18.77 0.97
0.900 0.65 6.867 1.08 12.833 3.02 18.80 1.08
0.933 0.65 6.900 1.08 12.867 3.02 18.83 1.08
0.967 0.65 6.933 1.08 12.900 3.02 18.87 1.08
1.000 0.65 6.967 1.08 12.933 3.02 18.90 1.08
1.033 0.65 7.000 1.08 12.967 3.02 18.93 1.08
1.067 0.65 7.033 1.29 13.000 3.02 18.97 1.08
1.100 0.65 7.067 1.29 13.033 2.80 19.00 1.08
1.133 0.65 7.100 1.29 13.067 2.80 19.03 0.86
1.167 0.65 7.133 1.29 13.100 2.80 19.07 0.86
1.200 0.65 7.167 1.29 13.133 2.80 19.10 0.86
1.233 0.65 7.200 1.29 13.167 2.80 19.13 0.86
1.267 0.54 7.233 1.29 13.200 2.80 19.17 0.86
1.300 0.43 7.267 1.19 13.233 2.80 19.20 0.86
1.333 0.43 7.300 1.08 13.267 2.59 19.23 0.86
1.367 0.43 7.333 1.08 13.300 2.57 19.27 0.97
1.400 0.43 7.367 1.08 13.333 2.37 19.30 1.08
1.433 0.43 7.400 1.08 13.367 2.37 19.33 1.08
1.467 0.43 7.433 1.08 13.400 2.37 19.37 1.08
1.500 0.43 7.467 1.08 13.433 2.37 19.40 1.08
1.533 0.65 7.500 1.08 13.467 2.37 19.43 1.08
1.567 0.65 7.533 1.29 13.500 2.37 19.47 1.08
1.600 0.65 7.567 1.29 13.533 2.16 19.50 1.08
1.633 0.65 7.600 1.29 13.567 2.16 19.53 0.86
1.667 0.65 7.633 1.29 13.600 2.16 19.57 0.86
1.700 0.65 7.667 1.29 13.633 2.16 19.60 0.86
1.733 0.65 7.700 1.29 13.667 2.16 19.63 0.86
1.767 0.65 7.733 1.29 13.700 2.16 19.67 0.86
1.800 0.65 7.767 1.29 13.733 2.16 19.70 0.86
1.833 0.65 7.800 1.29 13.767 1.94 19.73 0.86
1.867 0.65 7.833 1.29 13.800 1.72 19.77 0.75
1.900 0.65 7.867 1.29 13.833 1.72 19.80 0.65
1.933 0.65 7.900 1.29 13.867 1.72 19.83 0.65
1.967 0.65 7.933 1.29 13.900 1.72 19.87 0.65
2.000 0.65 7.967 1.29 13.933 1.72 19.90 0.65
2.033 0.86 8.000 1.29 13.967 1.72 19.93 0.65
2.067 0.86 8.033 1.51 14.000 1.72 19.97 0.65
2.100 0.86 8.067 1.51 14.033 1.51 20.00 0.65
2.133 0.86 8.100 1.51 14.067 1.51 20.03 0.65
2.167 0.86 8.133 1.51 14.100 1.51 20.07 0.65
2.200 0.86 8.167 1.51 14.133 1.51 20.10 0.65
2.233 0.86 8.200 1.51 14.167 1.51 20.13 0.65
2.267 0.75 8.233 1.51 14.200 1.51 20.17 0.65
2.300 0.65 8.267 1.51 14.233 1.51 20.20 0.65
2.333 0.65 8.300 1.51 14.267 1.62 20.23 0.65
2.367 0.65 8.333 1.51 14.300 1.72 20.27 0.65
2.400 0.65 8.367 1.51 14.333 1.72 20.30 0.65
2.433 0.65 8.400 1.51 14.367 1.72 20.33 0.65
2.467 0.65 8.433 1.51 14.400 1.72 20.37 0.65
2.500 0.65 8.467 1.51 14.433 1.72 20.40 0.65
2.533 0.65 8.500 1.51 14.467 1.72 20.43 0.65
2.567 0.65 8.533 1.51 14.500 1.72 20.47 0.65
2.600 0.65 8.567 1.51 14.533 1.51 20.50 0.65
2.633 0.65 8.600 1.51 14.567 1.51 20.53 0.65
2.667 0.65 8.633 1.51 14.600 1.51 20.57 0.65
2.700 0.65 8.667 1.51 14.633 1.51 20.60 0.65
2.733 0.65 8.700 1.51 14.667 1.51 20.63 0.65
2.767 0.65 8.733 1.51 14.700 1.51 20.67 0.65
2.800 0.65 8.767 1.62 14.733 1.51 20.70 0.65
2.833 0.65 8.800 1.72 14.767 1.62 20.73 0.65
2.867 0.65 8.833 1.72 14.800 1.72 20.77 0.65
2.900 0.65 8.867 1.72 14.833 1.72 20.80 0.65
2.933 0.65 8.900 1.72 14.867 1.72 20.83 0.65
2.967 0.65 8.933 1.72 14.900 1.72 20.87 0.65
3.000 0.65 8.967 1.72 14.933 1.72 20.90 0.65
3.033 0.86 9.000 1.72 14.967 1.72 20.93 0.65
3.067 0.86 9.033 1.72 15.000 1.72 20.97 0.65
3.100 0.86 9.067 1.72 15.033 1.51 21.00 0.65
3.133 0.86 9.100 1.72 15.067 1.51 21.03 0.65
3.167 0.86 9.133 1.72 15.100 1.51 21.07 0.65
3.200 0.86 9.167 1.72 15.133 1.51 21.10 0.65
3.233 0.86 9.200 1.72 15.167 1.51 21.13 0.65
3.267 0.75 9.233 1.72 15.200 1.51 21.17 0.65
3.300 0.65 9.267 1.83 15.233 1.51 21.20 0.65
3.333 0.65 9.300 1.94 15.267 1.62 21.23 0.65
3.367 0.65 9.333 1.94 15.300 1.72 21.27 0.65
3.400 0.65 9.367 1.94 15.333 1.72 21.30 0.65
3.433 0.65 9.400 1.94 15.367 1.72 21.33 0.65
3.467 0.65 9.433 1.94 15.400 1.72 21.37 0.65
3.500 0.65 9.467 1.94 15.433 1.72 21.40 0.65
3.533 0.65 9.500 1.94 15.467 1.72 21.43 0.65
3.567 0.65 9.533 1.94 15.500 1.72 21.47 0.65
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3.633 0.65 9.600 1.94 15.567 1.51 21.53 0.65
3.667 0.65 9.633 1.94 15.600 1.51 21.57 0.65
3.700 0.65 9.667 1.94 15.633 1.51 21.60 0.65
3.733 0.65 9.700 1.94 15.667 1.51 21.63 0.65
3.767 0.75 9.733 1.94 15.700 1.51 21.67 0.65
3.800 0.86 9.767 2.16 15.733 1.51 21.70 0.65
3.833 0.86 9.800 2.37 15.767 1.29 21.73 0.65
3.867 0.86 9.833 2.37 15.800 1.08 21.77 0.65
3.900 0.86 9.867 2.37 15.833 1.08 21.80 0.65
3.933 0.86 9.900 2.37 15.867 1.08 21.83 0.65
3.967 0.86 9.933 2.37 15.900 1.08 21.87 0.65
4.000 0.86 9.967 2.37 15.933 1.08 21.90 0.65
4.033 0.86 10.000 2.37 15.967 1.08 21.93 0.65
4.067 0.86 10.033 2.59 16.000 1.08 21.97 0.65
4.100 0.86 10.067 2.59 16.033 0.86 22.00 0.65
4.133 0.86 10.100 2.59 16.067 0.86 22.03 0.65
4.167 0.86 10.133 2.59 16.100 0.86 22.07 0.65

4.200 0.86 10.167 2.59 16.133 0.86 22.10 0.65
4.233 0.86 10.200 2.59 16.167 0.86 22.13 0.65
4.267 0.86 10.233 2.59 16.200 0.86 22.17 0.65
4.300 0.86 10.267 2.91 16.233 0.86 22.20 0.65
4.333 0.86 10.300 3.23 16.267 0.97 22.23 0.65
4.367 0.86 10.333 3.23 16.300 1.08 22.27 0.65
4.400 0.86 10.367 3.23 16.333 1.08 22.30 0.65
4.433 0.86 10.400 3.23 16.367 1.08 22.33 0.65
4.467 0.86 10.433 3.23 16.400 1.08 22.37 0.65
4.500 0.86 10.467 3.23 16.433 1.08 22.40 0.65
4.533 0.86 10.500 3.23 16.467 1.08 22.43 0.65
4.567 0.86 10.533 3.45 16.500 1.08 22.47 0.65
4.600 0.86 10.567 3.45 16.533 0.86 22.50 0.65
4.633 0.86 10.600 3.45 16.567 0.86 22.53 0.65
4.667 0.86 10.633 3.45 16.600 0.86 22.57 0.65
4.700 0.86 10.667 3.45 16.633 0.86 22.60 0.65
4.733 0.86 10.700 3.45 16.667 0.86 22.63 0.65
4.767 0.86 10.733 3.45 16.700 0.86 22.67 0.65
4.800 0.86 10.767 4.31 16.733 0.86 22.70 0.65
4.833 0.86 10.800 5.17 16.767 0.97 22.73 0.65
4.867 0.86 10.833 5.17 16.800 1.08 22.77 0.65
4.900 0.86 10.867 5.17 16.833 1.08 22.80 0.65
4.933 0.86 10.900 5.17 16.867 1.08 22.83 0.65
4.967 0.86 10.933 5.17 16.900 1.08 22.87 0.65
5.000 0.86 10.967 5.17 16.933 1.08 22.90 0.65
5.033 0.86 11.000 5.17 16.967 1.08 22.93 0.65
5.067 0.86 11.033 5.17 17.000 1.08 22.97 0.65
5.100 0.86 11.067 5.17 17.033 0.86 23.00 0.65
5.133 0.86 11.100 5.17 17.067 0.86 23.03 0.65
5.167 0.86 11.133 5.17 17.100 0.86 23.07 0.65
5.200 0.86 11.167 5.17 17.133 0.86 23.10 0.65
5.233 0.86 11.200 5.17 17.167 0.86 23.13 0.65
5.267 0.86 11.233 5.17 17.200 0.86 23.17 0.65
5.300 0.86 11.267 10.58 17.233 0.86 23.20 0.65
5.333 0.86 11.300 15.95 17.267 0.97 23.23 0.65
5.367 0.86 11.333 15.95 17.300 1.08 23.27 0.65
5.400 0.86 11.367 15.95 17.333 1.08 23.30 0.65
5.433 0.86 11.400 15.95 17.367 1.08 23.33 0.65
5.467 0.86 11.433 15.95 17.400 1.08 23.37 0.65
5.500 0.86 11.467 15.95 17.433 1.08 23.40 0.65
5.533 0.86 11.500 16.01 17.467 1.08 23.43 0.65
5.567 0.86 11.533 65.97 17.500 1.08 23.47 0.65
5.600 0.86 11.567 65.97 17.533 0.86 23.50 0.65
5.633 0.86 11.600 65.97 17.567 0.86 23.53 0.65
5.667 0.86 11.633 65.97 17.600 0.86 23.57 0.65
5.700 0.86 11.667 65.97 17.633 0.86 23.60 0.65
5.733 0.86 11.700 65.97 17.667 0.86 23.63 0.65
5.767 0.86 11.733 65.97 17.700 0.86 23.67 0.65
5.800 0.86 11.767 36.79 17.733 0.86 23.70 0.65
5.833 0.86 11.800 7.76 17.767 0.97 23.73 0.65
5.867 0.86 11.833 7.76 17.800 1.08 23.77 0.32
5.900 0.86 11.867 7.76 17.833 1.08
5.933 0.86 11.900 7.76 17.867 1.08
5.967 0.86 11.933 7.76 17.900 1.08

Unit Hyd Qpeak (cms)= 1.184

PEAK FLOW (cms)= 0.131 (1)
TIME TO PEAK (hrs)= 11.800
RUNOFF VOLUME (mm)= 9.905
TOTAL RAINFALL (mm)= 53.738
RUNOFF COEFFICIENT = 0.184

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

ADD HYD (@201)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (@101): 4.36 0.087 11.83 7.68
+ ID2= 2 (@102): 4.65 0.131 11.80 9.91
ID = 3 (@201): 9.01 0.217 11.80 8.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.0.2006)
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 UUUU 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 Y M M O O
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***** DETAILED OUTPUT *****

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DATE: 02-08-2021 TIME: 10:58:02

1.600	0.86	7.567	1.72	13.533	2.87	19.58	1.44
1.633	0.86	7.600	1.72	13.567	2.87	19.53	1.45
1.667	0.86	7.633	1.72	13.600	2.87	19.48	1.46
1.700	0.86	7.667	1.72	13.633	2.87	19.46	1.15
1.733	0.86	7.700	1.72	13.667	2.87	19.63	1.15
1.767	0.86	7.733	1.72	13.700	2.87	19.67	1.15
1.800	0.86	7.767	1.72	13.733	2.87	19.67	1.15
1.833	0.86	7.800	1.72	13.767	2.58	19.73	1.15
1.867	0.86	7.833	1.72	13.800	2.58	19.77	1.00
1.900	0.86	7.867	1.72	13.833	2.58	19.77	1.00
1.933	0.86	7.900	1.72	13.867	2.30	19.83	0.86
1.967	0.86	7.933	1.72	13.900	2.30	19.87	0.86
2.000	0.86	7.967	1.72	13.933	2.30	19.90	0.86
2.033	1.15	8.000	2.01	14.000	2.30	19.97	0.86
2.067	1.15	8.033	2.01	14.033	2.30	19.97	0.86
2.100	1.15	8.067	2.01	14.067	2.01	20.00	0.86
2.133	1.15	8.100	2.01	14.100	2.01	20.00	0.86
2.167	1.15	8.133	2.01	14.133	2.01	20.07	0.87
2.200	1.15	8.167	2.01	14.167	2.01	20.10	1.15
2.233	1.15	8.200	2.01	14.200	2.01	20.13	1.15
2.267	1.01	8.233	2.01	14.233	2.01	20.17	0.86
2.300	0.86	8.267	2.01	14.267	2.01	20.20	0.86
2.333	0.86	8.300	2.01	14.307	2.15	20.30	0.86
2.367	0.86	8.333	2.01	14.337	2.15	20.27	0.86
2.400	0.86	8.367	2.01	14.367	2.30	20.30	0.86
2.433	0.86	8.400	2.01	14.367	2.30	20.33	0.86
2.467	0.86	8.433	2.01	14.367	2.30	20.37	0.86
2.500	0.86	8.467	2.01	14.433	2.30	20.40	0.86
2.533	0.86	8.500	2.01	14.467	2.30	20.43	0.86
2.567	0.86	8.533	2.01	14.500	2.30	20.47	0.86
2.600	0.86	8.567	2.01	14.533	2.30	20.50	0.86
2.633	0.86	8.600	2.01	14.567	2.01	20.53	0.86
2.667	0.86	8.633	2.01	14.600	2.01	20.57	0.86
2.700	0.86	8.667	2.01	14.633	2.01	20.60	0.86
2.733	0.86	8.700	2.01	14.667	2.01	20.63	0.86
2.767	0.86	8.733	2.01	14.700	2.01	20.67	0.86
2.800	0.86	8.767	2.15	14.733	2.15	20.73	0.86
2.833	0.86	8.800	2.15	14.767	2.15	20.77	0.86
2.867	0.86	8.833	2.30	14.800	2.30	20.77	0.86
2.900	0.86	8.867	2.30	14.833	2.30	20.80	0.86
2.933	0.86	8.900	2.30	14.867	2.30	20.83	0.86
2.967	0.86	8.933	2.30	14.900	2.30	20.87	0.86
3.000	0.86	8.967	2.30	14.933	2.30	20.90	0.86
3.033	1.15	9.000	2.30	14.967	2.30	20.93	0.86
3.067	1.15	9.033	2.30	15.000	2.30	20.97	0.86
3.100	1.15	9.067	2.30	15.033	2.01	21.00	0.86
3.133	1.15	9.100	2.30	15.067	2.01	21.03	0.86
3.167	1.15	9.133	2.30	15.100	2.01	21.07	0.86
3.200	1.15	9.167	2.30	15.133	2.01	21.10	0.86
3.233	1.15	9.200	2.30	15.167	2.01	21.13	

PEAK FLOW	(cms)=	0.161 (i)
TIME TO PEAK	(hrs)=	11.833
RUNOFF VOLUME	(mm)=	13.886
TOTAL RAINFALL	(mm)=	71.584

CALIB			
NASHYD (0102)	Area (ha)=	4.65	Curve Number (CN)= 59.7
ID= 1 DT= 2.0 min	Ia (mm)=	7.23	# of Linear Res.(N)= 3.00
II H Tn(hcc)=	0.15		

TRANSFORMED HYDROGRAPH							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
0.033	0.86	6.000	1.15	11.967	10.34	17.93	1.44
0.067	0.86	6.033	1.44	12.000	10.34	17.97	1.44
0.100	0.86	6.067	1.44	12.033	10.34	18.00	1.44
0.133	0.86	6.100	1.44	12.067	10.34	18.03	1.44
0.167	0.86	6.133	1.44	12.100	10.34	18.07	1.15
0.200	0.86	6.167	1.44	12.133	10.34	18.10	1.15
0.233	0.86	6.200	1.44	12.167	10.34	18.13	1.15
0.267	0.72	6.233	1.44	12.200	10.34	18.17	1.15
0.300	0.57	6.267	1.29	12.233	10.34	18.20	1.15
0.333	0.57	6.300	1.15	12.267	7.89	18.23	1.15
0.367	0.57	6.333	1.15	12.300	7.89	18.26	1.15
0.400	0.57	6.367	1.15	12.333	5.46	18.30	1.44
0.433	0.57	6.400	1.15	12.367	5.46	18.33	1.44
0.467	0.57	6.433	1.15	12.400	5.46	18.36	1.44
0.500	0.57	6.467	1.15	12.433	5.46	18.40	1.44
0.533	0.86	6.500	1.15	12.467	5.46	18.43	1.44
0.567	0.86	6.533	1.44	12.500	5.46	18.47	1.44
0.600	0.86	6.567	1.44	12.533	5.46	18.50	1.44
0.633	0.86	6.600	1.44	12.567	5.17	18.53	1.15
0.667	0.86	6.633	1.44	12.600	5.17	18.57	1.15
0.700	0.86	6.667	1.44	12.633	5.17	18.60	1.15
0.733	0.86	6.700	1.44	12.667	5.17	18.63	1.15
0.767	0.86	6.733	1.44	12.700	5.17	18.67	1.15
0.800	0.86	6.767	1.44	12.733	5.17	18.70	1.15
0.833	0.86	6.800	1.44	12.767	5.17	18.73	1.15
0.867	0.86	6.833	1.44	12.800	4.82	18.77	1.29
0.900	0.86	6.867	1.44	12.833	4.82	18.80	1.44
0.933	0.86	6.900	1.44	12.867	4.82	18.83	1.44
0.967	0.86	6.933	1.44	12.900	4.82	18.87	1.44
1.000	0.86	6.967	1.44	12.933	4.82	18.90	1.44
1.033	0.86	7.000	1.44	12.967	4.82	18.93	1.44
1.067	0.86	7.033	1.44	12.999	4.82	18.96	1.44
1.100	0.86	7.067	1.72	13.033	3.73	19.00	1.44
1.133	0.86	7.100	1.72	13.067	3.73	19.03	1.15
1.167	0.86	7.133	1.72	13.100	3.73	19.06	1.15
1.200	0.86	7.167	1.72	13.133	3.73	19.10	1.15
1.233	0.86	7.200	1.72	13.167	3.73	19.13	1.15
1.267	0.72	7.233	1.72	13.200	3.73	19.17	1.15
1.300	0.72	7.267	1.72	13.233	3.73	19.20	1.15
1.333	0.57	7.300	1.44	13.267	3.45	19.23	1.15
1.367	0.57	7.333	1.44	13.300	3.16	19.27	1.29
1.400	0.57	7.367	1.44	13.333	3.16	19.30	1.44
1.433	0.57	7.400	1.44	13.367	3.16	19.33	1.44
1.467	0.57	7.433	1.44	13.400	3.16	19.37	1.44
1.500	0.57	7.467	1.44	13.433	3.16	19.40	1.44
1.533	0.57	7.500	1.44	13.467	3.16	19.43	1.44
1.567	0.86	7.533	1.72	13.500	3.16	19.47	1.44

2.467 1.01 8.433 2.35 14.400 2.68 20.37 1.01
2.500 1.01 8.467 2.35 14.433 2.68 20.40 1.01
2.533 1.01 8.500 2.35 14.467 2.68 20.43 1.01
2.567 1.01 8.533 2.35 14.500 2.68 20.47 1.01
2.600 1.01 8.567 2.35 14.533 2.35 20.50 1.01
2.633 1.01 8.600 2.35 14.567 2.35 20.53 1.01
2.667 1.01 8.633 2.35 14.600 2.35 20.57 1.01
2.700 1.01 8.667 2.35 14.633 2.35 20.60 1.01
2.733 1.01 8.700 2.35 14.667 2.35 20.63 1.01
2.767 1.01 8.733 2.35 14.700 2.35 20.67 1.01
2.800 1.01 8.767 2.51 14.733 2.35 20.70 1.01
2.833 1.01 8.800 2.68 14.767 2.51 20.73 1.01
2.867 1.01 8.833 2.68 14.800 2.68 20.77 1.01
2.900 1.01 8.867 2.68 14.833 2.68 20.80 1.01
2.933 1.01 8.900 2.68 14.867 2.68 20.83 1.01
2.967 1.01 8.933 2.68 14.900 2.68 20.87 1.01
3.000 1.01 8.967 2.68 14.933 2.68 20.90 1.01
3.033 1.34 9.000 2.68 14.967 2.68 20.93 1.01
3.067 1.34 9.033 2.68 15.000 2.68 20.97 1.01
3.100 1.34 9.067 2.68 15.033 2.35 21.00 1.01
3.133 1.34 9.100 2.68 15.067 2.35 21.03 1.01
3.167 1.34 9.133 2.68 15.100 2.35 21.07 1.01
3.200 1.34 9.167 2.68 15.133 2.35 21.10 1.01
3.233 1.34 9.200 2.68 15.167 2.35 21.13 1.01
3.267 1.17 9.233 2.68 15.200 2.35 21.17 1.01
3.300 1.01 9.267 2.85 15.233 2.35 21.20 1.01
3.333 1.01 9.300 3.02 15.267 2.51 21.23 1.01
3.367 1.01 9.333 3.02 15.300 2.68 21.27 1.01
3.400 1.01 9.367 3.02 15.333 2.68 21.30 1.01
3.433 1.01 9.400 3.02 15.367 2.68 21.33 1.01
3.467 1.01 9.433 3.02 15.400 2.68 21.37 1.01
3.500 1.01 9.467 3.02 15.433 2.68 21.40 1.01
3.533 1.01 9.500 3.02 15.467 2.68 21.43 1.01
3.567 1.01 9.533 3.02 15.500 2.68 21.47 1.01
3.600 1.01 9.567 3.02 15.533 2.35 21.50 1.01
3.633 1.01 9.600 3.02 15.567 2.35 21.53 1.01
3.667 1.01 9.633 3.02 15.600 2.35 21.57 1.01
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3.733 1.01 9.700 3.02 15.667 2.35 21.63 1.01
3.767 1.17 9.733 3.02 15.700 2.35 21.67 1.01
3.800 1.34 9.767 3.35 15.733 2.35 21.70 1.01
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3.867 1.34 9.833 3.69 15.800 1.68 21.77 1.01
3.900 1.34 9.867 3.69 15.833 1.68 21.80 1.01
3.933 1.34 9.900 3.69 15.867 1.68 21.83 1.01
3.967 1.34 9.933 3.69 15.900 1.68 21.87 1.01
4.000 1.34 9.967 3.69 15.933 1.68 21.90 1.01
4.033 1.34 10.000 3.69 15.967 1.68 21.93 1.01
4.067 1.34 10.033 4.02 16.000 1.68 21.97 1.01
4.100 1.34 10.067 4.02 16.033 1.34 22.00 1.01
4.133 1.34 10.100 4.02 16.067 1.34 22.03 1.01
4.167 1.34 10.133 4.02 16.100 1.34 22.07 1.01
4.200 1.34 10.167 4.02 16.133 1.34 22.10 1.01
4.233 1.34 10.200 4.02 16.167 1.34 22.13 1.01
4.267 1.34 10.233 4.02 16.200 1.34 22.17 1.01
4.300 1.34 10.267 4.53 16.233 1.34 22.20 1.01
4.333 1.34 10.300 5.03 16.267 1.51 22.23 1.01
4.367 1.34 10.333 5.03 16.300 1.68 22.27 1.01
4.400 1.34 10.367 5.03 16.333 1.68 22.30 1.01
4.433 1.34 10.400 5.03 16.367 1.68 22.33 1.01
4.467 1.34 10.433 5.03 16.400 1.68 22.37 1.01
4.500 1.34 10.467 5.03 16.433 1.68 22.40 1.01
4.533 1.34 10.500 5.03 16.467 1.68 22.43 1.01
4.567 1.34 10.533 5.36 16.500 1.68 22.47 1.01
4.600 1.34 10.567 5.36 16.533 1.34 22.50 1.01
4.633 1.34 10.600 5.36 16.567 1.34 22.53 1.01
4.667 1.34 10.633 5.36 16.600 1.34 22.57 1.01
4.700 1.34 10.667 5.36 16.633 1.34 22.60 1.01
4.733 1.34 10.700 5.36 16.667 1.34 22.63 1.01
4.767 1.34 10.733 5.36 16.700 1.34 22.67 1.01
4.800 1.34 10.767 6.71 16.733 1.34 22.70 1.01
4.833 1.34 10.800 8.04 16.767 1.51 22.73 1.01
4.867 1.34 10.833 8.04 16.800 1.68 22.77 1.01
4.900 1.34 10.867 8.04 16.833 1.68 22.80 1.01
4.933 1.34 10.900 8.04 16.867 1.68 22.83 1.01
4.967 1.34 10.933 8.04 16.900 1.68 22.87 1.01
5.000 1.34 10.967 8.04 16.933 1.68 22.90 1.01
5.033 1.34 11.000 8.04 16.967 1.68 22.93 1.01
5.067 1.34 11.033 8.04 17.000 1.68 22.97 1.01
5.100 1.34 11.067 8.04 17.033 1.34 23.00 1.01
5.133 1.34 11.100 8.04 17.067 1.34 23.03 1.01
5.167 1.34 11.133 8.04 17.100 1.34 23.07 1.01
5.200 1.34 11.167 8.04 17.133 1.34 23.10 1.01
5.233 1.34 11.200 8.04 17.167 1.34 23.13 1.01
5.267 1.34 11.233 8.04 17.200 1.34 23.17 1.01
5.300 1.34 11.267 16.44 17.233 1.34 23.20 1.01
5.333 1.34 11.300 24.80 17.267 1.51 23.23 1.01
5.367 1.34 11.333 24.80 17.300 1.68 23.27 1.01
5.400 1.34 11.367 24.80 17.333 1.68 23.30 1.01
5.433 1.34 11.400 24.80 17.367 1.68 23.33 1.01
5.467 1.34 11.433 24.80 17.400 1.68 23.37 1.01
5.500 1.34 11.467 24.80 17.433 1.68 23.40 1.01
5.533 1.34 11.500 24.90 17.467 1.68 23.43 1.01
5.567 1.34 11.533 102.57 17.500 1.68 23.47 1.01
5.600 1.34 11.567 102.57 17.533 1.34 23.50 1.01
5.633 1.34 11.600 102.57 17.567 1.34 23.53 1.01
5.667 1.34 11.633 102.57 17.600 1.34 23.57 1.01
5.700 1.34 11.667 102.57 17.633 1.34 23.60 1.01
5.733 1.34 11.700 102.57 17.667 1.34 23.63 1.01
5.767 1.34 11.733 102.57 17.700 1.34 23.67 1.01
5.800 1.34 11.767 57.20 17.733 1.34 23.70 1.01
5.833 1.34 11.800 12.07 17.767 1.51 23.73 1.01
5.867 1.34 11.833 12.07 17.800 1.68 23.77 0.50
5.900 1.34 11.867 12.07 17.833 1.68 23.80 0.50

5.933 1.34 11.900 12.07 17.867 1.68 23.83 1.01
5.967 1.34 11.933 12.07 17.900 1.68 23.87 1.01

Unit Hyd Qpeak (cms) = 1.184

PEAK FLOW (cms)= 0.320 (1)
TIME TO PEAK (hrs)= 11.880
RUNOFF VOLUME (mm)= 23.469
TOTAL RAINFALL (mm)= 83.548
RUNOFF COEFFICIENT = 0.281

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

ADD HYD (0201)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0101): 4.36 0.220 11.83 16.81
+ ID2= 2 (0102): 4.65 0.320 11.80 23.47
===== ID = 3 (0201): 9.01 0.538 11.80 21.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.0.2086)
V V I SS U A A L
V V I SS U A A A A L
V V I SS U U A A L
V V I SSSSS 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 Y M M O O
000 T T H H Y Y M M 000
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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eafb4675c3\fdfee5b2-dd57-4b33-9628-0312159451d1\scen
Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eafb4675c3\fdfee5b2-dd57-4b33-9628-0312159451d1\scen

DATE: 02-08-2021 TIME: 10:58:02

USER:

COMMENTS: SCS 25 year (PRE)

** SIMULATION : Run 04 **

MASS STORM
Filename: C:\Users\ASchoof\AppData\Local\Temp\88074795-6db2-4042-bbff-05171883654e\8ae18c54
Comments: SCS Type II 24 HR MASS CURVE
Duration of storm = 23.75 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.19	6.25	1.98	12.25	14.24	18.25	1.58
0.50	0.79	6.50	1.58	12.50	7.52	18.50	1.98
0.75	1.19	6.75	1.98	12.75	7.12	18.75	1.58
1.00	1.19	7.00	1.98	13.00	5.54	19.00	1.98
1.25	1.19	7.25	2.37	13.25	5.14	19.25	1.58
1.50	0.79	7.50	1.98	13.50	4.35	19.50	1.98
1.75	1.19	7.75	2.37	13.75	3.96	19.75	1.58
2.00	1.19	8.00	2.37	14.00	3.16	20.00	1.19
2.25	1.58	8.25	2.77	14.25	2.77	20.25	1.19
2.50	1.19	8.50	2.77	14.50	3.16	20.50	1.19
2.75	1.19	8.75	2.77	14.75	2.77	20.75	1.19
3.00	1.19	9.00	3.16	15.00	3.16	21.00	1.19
3.25	1.58	9.25	3.16	15.25	2.77	21.25	1.19
3.50	1.19	9.50	3.56	15.50	3.16	21.50	1.19
3.75	1.19	9.75	3.56	15.75	2.77	21.75	1.19
4.00	1.58	10.00	4.35	16.00	1.98	22.00	1.19
4.25	1.58	10.25	4.75	16.25	1.58	22.25	1.19
4.50	1.58	10.50	5.93	16.50	1.98	22.50	1.19
4.75	1.58	10.75	6.33	16.75	1.58	22.75	1.19
5.00	1.58	11.00	9.49	17.00	1.98	23.00	1.19
5.25	1.58	11.25	9.49	17.25	1.58	23.25	1.19
5.50	1.58	11.50	29.27	17.50	1.98	23.50	1.19
5.75	1.58	11.75	121.05	17.75	1.58	23.75	1.19
6.00	1.58	12.00	14.24	18.00	1.98		

CALIB


```
Unit Hyd Qpeak (cms)= 0.980
PEAK FLOW (cms)= 0.370 (i)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 31.215
TOTAL RAINFALL (mm)= 109.470
RUNOFF COEFFICIENT = 0.285
```

CALIB		
NASHYD (0102)	Area (ha)= 4.65	Curve Number (CN)= 59.7
ID= 1 DT= 2.0 min	Ia (mm)= 7.23	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.15	

--- TRANSFORMED HYDROGRAPH ---									
TIME		RAIN		TIME		RAIN		hrs	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.32	6.000	1.76	11.967	15.81	17.93	2.20		
0.067	1.32	6.033	2.20	12.080	15.81	17.97	2.20		
0.100	1.32	6.067	2.20	12.193	15.81	18.00	2.20		
0.133	1.32	6.100	2.20	12.267	15.81	18.03	1.76		
0.167	1.32	6.133	2.20	12.280	15.81	18.07	1.76		
0.200	1.32	6.167	2.20	12.280	15.81	18.10	1.76		
0.233	1.32	6.200	2.20	12.267	15.81	18.13	1.76		
0.267	1.10	6.233	2.20	12.280	15.81	18.17	1.76		
0.300	0.88	6.267	1.98	12.233	15.81	18.20	1.76		
0.333	0.88	6.300	1.98	12.267	15.81	18.23	1.76		
0.367	0.88	6.333	1.76	12.280	8.34	18.27	1.98		
0.400	0.88	6.367	1.76	12.233	8.34	18.30	2.20		
0.433	0.88	6.400	1.76	12.267	8.34	18.33	2.20		
0.467	0.88	6.433	1.76	12.240	8.34	18.37	2.20		
0.500	0.88	6.467	1.76	12.243	8.34	18.40	2.20		
0.533	1.32	6.500	1.76	12.267	8.34	18.43	2.20		
0.567	1.32	6.533	2.20	12.250	8.34	18.47	2.20		

1.467 0.97 | 7.433 2.42 |13.400 5.32 | 19.37 2.42
1.500 0.97 7.467 2.42 |13.433 5.32 | 19.40 2.42
1.533 1.45 7.500 2.42 |13.467 5.32 | 19.43 2.42
1.567 1.45 7.533 2.90 |13.500 5.31 | 19.47 2.42
1.600 1.45 7.567 2.90 |13.533 4.83 | 19.50 2.42
1.633 1.45 7.600 2.90 |13.567 4.83 | 19.53 1.93
1.667 1.45 7.633 2.90 |13.600 4.83 | 19.57 1.93
1.700 1.45 7.667 2.90 |13.633 4.83 | 19.60 1.93
1.733 1.45 7.700 2.90 |13.667 4.83 | 19.63 1.93
1.767 1.45 7.733 2.90 |13.700 4.83 | 19.67 1.93
1.800 1.45 7.767 2.90 |13.733 4.83 | 19.70 1.93
1.833 1.45 7.800 2.90 |13.767 4.35 | 19.73 1.93
1.867 1.45 7.833 2.90 |13.800 3.87 | 19.77 1.69
1.900 1.45 7.867 2.90 |13.833 3.87 | 19.80 1.45
1.933 1.45 7.900 2.90 |13.867 3.87 | 19.83 1.45
1.967 1.45 7.933 2.90 |13.900 3.87 | 19.87 1.45
2.000 1.45 7.967 2.90 |13.933 3.87 | 19.90 1.45
2.033 1.93 8.000 2.90 |13.967 3.87 | 19.93 1.45
2.067 1.93 8.033 3.38 |14.000 3.86 | 19.97 1.45
2.100 1.93 8.067 3.38 |14.033 3.38 | 20.00 1.45
2.133 1.93 8.100 3.38 |14.067 3.38 | 20.03 1.45
2.167 1.93 8.133 3.38 |14.100 3.38 | 20.07 1.45
2.200 1.93 8.167 3.38 |14.133 3.38 | 20.10 1.45
2.233 1.93 8.200 3.38 |14.167 3.38 | 20.13 1.45
2.267 1.69 8.233 3.38 |14.200 3.38 | 20.17 1.45
2.300 1.45 8.267 3.38 |14.233 3.38 | 20.20 1.45
2.333 1.45 8.300 3.38 |14.267 3.63 | 20.23 1.45
2.367 1.45 8.333 3.38 |14.300 3.87 | 20.27 1.45
2.400 1.45 8.367 3.38 |14.333 3.87 | 20.30 1.45
2.433 1.45 8.400 3.38 |14.367 3.87 | 20.33 1.45
2.467 1.45 8.433 3.38 |14.400 3.87 | 20.37 1.45
2.500 1.45 8.467 3.38 |14.433 3.87 | 20.40 1.45
2.533 1.45 8.500 3.38 |14.467 3.87 | 20.43 1.45
2.567 1.45 8.533 3.38 |14.500 3.86 | 20.47 1.45
2.600 1.45 8.567 3.38 |14.533 3.38 | 20.50 1.45
2.633 1.45 8.600 3.38 |14.567 3.38 | 20.53 1.45
2.667 1.45 8.633 3.38 |14.600 3.38 | 20.57 1.45
2.700 1.45 8.667 3.38 |14.633 3.38 | 20.60 1.45
2.733 1.45 8.700 3.38 |14.667 3.38 | 20.63 1.45
2.767 1.45 8.733 3.38 |14.700 3.38 | 20.67 1.45
2.800 1.45 8.767 3.62 |14.733 3.38 | 20.70 1.45
2.833 1.45 8.800 3.87 |14.767 3.63 | 20.73 1.45
2.867 1.45 8.833 3.87 |14.800 3.87 | 20.77 1.45
2.900 1.45 8.867 3.87 |14.833 3.87 | 20.80 1.45
2.933 1.45 8.900 3.87 |14.867 3.87 | 20.83 1.45
2.967 1.45 8.933 3.87 |14.900 3.87 | 20.87 1.45
3.000 1.45 8.967 3.87 |14.933 3.87 | 20.90 1.45
3.033 1.93 9.000 3.87 |14.967 3.87 | 20.93 1.45
3.067 1.93 9.033 3.87 |15.000 3.86 | 20.97 1.45
3.100 1.93 9.067 3.87 |15.033 3.38 | 21.00 1.45
3.133 1.93 9.100 3.87 |15.067 3.38 | 21.03 1.45
3.167 1.93 9.133 3.87 |15.100 3.38 | 21.07 1.45
3.200 1.93 9.167 3.87 |15.133 3.38 | 21.10 1.45
3.233 1.93 9.200 3.87 |15.167 3.38 | 21.13 1.45
3.267 1.69 9.233 3.87 |15.200 3.38 | 21.17 1.45
3.300 1.45 9.267 4.11 |15.233 3.38 | 21.20 1.45
3.333 1.45 9.300 4.35 |15.267 3.63 | 21.23 1.45
3.367 1.45 9.333 3.35 |15.300 3.87 | 21.27 1.45
3.400 1.45 9.367 4.35 |15.333 3.87 | 21.30 1.45
3.433 1.45 9.400 4.35 |15.367 3.87 | 21.33 1.45
3.467 1.45 9.433 4.35 |15.400 3.87 | 21.37 1.45
3.500 1.45 9.467 4.35 |15.433 3.87 | 21.40 1.45
3.533 1.45 9.500 4.35 |15.467 3.87 | 21.43 1.45
3.567 1.45 9.533 4.35 |15.500 3.86 | 21.47 1.45
3.600 1.45 9.567 4.35 |15.533 3.38 | 21.50 1.45
3.633 1.45 9.600 4.35 |15.567 3.38 | 21.53 1.45
3.667 1.45 9.633 4.35 |15.600 3.38 | 21.57 1.45
3.700 1.45 9.667 4.35 |15.633 3.38 | 21.60 1.45
3.733 1.45 9.700 4.35 |15.667 3.38 | 21.63 1.45
3.767 1.69 9.733 4.35 |15.700 3.38 | 21.67 1.45
3.800 1.93 9.767 4.63 |15.733 3.38 | 21.70 1.45
3.833 1.93 9.800 5.32 |15.767 2.90 | 21.73 1.45
3.867 1.93 9.833 5.32 |15.800 2.42 | 21.77 1.45
3.900 1.93 9.867 5.32 |15.833 2.42 | 21.80 1.45
3.933 1.93 9.900 5.32 |15.867 2.42 | 21.83 1.45
3.967 1.93 9.933 5.32 |15.900 2.42 | 21.87 1.45
4.000 1.93 9.967 5.32 |15.933 2.42 | 21.90 1.45
4.033 1.93 10.000 5.32 |15.967 2.42 | 21.93 1.45
4.067 1.93 10.033 5.80 |16.000 2.41 | 21.97 1.45
4.100 1.93 10.067 5.80 |16.033 1.93 | 22.00 1.45
4.133 1.93 10.100 5.80 |16.067 1.93 | 22.03 1.45
4.167 1.93 10.133 5.80 |16.100 1.93 | 22.07 1.45
4.200 1.93 10.167 5.80 |16.133 1.93 | 22.10 1.45
4.233 1.93 10.200 5.80 |16.167 1.93 | 22.13 1.45
4.267 1.93 10.233 5.80 |16.200 1.93 | 22.17 1.45
4.300 1.93 10.267 6.52 |16.233 1.93 | 22.20 1.45
4.333 1.93 10.300 7.25 |16.267 2.18 | 22.23 1.45
4.367 1.93 10.333 7.25 |16.300 2.42 | 22.27 1.45
4.400 1.93 10.367 7.25 |16.333 2.42 | 22.30 1.45
4.433 1.93 10.400 7.25 |16.367 2.42 | 22.33 1.45
4.467 1.93 10.433 7.25 |16.400 2.42 | 22.37 1.45
4.500 1.93 10.467 7.25 |16.433 2.42 | 22.40 1.45
4.533 1.93 10.500 7.25 |16.467 2.42 | 22.43 1.45
4.567 1.93 10.533 7.73 |16.500 2.41 | 22.47 1.45
4.600 1.93 10.567 7.73 |16.533 1.93 | 22.50 1.45
4.633 1.93 10.600 7.73 |16.567 1.93 | 22.53 1.45
4.667 1.93 10.633 7.73 |16.600 1.93 | 22.57 1.45
4.700 1.93 10.667 7.73 |16.633 1.93 | 22.60 1.45
4.733 1.93 10.700 7.73 |16.667 1.93 | 22.63 1.45
4.767 1.93 10.733 7.73 |16.700 1.93 | 22.67 1.45
4.800 1.93 10.767 9.67 |16.733 1.93 | 22.70 1.45
4.833 1.93 10.800 11.60 |16.767 2.18 | 22.73 1.45
4.867 1.93 10.833 11.60 |16.800 2.42 | 22.77 1.45
4.900 1.93 10.867 11.60 |16.833 2.42 | 22.80 1.45

4.933 1.93 |10.900 11.60 |16.867 2.42 | 22.83 1.45
4.967 1.93 |10.933 11.60 |16.900 2.42 | 22.87 1.45
5.000 1.93 |10.967 11.60 |16.933 2.42 | 22.90 1.45
5.033 1.93 |11.000 11.60 |16.967 2.42 | 22.93 1.45
5.067 1.93 |11.033 11.60 |17.000 2.41 | 22.97 1.45
5.100 1.93 |11.067 11.60 |17.033 1.93 | 23.00 1.45
5.133 1.93 |11.100 11.60 |17.067 1.93 | 23.03 1.45
5.167 1.93 |11.133 11.60 |17.100 1.93 | 23.07 1.45
5.200 1.93 |11.167 11.60 |17.133 1.93 | 23.10 1.45
5.233 1.93 |11.200 11.60 |17.167 1.93 | 23.13 1.45
5.267 1.93 |11.233 11.60 |17.200 1.93 | 23.17 1.45
5.300 1.93 |11.267 23.70 |17.233 1.93 | 23.20 1.45
5.333 1.93 |11.300 35.76 |17.267 2.18 | 23.23 1.45
5.367 1.93 |11.333 35.76 |17.300 2.42 | 23.27 1.45
5.400 1.93 |11.367 35.76 |17.333 2.42 | 23.30 1.45
5.433 1.93 |11.400 35.76 |17.367 2.42 | 23.33 1.45
5.467 1.93 |11.433 35.76 |17.400 2.42 | 23.37 1.45
5.500 1.93 |11.467 35.76 |17.433 2.42 | 23.40 1.45
5.533 1.93 |11.500 35.89 |17.467 2.42 | 23.43 1.45
5.567 1.93 |11.533 147.86 |17.500 2.41 | 23.47 1.45
5.600 1.93 |11.567 147.86 |17.533 1.93 | 23.50 1.45
5.633 1.93 |11.600 147.86 |17.567 1.93 | 23.53 1.45
5.667 1.93 |11.633 147.86 |17.600 1.93 | 23.57 1.45
5.700 1.93 |11.667 147.86 |17.633 1.93 | 23.60 1.45
5.733 1.93 |11.700 147.86 |17.667 1.93 | 23.63 1.45
5.767 1.93 |11.733 147.86 |17.700 1.93 | 23.67 1.45
5.800 1.93 |11.767 62.46 |17.733 1.93 | 23.70 1.45
5.833 1.93 |11.800 17.40 |17.767 2.18 | 23.73 1.45
5.867 1.93 |11.833 17.40 |17.800 2.42 | 23.77 0.73
5.900 1.93 |11.867 17.40 |17.833 2.42 |
5.933 1.93 |11.900 17.40 |17.867 2.42 |
5.967 1.93 |11.933 17.40 |17.900 2.42 |

Unit Hyd Qpeak (cms)= 1.184

PEAK FLOW (cms)= 0.623 (1)
TIME TO PEAK (hrs)= 11.800
RUNOFF VOLUME (mm)= 44.956
TOTAL RAINFALL (mm)= 120.437
RUNOFF COEFFICIENT = 0.373

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

| ADD HYD (0201) |
| 1 + 2 + 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0101): 4.36 0.441 11.83 37.08
+ ID2= 2 (0102): 4.65 0.623 11.80 44.96

ID = 3 (0201): 9.01 1.061 11.80 41.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

Appendix B: Post-Development Hydrological Analysis

Approved:



Design Storm - OWEN SOUND MOE					
<u>5 YEAR</u>		<u>Runoff Coefficients</u>		Project Name:	Camperdown Condominiums
A - 1234.576	Residential	0.55		Project Number:	117304
B - 8.297	Open Space	0.25		Municipality:	Town of The Blue Mountains
C - 0.851				Designed By:	AS
				Date:	March 2018
	<u>Mannings "n"</u>			Checked By:	
Concrete		PVC		Date:	March 2018
0.013		0.009		Revised By:	AS
				Date:	October 2020
				Checked By:	

[illegible]

Site Area (Catchment 201)	=	22,000	sq.m	
Impervious Area	=	9,545	sq.m	(Asphalt, Driveway, House, Pond)
Pervious Area	=	12,455	sq.m	
Directly Connected Area	=	4,605	sq.m	(Asphalt, Driveway, House)

% Impervious	=	43.4
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% Directly Connected	=	20.9
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Site Area (Catchment 205)	=	300	sq.m	
Impervious Area	=	168	sq.m	(Asphalt, Driveway, House)
Pervious Area	=	132	sq.m	
Directly Connected Area	=	84	sq.m	(Asphalt, Driveway, House)

% Impervious	=	56.0
--------------	---	------

% Directly Connected	=	28.0
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Site Area (Catchment 206)	=	7,300	sq.m	
Impervious Area	=	2,319	sq.m	(Asphalt, Driveway, House)
Pervious Area	=	4,981	sq.m	
Directly Connected Area	=	927	sq.m	(Asphalt, Driveway, House)

% Impervious	=	31.8
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% Directly Connected	=	12.7
----------------------	---	------

	Project:	Camperdown Condominiums
	File No.:	117304
	Date:	June 2018
	Designed By:	AS
	Checked By:	RS
	Subject:	CN Calculator

CURVE NUMBER, INITIAL ABSTRACTION & TIME TO PEAK CALCULATIONS

Catchment 202 Area 1.63 ha

WEIGHTED CN VALUE																										
Soil Series	Soil Series	Hydrologic Soil Group	Soil Texture	Runoff Coefficient Type	Catchment Soil Characteristics		Forest/Woodland			Pasture/Lawns			Meadows			Cultivated			Impervious			Wetland/Lakes/SWMF			Average CN for Soil Type	
					Area	Percent	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN		
WSL	WATERLOO	A	Sand Loam	1	1.22	0.75	1.22	0.7	1	32	0		49	0		38	0		62	0		100	0		50	32
DUC	DUNEDIN	D	Clay Loam or Clay	3	0.41	0.25	0.29	0.7	79	0.12	0.3	84	0		81	0		86	0		100	0		50	80.5	
	#N/A	#N/A	#N/A	#N/A	0.00		0.00		#N/A	0.00		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0	
	#N/A	#N/A	#N/A	#N/A	0		0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0	
	#N/A	#N/A	#N/A	#N/A	0		0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0	
Totals					1.63	1.00	1.51	0.93		0.12	0.08		0	0		0	0		0	0		0	0		44.13	

Time of Concentration Calculations

For Runoff Coefficients greater than 0.4

Bransby-Williams Formula

Maximum Catchment Elevation 223 m
Minimum Catchment Elevation 190.5 m
Catchment length 200 m
Catchment Slope 16%
Catchment Area 1.63 ha

Time of Concentration (Minutes) 6.22
Time of Concentration (Hours) 0.10
Time to Peak (2/3 x Time of Concentration) 0.07

Time to Peak 0.17 hrs

For Runoff Coefficients less than 0.4

Airport Method

Maximum Catchment Elevation 223 m
Minimum Catchment Elevation 190.5 m
Catchment length 200 m
Catchment Slope 16%
Catchment Area 1.63 ha

Time of Concentration (Minutes) 15.30
Time of Concentration (Hours) 0.25
Time to Peak (2/3 x Time of Concentration) 0.17

Initial Abstraction 9.625 mm

Wetlands	12
Woods	10
Meadows	8
Cultivated	7
Lawns	5
Impervious	2

Runoff Coefficient 0.27

Landuse Type	Soil Series				
	WSL	DUC	0	0	0
Forest/Woodland	0.18	0.52	#N/A	#N/A	#N/A
Cultivated	0.4	0.7	#N/A	#N/A	#N/A
Pasture/Lawn	0.22	0.55	#N/A	#N/A	#N/A
Impervious	0.95	0.95	#N/A	#N/A	#N/A
Wetland/Lake/SWMF	0.05	0.05	#N/A	#N/A	#N/A
Meadows	0.20	0.54	#N/A	#N/A	#N/A
Soil Series Total	0.18	0.529	#N/A	#N/A	#N/A

	Project:	Camperdown Condominiums
	File No.:	117304
	Date:	June 2018
	Designed By:	AS
	Checked By:	RS
	Subject:	CN Calculator

CURVE NUMBER, INITIAL ABSTRACTION & TIME TO PEAK CALCULATIONS

Catchment 203 Area 2.89 ha

WEIGHTED CN VALUE																			
Soil Series	Soil Series	Hydrologic Soil Group	Soil Texture	Runoff Coefficient Type	Catchment Soil Characteristics			Forest/Woodland			Pasture/Lawns			Meadows			Cultivated		
					Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN
TS	TECUMSETH	AB	Sand Loam	1	0.98	0.34	0.98	1	46	0	59	0	51	0	68	0	100	0	50
WSL	WATERLOO	A	Sand Loam	1	1.91	0.66	1.43	0.75	32	0.29	0.15	49	0	38	0	62	0.1907	0.1	50
	#N/A	#N/A	#N/A	#N/A	0.00			#N/A		#N/A	0		#N/A	0		#N/A	0		#N/A
	#N/A	#N/A	#N/A	#N/A	0		0	#N/A	0	#N/A	0		#N/A	0		#N/A	0		#N/A
	#N/A	#N/A	#N/A	#N/A	0		0	#N/A	0	#N/A	0		#N/A	0		#N/A	0		#N/A
Totals					2.89	1.00	2.41	0.84		0.29	0.10	0	0	0	0	0.19074	0.066	0	42.93

Time of Concentration Calculations

For Runoff Coefficients greater than 0.4

Bransby-Williams Formula

Maximum Catchment Elevation 223 m
 Minimum Catchment Elevation 190.5 m
 Catchment length 200 m
 Catchment Slope 16%
 Catchment Area 2.89 ha

Time of Concentration (Minutes) 5.87
 Time of Concentration (Hours) 0.10
 Time to Peak (2/3 x Time of Concentration) 0.07

Time to Peak 0.18 hrs

For Runoff Coefficients less than 0.4

Airport Method

Maximum Catchment Elevation 223 m
 Minimum Catchment Elevation 190.5 m
 Catchment length 200 m
 Catchment Slope 16%
 Catchment Area 2.89 ha

Time of Concentration (Minutes) 15.90
 Time of Concentration (Hours) 0.26
 Time to Peak (2/3 x Time of Concentration) 0.18

Initial Abstraction 8.977 mm

Wetlands	12
Woods	10
Meadows	8
Cultivated	7
Lawns	5
Impervious	2

Runoff Coefficient 0.23

Landuse Type	Soil Series				
	TS	WSL	0	0	0
Forest/Woodland	0.18	0.18	#N/A	#N/A	#N/A
Cultivated	0.4	0.4	#N/A	#N/A	#N/A
Pasture/Lawn	0.22	0.22	#N/A	#N/A	#N/A
Impervious	0.95	0.95	#N/A	#N/A	#N/A
Wetland/Lake/SWMF	0.05	0.05	#N/A	#N/A	#N/A
Meadows	0.20	0.20	#N/A	#N/A	#N/A
Soil Series Total	0.18	0.263	#N/A	#N/A	#N/A

	Project:	Camperdown Condominiums
	File No.:	117304
	Date:	June 2018
	Designed By:	AS
	Checked By:	RS
Subject:		CN Calculator

CURVE NUMBER, INITIAL ABSTRACTION & TIME TO PEAK CALCULATIONS

Catchment 204 Area 0.64 ha

WEIGHTED CN VALUE																										
Soil Series	Soil Series	Hydrologic Soil Group	Soil Texture	Runoff Coefficient Type	Catchment Soil Characteristics			Forest/Woodland			Pasture/Lawns			Meadows			Cultivated			Impervious			Wetland/Lakes/SWMF			Average CN for Soil Type
					Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	
TS	TECUMSETH	AB	Sand Loam	1	0.64	1.00	0.54	0.84	46	0.1024	0.16	59	0	0	51	0	68	0	0	100	0	0	50	48.08		
	#N/A	#N/A	#N/A	#N/A	0.00		0.00		#N/A	0.00		#N/A	0		#N/A	0		#N/A	0	0.1	#N/A	0		#N/A	0	
	#N/A	#N/A	#N/A	#N/A	0.00				#N/A			#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0	
	#N/A	#N/A	#N/A	#N/A	0		0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0	
	#N/A	#N/A	#N/A	#N/A	0				#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0	
Totals					0.64	1.00	0.54	0.84		0.10	0.16		0	0		0	0		0	0		0	0		48.08	

Time of Concentration Calculations

For Runoff Coefficients greater than 0.4

Bransby-Williams Formula

Maximum Catchment Elevation 192 m
 Minimum Catchment Elevation 190 m
 Catchment length 115 m
 Catchment Slope 2%
 Catchment Area 0.64 ha

Time of Concentration (Minutes) 6.14
 Time of Concentration (Hours) 0.10
 Time to Peak (2/3 x Time of Concentration) 0.07

Time to Peak 0.33 hrs

For Runoff Coefficients less than 0.4

Airport Method

Maximum Catchment Elevation 192 m
 Minimum Catchment Elevation 190 m
 Catchment length 115 m
 Catchment Slope 2%
 Catchment Area 0.64 ha

Time of Concentration (Minutes) 29.61
 Time of Concentration (Hours) 0.49
 Time to Peak (2/3 x Time of Concentration) 0.33

Initial Abstraction 9.2 mm

Wetlands	12
Woods	10
Meadows	8
Cultivated	7
Lawns	5
Impervious	2

Runoff Coefficient 0.08

Landuse Type	Soil Series				
	TS	0	0	0	0
Forest/Woodland	0.08	#N/A	#N/A	#N/A	#N/A
Cultivated	0.22	#N/A	#N/A	#N/A	#N/A
Pasture/Lawn	0.1	#N/A	#N/A	#N/A	#N/A
Impervious	0.95	#N/A	#N/A	#N/A	#N/A
Wetland/Lake/SWMF	0.05	#N/A	#N/A	#N/A	#N/A
Meadows	0.09	#N/A	#N/A	#N/A	#N/A
Soil Series Total	0.0832	#N/A	#N/A	#N/A	#N/A

	Project:	Camperdown Condominiums
	File No.:	117304
	Date:	March 2018
	Designed By:	AS
	Checked By:	RS
Subject:		CN Calculator

CURVE NUMBER, INITIAL ABSTRACTION & TIME TO PEAK CALCULATIONS

Catchment 207 Area 0.78 ha

WEIGHTED CN VALUE																									
Soil Series	Soil Series	Hydrologic Soil Group	Soil Texture	Runoff Coefficient Type	Catchment Soil Characteristics		Forest/Woodland			Pasture/Lawns			Meadows			Cultivated			Impervious			Wetland/Lakes/SWMF			Average CN for Soil Type
					Area	Percent	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	
TS	TECUMSETH	AB	Sand Loam	1	0.78	1.00	0.08	0.1	46	0.538	0.69	59	0		51	0		68	0.164	0.21	100	0		50	66.31
	#N/A	#N/A	#N/A	#N/A	0.00		0.00		#N/A	0.00		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0
	#N/A	#N/A	#N/A	#N/A	0.00				#N/A			#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0
	#N/A	#N/A	#N/A	#N/A	0		0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0
	#N/A	#N/A	#N/A	#N/A	0		0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0
Totals					0.78	1.00	0.08	0.10		0.54	0.69		0	0		0	0		0.1638	0.21		0	0		66.31

Time of Concentration Calculations

For Runoff Coefficients greater than 0.4

Bransby-Williams Formula

Maximum Catchment Elevation 191 m
 Minimum Catchment Elevation 187 m
 Catchment length 100 m
 Catchment Slope 4%
 Catchment Area 0.78 ha

Time of Concentration (Minutes) 4.43
 Time of Concentration (Hours) 0.07
 Time to Peak (2/3 x Time of Concentration) 0.05

Time to Peak 0.19 hrs

For Runoff Coefficients less than 0.4

Airport Method

Maximum Catchment Elevation 191 m
 Minimum Catchment Elevation 187 m
 Catchment length 100 m
 Catchment Slope 4%
 Catchment Area 0.78 ha

Time of Concentration (Minutes) 16.99
 Time of Concentration (Hours) 0.28
 Time to Peak (2/3 x Time of Concentration) 0.19

Initial Abstraction 4.87 mm

Wetlands	12
Woods	10
Meadows	8
Cultivated	7
Lawns	5
Impervious	2

Runoff Coefficient 0.28

Landuse Type	Soil Series				
	TS	0	0	0	0
Forest/Woodland	0.08	#N/A	#N/A	#N/A	#N/A
Cultivated	0.22	#N/A	#N/A	#N/A	#N/A
Pasture/Lawn	0.1	#N/A	#N/A	#N/A	#N/A
Impervious	0.95	#N/A	#N/A	#N/A	#N/A
Wetland/Lake/SWMF	0.05	#N/A	#N/A	#N/A	#N/A
Meadows	0.09	#N/A	#N/A	#N/A	#N/A
Soil Series Total	0.277	#N/A	#N/A	#N/A	#N/A

	Project:	Camperdown Condominiums
	File No.:	117304
	Date:	March 2018
	Designed By:	AS
	Checked By:	RS
Subject:		CN Calculator

CURVE NUMBER, INITIAL ABSTRACTION & TIME TO PEAK CALCULATIONS

Catchment 207-2 Area 0.34 ha

WEIGHTED CN VALUE																									
Soil Series	Soil Series	Hydrologic Soil Group	Soil Texture	Runoff Coefficient Type	Catchment Soil Characteristics		Forest/Woodland			Pasture/Lawns			Meadows			Cultivated			Impervious			Wetland/Lakes/SWMF			Average CN for Soil Type
					Area	Percent	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	Area	Percent	CN	
TS	TECUMSETH	AB	Sand Loam	1	0.34	1.00	0.03	0.1	46	0.235	0.69	59	0		51	0		68	0.071	0.21	100	0		50	66.31
	#N/A	#N/A	#N/A	#N/A	0.00		0.00		#N/A	0.00		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0
	#N/A	#N/A	#N/A	#N/A	0.00				#N/A			#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0
	#N/A	#N/A	#N/A	#N/A	0		0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0
	#N/A	#N/A	#N/A	#N/A	0				#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0		#N/A	0
Totals					0.34	1.00	0.03	0.10		0.23	0.69		0	0		0	0		0.0714	0.21		0	0		66.31

Time of Concentration Calculations

For Runoff Coefficients greater than 0.4

Bransby-Williams Formula

Maximum Catchment Elevation 191 m
Minimum Catchment Elevation 187 m
Catchment length 100 m
Catchment Slope 4%
Catchment Area 0.34 ha

Time of Concentration (Minutes) 4.81
Time of Concentration (Hours) 0.08
Time to Peak (2/3 x Time of Concentration) 0.05

Time to Peak	0.19 hrs
---------------------	-----------------

For Runoff Coefficients less than 0.4

Airport Method

Maximum Catchment Elevation 191 m
Minimum Catchment Elevation 187 m
Catchment length 100 m
Catchment Slope 4%
Catchment Area 0.34 ha

Time of Concentration (Minutes) 16.99
Time of Concentration (Hours) 0.28
Time to Peak (2/3 x Time of Concentration) 0.19

Initial Abstraction	4.87 mm
----------------------------	----------------

Wetlands	12
Woods	10
Meadows	8
Cultivated	7
Lawns	5
Impervious	2

Runoff Coefficient	0.28
---------------------------	-------------

Landuse Type	Soil Series				
	TS	0	0	0	0
Forest/Woodland	0.08	#N/A	#N/A	#N/A	#N/A
Cultivated	0.22	#N/A	#N/A	#N/A	#N/A
Pasture/Lawn	0.1	#N/A	#N/A	#N/A	#N/A
Impervious	0.95	#N/A	#N/A	#N/A	#N/A
Wetland/Lake/SWMF	0.05	#N/A	#N/A	#N/A	#N/A
Meadows	0.09	#N/A	#N/A	#N/A	#N/A
Soil Series Total	0.277	#N/A	#N/A	#N/A	#N/A

Camperdown Condominiums
SWM Pond Volume Table

Designed: AS
Checked: RS
Date: Oct 2020

Wet Pond Characteristics:

Side Slope: 5 :1
Top Elevation: 190.80 m
Bottom Elev: 188.50 m
Permanent Pool: 189.50 m
Stage 0.1 m

Stormwater Management Pond								
Pond Geometry				Pond Volume (m ³)				
Elevation (m)	Depth (m)	Area (m ²)	Avg. Area (m)	Dead	Accum. Dead	Live	Accum. Live	Accum. Total
188.50	0.00	50	50.00	0.00	0.00		0.00	0.00
188.60	0.10	70	60.00	6.00	6.00		0.00	6.00
188.70	0.20	94	82.00	8.20	14.20		0.00	14.20
188.80	0.30	120	107.00	10.70	24.90		0.00	24.90
188.90	0.40	149	134.50	13.45	38.35		0.00	38.35
189.00	0.50	181	165.00	16.50	54.85		0.00	54.85
189.10	0.60	217	199.00	19.90	74.75		0.00	74.75
189.20	0.70	255	236.00	23.60	98.35		0.00	98.35
189.30	0.80	296	275.50	27.55	125.90		0.00	125.90
189.40	0.90	339	317.50	31.75	157.65		0.00	157.65
189.50	1.00	386	362.50	36.25	193.90	0.00	0.00	193.90
189.60	1.10	434	410.00		193.90	41.00	41.00	234.90
189.70	1.20	484	459.00		193.90	45.90	86.90	280.80
189.80	1.30	537	510.50		193.90	51.05	137.95	331.85
189.90	1.40	592	564.50		193.90	56.45	194.40	388.30
190.00	1.50	649	620.50		193.90	62.05	256.45	450.35
190.10	1.60	709	679.00		193.90	67.90	324.35	518.25
190.20	1.70	772	740.50		193.90	74.05	398.40	592.30
190.30	1.80	837	804.50		193.90	80.45	478.85	672.75
190.40	1.90	904	870.50		193.90	87.05	565.90	759.80
190.50	2.00	974	939.00		193.90	93.90	659.80	853.70
190.60	2.10	1046	1010.00		193.90	101.00	760.80	954.70
190.70	2.20	1121	1083.50		193.90	108.35	869.15	1063.05
190.80	2.30	1596	1358.50		193.90	135.85	1005.00	1198.90

Camperdown Condominiums
SWM Pond Volume Table

Designed: AS
Checked: RS
Date: Oct 2020

Pond Discharge Table:

Orifice #1:	Orifice #2:	Overflow Weir:
Diameter: 300	Diameter: 0 mm	Bottom Length: 3.5 m
Area: 0.0707	Area: 0.0000 m ²	Sill Elevation: 190.5 m
C: 0.63	C: 0.63	D/S Weir Length: 10 m
Invert: 189.50	Invert: m	Side Slopes (H:V) 5 :1

Elevation (m)	Orifice #1		Orifice #2		Overflow Weir		Hydraulic Control	Discharge (m ³ /s)
	Head (m)	Discharge (m)	Head (m)	Discharge (m)	Head (m)	Discharge (m)		
188.50	0.000	0.000	188.500	0.000	0	0	Orifice	0.000
188.60	0.000	0.000	188.600	0.000	0	0	Orifice	0.000
188.70	0.000	0.000	188.700	0.000	0	0	Orifice	0.000
188.80	0.000	0.000	188.800	0.000	0	0	Orifice	0.000
188.90	0.000	0.000	188.900	0.000	0	0	Orifice	0.000
189.00	0.000	0.000	189.000	0.000	0	0	Orifice	0.000
189.10	0.000	0.000	189.100	0.000	0	0	Orifice	0.000
189.20	0.000	0.000	189.200	0.000	0	0	Orifice	0.000
189.30	0.000	0.000	189.300	0.000	0	0	Orifice	0.000
189.40	0.000	0.000	189.400	0.000	0	0	Orifice	0.000
189.50	0.000	0.000	189.500	0.000	0	0	Orifice	0.000
189.60	0.000	0.000	189.600	0.000	0	0	Orifice	0.000
189.70	0.050	0.044	189.700	0.000	0	0	Orifice	0.044
189.80	0.150	0.076	189.800	0.000	0	0	Orifice	0.076
189.90	0.250	0.099	189.900	0.000	0	0	Orifice	0.099
190.00	0.350	0.117	190.000	0.000	0	0	Orifice	0.117
190.10	0.450	0.132	190.100	0.000	0	0	Orifice	0.132
190.20	0.550	0.146	190.200	0.000	0	0	Orifice	0.146
190.30	0.650	0.159	190.300	0.000	0	0	Orifice	0.159
190.40	0.750	0.171	190.400	0.000	0	0	Orifice	0.171
190.50	0.850	0.182	190.500	0.000	0	0	Orifice	0.182
190.60	0.950	0.192	190.600	0.000	0.10	0.17	Orifice/Weir	0.362
190.70	1.050	0.202	190.700	0.000	0.20	0.53	Orifice/Weir	0.732
190.80	1.150	0.212	190.800	0.000	0.30	1.09	Orifice/Weir	1.302

Comments:

- 1 0.15 - Calculation based on preferred NVCA weir flow spreadsheet
- 2 N/A - Not Applicable
- 3 Orifice Equation is:

$$Q = C \times A \times (2gH)^{0.5}$$

Where:

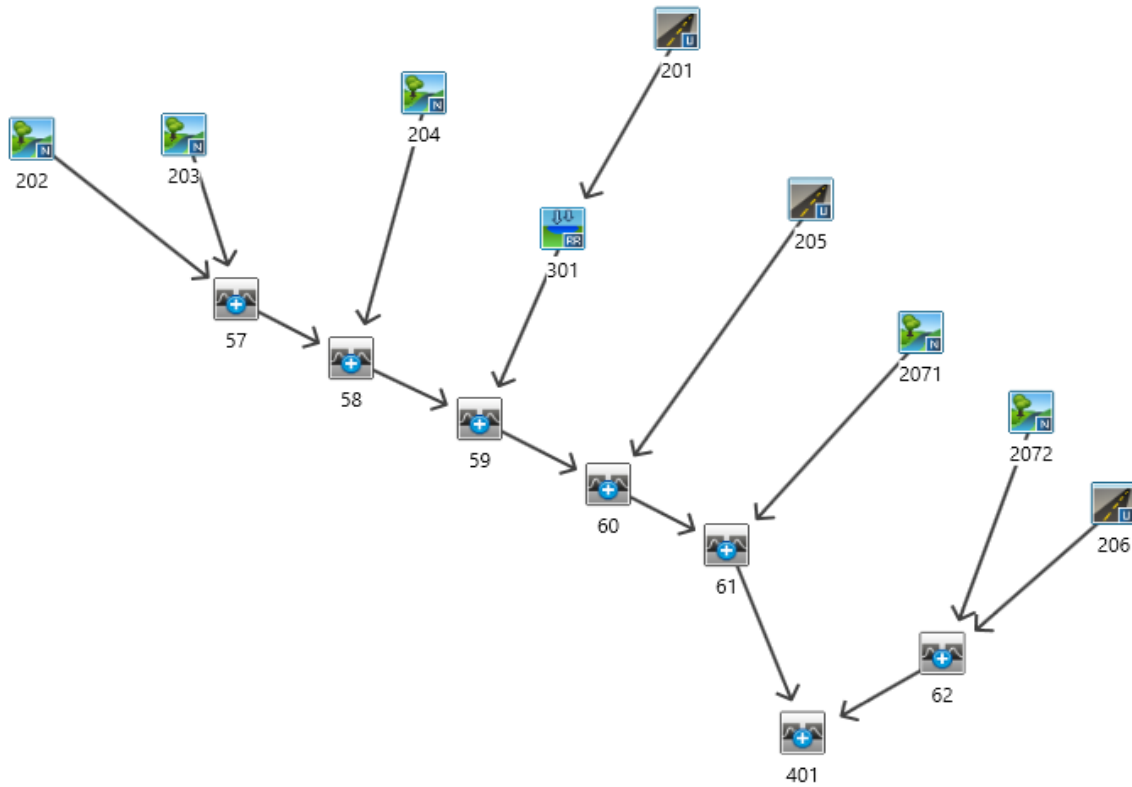
- Q = flow rate (cms)
- C = constant
- A = area of opening(sq. m)
- H = net head on the orifice
- g = Acceleration due to gravity

Camperdown Condominiums
Stage-Storage-Discharge

Designed: AS
 Checked: RS
 Date: Oct 2020

Stormwater Management Pond								
Pond Geometry				Pond Volume (m ³)				Discharge (m ³ /s)
Elevation (m)	Depth (m)	Area (m ²)	Avg. Area (m)	Dead	Accum. Dead	Live	Accum. Live	
188.50	0.00	50.00	50.00	0.00	0.00	0.00	0.00	0.000
188.60	0.10	70.00	60.00	6.00	6.00	0.00	0.00	0.000
188.70	0.20	94.00	82.00	8.20	14.20	0.00	0.00	0.000
188.80	0.30	120.00	107.00	10.70	24.90	0.00	0.00	0.000
188.90	0.40	149.00	134.50	13.45	38.35	0.00	0.00	0.000
189.00	0.50	181.00	165.00	16.50	54.85	0.00	0.00	0.000
189.10	0.60	217.00	199.00	19.90	74.75	0.00	0.00	0.000
189.20	0.70	255.00	236.00	23.60	98.35	0.00	0.00	0.000
189.30	0.80	296.00	275.50	27.55	125.90	0.00	0.00	0.000
189.40	0.90	339.00	317.50	31.75	157.65	0.00	0.00	0.000
189.50	1.00	386.00	362.50	36.25	193.90	0.00	0.00	0.000
189.60	1.10	434.00	410.00	0.00	193.90	41.00	41.00	0.000
189.70	1.20	484.00	459.00	0.00	193.90	45.90	86.90	0.044
189.80	1.30	537.00	510.50	0.00	193.90	51.05	137.95	0.076
189.90	1.40	592.00	564.50	0.00	193.90	56.45	194.40	0.099
190.00	1.50	649.00	620.50	0.00	193.90	62.05	256.45	0.117
190.10	1.60	709.00	679.00	0.00	193.90	67.90	324.35	0.132
190.20	1.70	772.00	740.50	0.00	193.90	74.05	398.40	0.146
190.30	1.80	837.00	804.50	0.00	193.90	80.45	478.85	0.159
190.40	1.90	904.00	870.50	0.00	193.90	87.05	565.90	0.171
190.50	2.00	974.00	939.00	0.00	193.90	93.90	659.80	0.182
190.60	2.10	1046.00	1010.00	0.00	193.90	101.00	760.80	0.362
190.70	2.20	1121.00	1083.50	0.00	193.90	108.35	869.15	0.732
190.80	2.30	1596.00	1358.50	0.00	193.90	135.85	1005.00	1.302

CAMPERDOWN CONDOMINIUM
PROPOSED CONDITIONS



Nashyd



Standhyd



Addhyd



Route Pipe



Route Channel



Route Reservoir



Duhyd



Diverthyd



Project: Camperdown Condominium

File No.: 117304

Subject: Otthymo Flow Schematic

Date: Nov 2019

Figure: 1

V V I SSSSS U U A A L (v 6.0.2006)
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 V I SSSSS UUUU A A LLLL

000 TTTT TTTT H H Y V M M 000 TM
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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 6.0\VO2\voin.dat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-9ef7-c4eaf04675c3\513308e9-a285-49e5-8d58-6d9ae6c6b0114\scen
Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-9ef7-c4eaf04675c3\513308e9-a285-49e5-8d58-6d9ae6c6b0114\scen

DATE: 02-08-2021 TIME: 10:22:43

USER:

COMMENTS: CHI 25 mm (POST)

** SIMULATION - Run 01 **

READ STORM		Filename: C:\Users\ASchoof\AppData\Local\Temp\689933a8-a1cc-42d4-b081-632d4e7443c3\395184f1	
Total= 24.97 mm		Comments: OWEN SOUND 25 mm (from a 2 year-4hr stor	
TIME		TIME	
hrs	mm/hr	hrs	mm/hr
0.10	1.29	1.10	2.81
0.20	1.36	1.20	3.22
0.30	1.44	1.30	3.77
0.40	1.53	1.40	4.55
0.50	1.63	1.50	5.77
0.60	1.75	1.60	7.86
0.70	1.89	1.70	12.27
0.80	2.06	1.80	26.17
0.90	2.26	1.90	72.58
1.00	2.50	2.00	26.96

CALIB	
NASHVD (0203)	Area (ha)= 2.89 Curve Number (CN)= 42.9
ID= 1 DT= 2.0 min	Ia (mm)= 8.98 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.18

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.29	1.033	2.81	2.033	13.05	3.03	2.04
0.067	1.29	1.067	2.81	2.067	13.05	3.07	2.04
0.100	1.29	1.100	2.81	2.100	13.05	3.10	2.04
0.133	1.36	1.133	3.22	2.133	8.44	3.13	1.89
0.167	1.36	1.167	3.22	2.167	8.44	3.17	1.89
0.200	1.36	1.200	3.22	2.200	8.44	3.20	1.89
0.233	1.44	1.233	3.77	2.233	6.21	3.23	1.76
0.267	1.44	1.267	3.77	2.267	6.21	3.27	1.76
0.300	1.44	1.300	3.77	2.300	6.21	3.30	1.76
0.333	1.53	1.333	4.55	2.333	4.91	3.33	1.65
0.367	1.53	1.367	4.55	2.367	4.91	3.37	1.65
0.400	1.53	1.400	4.55	2.400	4.91	3.40	1.65
0.433	1.63	1.433	5.77	2.433	4.06	3.43	1.55
0.467	1.63	1.467	5.77	2.467	4.06	3.47	1.55
0.500	1.63	1.500	5.77	2.500	4.06	3.50	1.55
0.533	1.75	1.533	7.86	2.533	3.47	3.53	1.46
0.567	1.75	1.567	7.86	2.567	3.47	3.57	1.46
0.600	1.75	1.600	7.86	2.600	3.47	3.60	1.46
0.633	1.89	1.633	12.27	2.633	3.03	3.63	1.39
0.667	1.89	1.667	12.27	2.667	3.03	3.67	1.39
0.700	1.89	1.700	12.27	2.700	3.03	3.70	1.39
0.733	2.06	1.733	26.17	2.733	2.70	3.73	1.32
0.767	2.06	1.767	26.17	2.767	2.70	3.77	1.32
0.800	2.26	1.800	26.17	2.800	2.70	3.80	1.32
0.833	2.26	1.833	72.58	2.833	2.43	3.83	1.26
0.867	2.26	1.867	72.58	2.867	2.43	3.87	1.26
0.900	2.26	1.900	72.58	2.900	2.43	3.90	1.26
0.933	2.50	1.933	26.96	2.933	2.22	3.93	1.20
0.967	2.50	1.967	26.96	2.967	2.22	3.97	1.20
1.000	2.50	2.000	26.96	3.000	2.22	4.00	1.20

Unit Hyd Qpeak (cms)= 0.613

PEAK FLOW (cms)= 0.007 (1)
TIME TO PEAK (hrs)= 2.167
RUNOFF VOLUME (mm)= 0.723
TOTAL RAINFALL (mm)= 24.971
RUNOFF COEFFICIENT = 0.020

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

CALIB	
NASHVD (0202)	Area (ha)= 1.63 Curve Number (CN)= 44.1
ID= 1 DT= 2.0 min	Ia (mm)= 9.62 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.29	1.033	2.81	2.033	13.05	3.03	2.04
0.067	1.29	1.067	2.81	2.067	13.05	3.07	2.04
0.100	1.29	1.100	2.81	2.100	13.05	3.10	2.04
0.133	1.36	1.133	3.22	2.133	8.44	3.13	1.89
0.167	1.36	1.167	3.22	2.167	8.44	3.17	1.89
0.200	1.36	1.200	3.22	2.200	8.44	3.20	1.89
0.233	1.44	1.233	3.77	2.233	6.21	3.23	1.76
0.267	1.44	1.267	3.77	2.267	6.21	3.27	1.76
0.300	1.44	1.300	3.77	2.300	6.21	3.30	1.76
0.333	1.53	1.333	4.55	2.333	4.91	3.33	1.65
0.367	1.53	1.367	4.55	2.367	4.91	3.37	1.65
0.400	1.53	1.400	4.55	2.400	4.91	3.40	1.65
0.433	1.63	1.433	5.77	2.433	4.06	3.43	1.55
0.467	1.63	1.467	5.77	2.467	4.06	3.47	1.55
0.500	1.63	1.500	5.77	2.500	4.06	3.50	1.55
0.533	1.75	1.533	7.86	2.533	3.47	3.53	1.46
0.567	1.75	1.567	7.86	2.567	3.47	3.57	1.46
0.600	1.75	1.600	7.86	2.600	3.47	3.60	1.46
0.633	1.89	1.633	12.27	2.633	3.03	3.63	1.39
0.667	1.89	1.667	12.27	2.667	3.03	3.67	1.39
0.700	1.89	1.700	12.27	2.700	3.03	3.70	1.39
0.733	2.06	1.733	26.17	2.733	2.70	3.73	1.32
0.767	2.06	1.767	26.17	2.767	2.70	3.77	1.32
0.800	2.06	1.800	26.17	2.800	2.70	3.80	1.32
0.833	2.26	1.833	72.58	2.833	2.43	3.83	1.26
0.867	2.26	1.867	72.58	2.867	2.43	3.87	1.26
0.900	2.26	1.900	72.58	2.900	2.43	3.90	1.26
0.933	2.50	1.933	26.96	2.933	2.22	3.93	1.20
0.967	2.50	1.967	26.96	2.967	2.22	3.97	1.20
1.000	2.50	2.000	26.96	3.000	2.22	4.00	1.20

Unit Hyd Qpeak (cms)= 0.366

PEAK FLOW (cms)= 0.004 (1)
TIME TO PEAK (hrs)= 2.167
RUNOFF VOLUME (mm)= 0.699
TOTAL RAINFALL (mm)= 24.971
RUNOFF COEFFICIENT = 0.028

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

ADD HYD (0057)	
1 + 2 = 3	AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID= 1 (0202):	1.63 0.004 2.17 0.70
+ ID2= 2 (0203):	2.89 0.007 2.17 0.72
ID = 3 (0057):	4.52 0.010 2.17 0.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHVD (0204)	Area (ha)= 0.64 Curve Number (CN)= 48.1
ID= 1 DT= 2.0 min	Ia (mm)= 9.20 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.33

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.29	1.033	2.81	2.033	13.05	3.03	2.04
0.067	1.29	1.067	2.81	2.067	13.05	3.07	2.04
0.100	1.29	1.100	2.81	2.100	13.05	3.10	2.04
0.133	1.36	1.133	3.22	2.133	8.44	3.13	1.89
0.167	1.36	1.167	3.22	2.167	8.44	3.17	1.89
0.200	1.36	1.200	3.22	2.200	8.44	3.20	1.89
0.233	1.44	1.233	3.77	2.233	6.21	3.23	1.76
0.267	1.44	1.267	3.77	2.267	6.21	3.27	1.76
0.300	1.44	1.300	3.77	2.300	6.21	3.30	1.76
0.333	1.53	1.333	4.55	2.333	4.91	3.33	1.65
0.367	1.53	1.367	4.55	2.367	4.91	3.37	1.65
0.400	1.53	1.400	4.55	2.400	4.91	3.40	1.65
0.433	1.63	1.433	5.77	2.433	4.06	3.43	1.55
0.467	1.63	1.467	5.77	2.467	4.06	3.47	1.55
0.500	1.63	1.500	5.77	2.500	4.06	3.50	1.55

0.533	1.75	1.533	7.86	2.533	3.47	3.53	1.46
0.567	1.75	1.567	7.86	2.567	3.47	3.57	1.46
0.600	1.75	1.600	7.86	2.600	3.47	3.60	1.46
0.633	1.89	1.633	12.27	2.633	3.03	3.63	1.39
0.667	1.89	1.667	12.27	2.667	3.03	3.67	1.39
0.700	1.89	1.700	12.27	2.700	3.03	3.70	1.39
0.733	2.06	1.733	26.17	2.733	2.70	3.73	1.32
0.767	2.06	1.767	26.17	2.767	2.70	3.77	1.32
0.800	2.06	1.800	26.17	2.800	2.70	3.80	1.32
0.833	2.26	1.833	72.58	2.833	2.43	3.83	1.26
0.867	2.26	1.867	72.58	2.867	2.43	3.87	1.26
0.900	2.26	1.900	72.58	2.900	2.43	3.90	1.26
0.933	2.50	1.933	26.96	2.933	2.22	3.93	1.20
0.967	2.50	1.967	26.96	2.967	2.22	3.97	1.20
1.000	2.50	2.000	26.96	3.000	2.22	4.00	1.20

Unit Hyd Qpeak (cms)= 0.074

PEAK FLOW (cms)= 0.001 (i)
TIME TO PEAK (hrs)= 2.367
RUNOFF VOLUME (mm)= 0.856
TOTAL RAINFALL (mm)= 24.971
RUNOFF COEFFICIENT = 0.034

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

ADD HYD (0058)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0204):	0.04	0.001	2.37	0.86
+ ID2= 2 (0057):	4.52	0.010	2.17	0.71
ID = 3 (0058):	5.16	0.011	2.17	0.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	2.20
STANDHYD (0201):	Total Imp(%)=	43.00	Dir. Conn.(%)= 21.00
ID= 1 DT= 5.0 min			
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	0.95	1.25
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	1.00
Length	(m)=	121.11	40.00
Mannings n	=	0.013	0.250

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	1.29	1.083	2.81	2.083	13.05	3.08	2.04	
0.167	1.35	1.167	3.14	2.167	9.36	3.17	1.92	
0.250	1.41	1.250	3.55	2.250	7.10	3.25	1.81	
0.333	1.48	1.333	4.08	2.333	5.69	3.33	1.72	
0.417	1.55	1.417	4.79	2.417	4.74	3.42	1.63	
0.500	1.63	1.500	5.77	2.500	4.06	3.50	1.55	
0.583	1.75	1.583	7.86	2.583	3.47	3.58	1.46	
0.667	1.86	1.667	11.39	2.667	3.12	3.67	1.40	
0.750	1.99	1.750	20.61	2.750	2.83	3.75	1.35	
0.833	2.14	1.833	44.73	2.833	2.59	3.83	1.30	
0.917	2.31	1.917	63.46	2.917	2.39	3.92	1.25	
1.000	2.50	2.000	26.96	3.000	2.22	4.00	1.20	

Max.Eff.Inten.(mm/hr)= 63.46 28.19
over (min) 5.00 20.00
Storage Coeff. (min)= 3.44 (ii) 17.86 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.26 0.06

PEAK FLOW (cms)= 0.07 0.05 0.087 (iii)
TIME TO PEAK (hrs)= 1.92 2.17 1.92
RUNOFF VOLUME (mm)= 23.97 5.08 9.05
TOTAL RAINFALL (mm)= 24.97 24.97 24.97
RUNOFF COEFFICIENT = 0.96 0.20 0.36

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

(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0301)	OVERFLOW IS OFF			
IN= 2--> OUT= 1				
DT= 5.0 min				
OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
0.0000	0.1600	0.1500	0.5570	
0.0440	0.2080	0.3520	0.7230	
0.0990	0.3020	1.2920	0.9160	
0.1320	0.4180	2.0620	1.0230	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	

INFLOW : ID= 2 (0201) 2.200 0.087 1.92 9.05
OUTFLOW: ID= 1 (0301) NaN 0.000 0.00 NaN

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.00
TIME SHIFT OF PEAK FLOW (min)=*****
MAXIMUM STORAGE USED (ha.m.)= 0.0041

ADD HYD (0059)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0301):	NaN	0.000	6.00	NaN
+ ID2= 2 (0058):	5.16	0.011	2.17	0.73
ID = 3 (0059):	NaN	0.011	2.17	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.03
STANDHYD (0205):	Total Imp(%)=	56.00	Dir. Conn.(%)= 28.00
ID= 1 DT= 5.0 min			
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	0.02	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	1.00
Length	(m)=	14.14	20.00
Mannings n	=	0.013	0.250

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	1.29	1.083	2.81	2.083	13.05	3.08	2.04	
0.167	1.35	1.167	3.14	2.167	9.36	3.17	1.92	
0.250	1.41	1.250	3.55	2.250	7.10	3.25	1.81	
0.333	1.48	1.333	4.08	2.333	5.69	3.33	1.72	
0.417	1.55	1.417	4.79	2.417	4.74	3.42	1.63	
0.500	1.63	1.500	5.77	2.500	4.06	3.50	1.55	
0.583	1.75	1.583	7.86	2.583	3.47	3.58	1.46	
0.667	1.86	1.667	11.39	2.667	3.12	3.67	1.40	
0.750	1.99	1.750	20.61	2.750	2.83	3.75	1.35	
0.833	2.14	1.833	44.73	2.833	2.59	3.83	1.30	
0.917	2.31	1.917	63.46	2.917	2.39	3.92	1.25	
1.000	2.50	2.000	26.96	3.000	2.22	4.00	1.20	

Max.Eff.Inten.(mm/hr)= 63.46 52.08
over (min) 5.00 10.00
Storage Coeff. (min)= 0.95 (ii) 8.39 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.34 0.12

PEAK FLOW (cms)= 0.00 0.00 0.002 (iii)
TIME TO PEAK (hrs)= 1.92 2.00 1.92
RUNOFF VOLUME (mm)= 23.97 6.40 10.55
TOTAL RAINFALL (mm)= 24.97 24.97 24.97
RUNOFF COEFFICIENT = 0.96 0.26 0.42

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

(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0060)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0205):	0.03	0.002	1.92	10.55
+ ID2= 2 (0059):	NaN	0.011	2.17	NaN
ID = 3 (0060):	NaN	0.012	2.13	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.52
NASHWD (2071):	Ia	(mm)=	4.87
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.19	Curve Number (CN)= 66.3 # of Linear Res.(N)= 3.00

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	1.29	1.083	2.81	2.083	13.05	3.08	2.04	
0.167	1.35	1.167	3.14	2.167	9.36	3.17	1.92	
0.250	1.41	1.250	3.55	2.250	7.10	3.25	1.81	
0.333	1.48	1.333	4.08	2.333	5.69	3.33	1.72	
0.417	1.55	1.417	4.79	2.417	4.74	3.42	1.63	
0.500	1.63	1.500	5.77	2.500	4.06	3.50	1.55	
0.583	1.75	1.583	7.86	2.583	3.47	3.58	1.46	

0.667	1.86	1.667	11.39	2.667	3.12	3.67	1.40
0.750	1.99	1.750	20.61	2.750	2.83	3.75	1.35
0.833	2.14	1.833	44.73	2.833	2.59	3.83	1.30
0.917	2.31	1.917	63.46	2.917	2.39	3.92	1.25
1.000	2.50	2.000	26.96	3.000	2.22	4.00	1.20

Unit Hyd Qpeak (cms)= 0.105

PEAK FLOW (cms)= 0.005 (i)
TIME TO PEAK (hrs)= 2.083
RUNOFF VOLUME (mm)= 2.701
TOTAL RAINFALL (mm)= 24.971
RUNOFF COEFFICIENT = 0.108

(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 (2071):	0.52	0.005	2.08	2.70
+ ID2= 2 (0060):	NaN	0.012	2.13	NaN
ID = 3 (0061):	NaN	0.017	2.13	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.34	Curve Number (CN)=	66.3
NASHYD (2072)	Ia	(mm)=	4.87	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=		0.19		

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	1.29	1.083	2.81	2.083	13.05	3.08	2.04
0.167	1.35	1.167	3.14	2.167	9.36	3.17	1.92
0.250	1.41	1.250	3.55	2.250	7.10	3.25	1.81
0.333	1.48	1.333	4.08	2.333	5.69	3.33	1.72
0.417	1.55	1.417	4.79	2.417	4.74	3.42	1.63
0.500	1.63	1.500	5.77	2.500	4.06	3.50	1.55
0.583	1.75	1.583	7.86	2.583	3.47	3.58	1.46
0.667	1.86	1.667	11.39	2.667	3.12	3.67	1.40
0.750	1.99	1.750	20.61	2.750	2.83	3.75	1.35
0.833	2.14	1.833	44.73	2.833	2.59	3.83	1.30
0.917	2.31	1.917	63.46	2.917	2.39	3.92	1.25
1.000	2.50	2.000	26.96	3.000	2.22	4.00	1.20

Unit Hyd Qpeak (cms)= 0.068

PEAK FLOW (cms)= 0.003 (i)
TIME TO PEAK (hrs)= 2.083
RUNOFF VOLUME (mm)= 2.701
TOTAL RAINFALL (mm)= 24.971
RUNOFF COEFFICIENT = 0.108

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

CALIB	Area	(ha)=	0.73
STANDHYD (0206)	Total Imp(%)=	32.00	Dir. Conn.(%)= 13.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.23 0.50
Dep. Storage	(mm)=	1.00 1.50
Average Slope	(%)=	1.00 2.00
Length	(m)=	60.76 40.00
Mannings n	=	0.013 0.250

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	1.29	1.083	2.81	2.083	13.05	3.08	2.04
0.167	1.35	1.167	3.14	2.167	9.36	3.17	1.92
0.250	1.41	1.250	3.55	2.250	7.10	3.25	1.81
0.333	1.48	1.333	4.08	2.333	5.69	3.33	1.72
0.417	1.55	1.417	4.79	2.417	4.74	3.42	1.63
0.500	1.63	1.500	5.77	2.500	4.06	3.50	1.55
0.583	1.75	1.583	7.86	2.583	3.47	3.58	1.46
0.667	1.86	1.667	11.39	2.667	3.12	3.67	1.40
0.750	1.99	1.750	20.61	2.750	2.83	3.75	1.35
0.833	2.14	1.833	44.73	2.833	2.59	3.83	1.30
0.917	2.31	1.917	63.46	2.917	2.39	3.92	1.25
1.000	2.50	2.000	26.96	3.000	2.22	4.00	1.20

Max.Eff.Inten.(mm/hr)= 63.46 22.44
over (min)= 5.00 20.00
Storage Coeff. (min)= 2.47 (ii) 15.30 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.07

PEAK FLOW (cms)= 0.02 0.02 0.020 (iii)
TIME TO PEAK (hrs)= 1.92 2.17 1.92

RUNOFF VOLUME (mm)= 23.97 4.39 6.93
TOTAL RAINFALL (mm)= 24.97 24.97 24.97
RUNOFF COEFFICIENT = 0.96 0.18 0.28

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20% YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (cm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0206):	0.73	0.020	1.92	6.93
+ ID2= 2 (2072):	0.34	0.003	2.08	2.70
ID = 3 (0062):	1.07	0.023	2.17	5.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0401)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0061):	NaN	0.017	2.13	NaN
+ ID2= 2 (0062):	1.07	0.023	2.17	5.58
ID = 3 (0401):	NaN	0.040	2.17	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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

Input filename: C:\Program Files (x86)\Visual OTTHYMD 6.0\VO2\vojn.dat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VH5\8194ef53-adad-4f15-90f7-c4eafb4675c3\7bba4497-9086-456b-8efe-b333a35116df\scen
Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VH5\8194ef53-adad-4f15-90f7-c4eafb4675c3\7bba4497-9086-456b-8efe-b333a35116df\scen

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DATE: 02-08-2021 TIME: 10:22:43

USER:

COMMENTS: CHI 2 year (POST)

** SIMULATION : Run 02

CHICAGO STORM	IDF curve parameters: A= 362.158 B= 0.000 C= 0.699
Ptotal= 31.36 mm	used in: INTENSITY = A / (t + B)^C
	Duration of storm = 4.00 hrs Storm time step = 15.00 min Time to peak ratio = 0.33

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	2.99	1.25	54.55	2.25	4.58	3.25	2.85
0.50	3.70	1.50	11.55	2.50	3.93	3.50	2.63
0.75	5.06	1.75	7.28	2.75	3.47	3.75	2.45
1.00	9.41	2.00	5.55	3.00	3.13	4.00	2.29

CALIB	Area	(ha)=	2.89	Curve Number (CN)=	42.9
NASHYD (0203)	Ia	(mm)=	8.98	# of Linear Res.(N)=	3.00
ID= 1 DT= 2.0 min	U.H. Tp(hrs)=		0.18		

0.917 9.41 | 1.917 5.55 | 2.917 3.13 | 3.92 2.29
1.000 9.41 | 2.000 5.55 | 3.000 3.13 | 4.00 2.29

Max.Eff.Inten.(mm/hr)= 54.55 38.22
over (min) 5.00 20.00
Storage Coeff. (min)= 3.65 (11) 16.42 (11)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.25 0.06

PEAK FLOW (cms)= 0.07 0.06 *TOTALS*
TIME TO PEAK (hrs)= 1.25 1.42 0.102 (11)
RUNOFF VOLUME (mm)= 30.36 6.89 11.82
TOTAL RAINFALL (mm)= 31.36 31.36
RUNOFF COEFFICIENT = 0.97 0.22 0.38

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

(1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0301) OVERFLOW IS OFF
IN= 2--> OUT= 1
DT= 5.0 min

OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.1600	0.1500	0.5570
0.0440	0.2080	0.3520	0.7230
0.0990	0.1620	1.2920	0.9160
0.1320	0.4180	2.0620	1.0230

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0201) 2.200 0.102 1.25 11.82
OUTFLOW: ID= 1 (0301) NaN 0.000 0.00 NaN

PEAK FLOW REDUCTION [out/qln](%)= 0.00
TIME SHIFT OF PEAK FLOW (min)=75.00
MAXIMUM STORAGE USED (ha.m.)= 0.0061

ADD HYD (0059) |
1 + 2 = 3 |

ID1= 1 (0301):	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
+ ID2= 2 (0058):	NaN	0.000	NaN	NaN
	5.16	0.013	1.47	1.42

=====

ID = 3 (0059): NaN 0.013 1.47 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB | STANHYD (0205) |
ID= 1 DT= 5.0 min | Area (ha)= 0.03 Dlr. Conn.(%)= 28.00
Total Imp(%)= 56.00

	IMPERVIOUS	PERVIOUS (1)
Surface Area (ha)=	0.02	0.01
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	1.00
Length (n)=	14.14	20.00
Manning's n	0.013	0.250

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.99	1.083	54.55	2.083	4.58
0.167	2.99	1.167	54.55	2.167	4.58
0.250	2.99	1.250	54.55	2.250	4.58
0.333	3.70	1.333	11.55	2.333	3.93
0.417	3.70	1.417	11.55	2.417	3.93
0.500	3.70	1.500	11.55	2.500	3.93
0.583	5.06	1.583	7.28	2.583	3.47
0.667	5.06	1.667	7.28	2.667	3.47
0.750	5.06	1.750	7.28	2.750	3.47
0.833	9.41	1.833	5.55	2.833	3.13
0.917	9.41	1.917	5.55	2.917	3.13
1.000	9.41	2.000	5.55	3.000	3.13

Max.Eff.Inten.(mm/hr)= 54.55 61.43
over (min) 5.00 10.00
Storage Coeff. (min)= 1.01 (11) 7.97 (11)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.34 0.13

PEAK FLOW (cms)= 0.00 0.00 *TOTALS*
TIME TO PEAK (hrs)= 1.25 1.25 0.003 (11)
RUNOFF VOLUME (mm)= 30.36 8.18 12.94
TOTAL RAINFALL (mm)= 31.36 31.36
RUNOFF COEFFICIENT = 0.97 0.26 0.41

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

(1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00

Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0060) |
1 + 2 = 3 |

ID1= 1 (0205):	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
+ ID2= 2 (0059):	NaN	0.013	1.47	12.94
	NaN	0.014	1.43	NaN

=====

ID = 3 (0060): NaN 0.014 1.43 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB | NASHYD (2071) |
ID= 1 DT= 5.0 min | Area (ha)= 0.52 Curve Number (CN)= 66.3
U.H. Tp(hrs)= 0.19 Ia (mm)= 4.87 # of Linear Res.(N)= 3.00

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.99	1.083	54.55	2.083	4.58
0.167	2.99	1.167	54.55	2.167	4.58
0.250	2.99	1.250	54.55	2.250	4.58
0.333	3.70	1.333	11.55	2.333	3.93
0.417	3.70	1.417	11.55	2.417	3.93
0.500	3.70	1.500	11.55	2.500	3.93
0.583	5.06	1.583	7.28	2.583	3.47
0.667	5.06	1.667	7.28	2.667	3.47
0.750	5.06	1.750	7.28	2.750	3.47
0.833	9.41	1.833	5.55	2.833	3.13
0.917	9.41	1.917	5.55	2.917	3.13
1.000	9.41	2.000	5.55	3.000	3.13

Unit Hyd Qpeak (cms)= 0.105

PEAK FLOW (cms)= 0.006 (1)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 4.498
TOTAL RAINFALL (mm)= 31.358
RUNOFF COEFFICIENT = 0.143

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

ADD HYD (0061) |
1 + 2 = 3 |

ID1= 1 (2071):	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
+ ID2= 2 (0060):	NaN	0.014	1.43	NaN
	NaN	0.020	1.40	NaN

=====

ID = 3 (0061): NaN 0.020 1.40 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB | NASHYD (2072) |
ID= 1 DT= 5.0 min | Area (ha)= 0.34 Curve Number (CN)= 66.3
U.H. Tp(hrs)= 0.19 Ia (mm)= 4.87 # of Linear Res.(N)= 3.00

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.99	1.083	54.55	2.083	4.58
0.167	2.99	1.167	54.55	2.167	4.58
0.250	2.99	1.250	54.55	2.250	4.58
0.333	3.70	1.333	11.55	2.333	3.93
0.417	3.70	1.417	11.55	2.417	3.93
0.500	3.70	1.500	11.55	2.500	3.93
0.583	5.06	1.583	7.28	2.583	3.47
0.667	5.06	1.667	7.28	2.667	3.47
0.750	5.06	1.750	7.28	2.750	3.47
0.833	9.41	1.833	5.55	2.833	3.13
0.917	9.41	1.917	5.55	2.917	3.13
1.000	9.41	2.000	5.55	3.000	3.13

Unit Hyd Qpeak (cms)= 0.068

PEAK FLOW (cms)= 0.004 (1)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 4.497
TOTAL RAINFALL (mm)= 31.358
RUNOFF COEFFICIENT = 0.143

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

| STANDHYD (0206)| Area (ha)= 0.73
|ID= 1 DT= 5.0 min| Total Imp(%)= 32.00 Dir. Conn.(%)= 13.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.23 0.50
Dep. Storage (mm)= 1.00 1.50
Average Slope (‰)= 1.00 2.00
Length (m)= 69.76 40.00
Mannings n = 0.013 0.250

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

TIME		RAIN		TIME		RAIN		TIME		RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	2.99	1.083	54.55	2.083	4.58	3.08	2.85				
0.167	2.99	1.167	54.55	2.167	4.58	3.17	2.85				
0.250	2.99	1.250	54.55	2.250	4.58	3.25	2.85				
0.333	3.70	1.333	11.55	2.333	3.93	3.33	2.63				
0.417	3.70	1.417	11.55	2.417	3.93	3.42	2.63				
0.500	3.70	1.500	11.55	2.500	3.93	3.50	2.63				
0.583	5.06	1.583	7.28	2.583	3.47	3.58	2.45				
0.667	5.06	1.667	7.28	2.667	3.47	3.67	2.45				
0.750	5.06	1.750	7.28	2.750	3.47	3.75	2.45				
0.833	9.41	1.833	5.55	2.833	3.13	3.83	2.29				
0.917	9.41	1.917	5.55	2.917	3.13	3.92	2.29				
1.000	9.41	2.000	5.55	3.000	3.13	4.00	2.29				

Max.Eff.Inten.(mm/hr)= 54.55 31.69
over (min) 5.00 15.00
Storage Coeff. (min)= 2.62 (ii) 13.80 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08

TOTALS
PEAK FLOW (cms)= 0.01 0.02 0.032 (iii)
TIME TO PEAK (hrs)= 1.25 1.25
RUNOFF VOLUME (mm)= 30.36 6.19 9.33
TOTAL RAINFALL (mm)= 31.36 31.36 31.36
RUNOFF COEFFICIENT = 0.97 0.20 0.30

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)		AREA		QPEAK		TPEAK		R.V.	
1 + 2 = 3		(ha)		(cms)		(hrs)		(mm)	
ID1= 1 (0206):	0.73	0.032	1.25	9.33					
+ ID2= 2 (2072):	0.34	0.004	1.33	4.50					
=====									
ID = 3 (0062):	1.07	0.035	1.25	7.79					

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0401)		AREA		QPEAK		TPEAK		R.V.	
1 + 2 = 3		(ha)		(cms)		(hrs)		(mm)	
ID1= 1 (0062):	NaN	0.020	1.40	NaN					
+ ID2= 2 (0062):	1.07	0.035	1.25	7.79					
=====									
ID = 3 (0401):	NaN	0.052	1.37	NaN					

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

=====

V	V	I	SSSSS	U	U	A	L		(v 6.0.2006)
V	V	I	SS	U	U	A	L		
V	V	I	SS	U	U	AAAA	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	
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 File name: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\vsin.dat
Output File name: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eaf04675c3\8769dacf-7786-40e2-af1e-0eacad1cf08\scen
Summary File name: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eaf04675c3\8769dacf-7786-40e2-af1e-0eacad1cf08\scen

DATE: 02-08-2021 TIME: 10:22:44

USER:

COMMENTS: CHI 5 year (POST)

** SIMULATION : Run 03 **

CHICAGO STORM	IDF curve parameters: A= 482.877
Ptotal= 41.81 mm	B= 0.000
	C= 0.699
used in: INTENSITY =	A / (t + B)^C
Duration of storm = 4.00 hrs	
Storm time step = 15.00 min	
Time to peak ratio = 0.33	

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	3.98	1.25	72.74	2.25	6.10	3.25	3.80	
0.50	4.93	1.50	15.40	2.50	5.24	3.50	3.51	
0.75	6.75	1.75	9.71	2.75	4.63	3.75	3.26	
1.00	12.55	2.00	7.41	3.00	4.17	4.00	3.06	

CALIB											
NASHVD (0203)	Area	(ha)= 2.89	Curve Number	(CN)= 42.9							
ID= 1 DT= 2.0 min	Ia	(mm)= 8.98	# of Linear Res.(N)= 3.00								
	U.H. Tp(hrs)=	0.18									

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME		RAIN		TIME		RAIN		TIME		RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	3.98	1.033	72.74	2.033	6.10	3.03	3.80				
0.067	3.98	1.067	72.74	2.067	6.10	3.07	3.80				
0.100	3.98	1.100	72.74	2.100	6.10	3.10	3.80				
0.133	3.98	1.133	72.74	2.133	6.10	3.13	3.80				
0.167	3.98	1.167	72.74	2.167	6.10	3.17	3.80				
0.200	3.98	1.200	72.74	2.200	6.10	3.20	3.80				
0.233	3.98	1.233	72.74	2.233	6.10	3.23	3.80				
0.267	4.46	1.267	44.87	2.267	5.67	3.27	3.66				
0.300	4.93	1.300	15.40	2.300	5.24	3.30	3.51				
0.333	4.93	1.333	15.40	2.333	5.24	3.33	3.51				
0.367	4.93	1.367	15.40	2.367	5.24	3.37	3.51				
0.400	4.93	1.400	15.40	2.400	5.24	3.40	3.51				
0.433	4.93	1.433	15.40	2.433	5.24	3.43	3.51				
0.467	4.93	1.467	15.40	2.467	5.24	3.47	3.51				
0.500	4.93	1.500	15.40	2.500	5.24	3.50	3.51				
0.533	6.75	1.533	9.71	2.533	4.63	3.53	3.26				
0.567	6.75	1.567	9.71	2.567	4.63	3.57	3.26				
0.600	6.75	1.600	9.71	2.600	4.63	3.60	3.26				
0.633	6.75	1.633	9.71	2.633	4.63	3.63	3.26				
0.667	6.75	1.667	9.71	2.667	4.63	3.67	3.26				
0.700	6.75	1.700	9.71	2.700	4.63	3.70	3.26				
0.733	6.75	1.733	9.71	2.733	4.63	3.73	3.26				
0.767	9.65	1.767	8.56	2.767	4.40	3.77	3.16				
0.800	12.55	1.800	7.41	2.800	4.17	3.80	3.06				
0.833	12.55	1.833	7.41	2.833	4.17	3.83	3.06				
0.867	12.55	1.867	7.41	2.867	4.17	3.87	3.06				
0.900	12.55	1.900	7.41	2.900	4.17	3.90	3.06				
0.933	12.55	1.933	7.41	2.933	4.17	3.93	3.06				
0.967	12.55	1.967	7.41	2.967	4.17	3.97	3.06				
1.000	12.55	2.000	7.41	3.000	4.17	4.00	3.06				

Unit Hyd Qpeak (cms)= 0.613

PEAK FLOW (cms)= 0.019 (1)
TIME TO PEAK (hrs)= 1.400
RUNOFF VOLUME (mm)= 2.909
TOTAL RAINFALL (mm)= 41.810
RUNOFF COEFFICIENT = 0.070

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

CALIB											
NASHVD (0202)	Area	(ha)= 1.63	Curve Number	(CN)= 44.1							
ID= 1 DT= 2.0 min	Ia	(mm)= 9.62	# of Linear Res.(N)= 3.00								
	U.H. Tp(hrs)=	0.17									

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME		RAIN		TIME		RAIN		TIME		RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.033	3.98	1.033	72.74	2.033	6.10	3.03	3.80				
0.067	3.98	1.067	72.74	2.067	6.10	3.07	3.80				
0.100	3.98	1.100	72.74	2.100	6.10	3.10	3.80				
0.133	3.98	1.133	72.74	2.133	6.10	3.13	3.80				
0.167	3.98	1.167	72.74	2.167	6.10	3.17	3.80				
0.200	3.98	1.200	72.74	2.200	6.10	3.20	3.80				
0.233	3.98	1.233	72.74	2.233	6.10	3.23	3.80				

0.267 4.46 | 1.267 44.07 | 2.267 5.67 | 3.27 3.66
0.300 4.93 | 1.300 15.40 | 2.300 5.24 | 3.30 3.51
0.333 4.93 | 1.333 15.40 | 2.333 5.24 | 3.33 3.51
0.367 4.93 | 1.367 15.40 | 2.367 5.24 | 3.37 3.51
0.400 4.93 | 1.400 15.40 | 2.400 5.24 | 3.40 3.51
0.433 4.93 | 1.433 15.40 | 2.433 5.24 | 3.43 3.51
0.467 4.93 | 1.467 15.40 | 2.467 5.24 | 3.47 3.51
0.500 4.93 | 1.500 15.40 | 2.500 5.24 | 3.50 3.51
0.533 6.75 | 1.533 9.71 | 2.533 4.63 | 3.53 3.26
0.567 6.75 | 1.567 9.71 | 2.567 4.63 | 3.57 3.26
0.600 6.75 | 1.600 9.71 | 2.600 4.63 | 3.60 3.26
0.633 6.75 | 1.633 9.71 | 2.633 4.63 | 3.63 3.26
0.667 6.75 | 1.667 9.71 | 2.667 4.63 | 3.67 3.26
0.700 6.75 | 1.700 9.71 | 2.700 4.63 | 3.70 3.26
0.733 6.75 | 1.733 9.71 | 2.733 4.63 | 3.73 3.26
0.767 9.65 | 1.767 8.56 | 2.767 4.40 | 3.77 3.16
0.800 12.55 | 1.800 7.41 | 2.800 4.17 | 3.80 3.06
0.833 12.55 | 1.833 7.41 | 2.833 4.17 | 3.83 3.06
0.867 12.55 | 1.867 7.41 | 2.867 4.17 | 3.87 3.06
0.900 12.55 | 1.900 7.41 | 2.900 4.17 | 3.90 3.06
0.933 12.55 | 1.933 7.41 | 2.933 4.17 | 3.93 3.06
0.967 12.55 | 1.967 7.41 | 2.967 4.17 | 3.97 3.06
1.000 12.55 | 2.000 7.41 | 3.000 4.17 | 4.00 3.06

Unit Hyd Qpeak (cms)= 0.366
PEAK FLOW (cms)= 0.011 (i)
TIME TO PEAK (hrs)= 1.400
RUNOFF VOLUME (mm)= 2.928
TOTAL RAINFALL (mm)= 41.810
RUNOFF COEFFICIENT = 0.070

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

ADD HYD (0057) |
1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0202): 1.63 0.011 1.40 2.93
+ ID2= 2 (0203): 2.89 0.019 1.40 2.91
ID = 3 (0057): 4.52 0.030 1.40 2.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB |
STANDHYD (0204) | Area (ha)= 0.64 Curve Number (CN)= 48.1
ID= 1 DT= 2.0 min | Ia (mm)= 9.20 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.33

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr
0.033 3.98 1.033 72.74 2.033 6.10 | 3.03 3.80
0.067 3.98 1.067 72.74 2.067 6.10 | 3.07 3.80
0.100 3.98 1.100 72.74 2.100 6.10 | 3.10 3.80
0.133 3.98 1.133 72.74 2.133 6.10 | 3.13 3.80
0.167 3.98 1.167 72.74 2.167 6.10 | 3.17 3.80
0.200 3.98 1.200 72.74 2.200 6.10 | 3.20 3.80
0.233 3.98 1.233 72.74 2.233 6.10 | 3.23 3.80
0.267 4.46 1.267 44.07 2.267 5.67 | 3.27 3.66
0.300 4.93 1.300 15.40 2.300 5.24 | 3.30 3.51
0.333 4.93 1.333 15.40 2.333 5.24 | 3.33 3.51
0.367 4.93 1.367 15.40 2.367 5.24 | 3.37 3.51
0.400 4.93 1.400 15.40 2.400 5.24 | 3.40 3.51
0.433 4.93 1.433 15.40 2.433 5.24 | 3.43 3.51
0.467 4.93 1.467 15.40 2.467 5.24 | 3.47 3.51
0.500 4.93 1.500 15.40 2.500 5.24 | 3.50 3.51
0.533 6.75 1.533 9.71 2.533 4.63 | 3.53 3.26
0.567 6.75 1.567 9.71 2.567 4.63 | 3.57 3.26
0.600 6.75 1.600 9.71 2.600 4.63 | 3.60 3.26
0.633 6.75 1.633 9.71 2.633 4.63 | 3.63 3.26
0.667 6.75 1.667 9.71 2.667 4.63 | 3.67 3.26
0.700 6.75 1.700 9.71 2.700 4.63 | 3.70 3.26
0.733 6.75 1.733 9.71 2.733 4.63 | 3.73 3.26
0.767 9.65 1.767 8.56 2.767 4.40 | 3.77 3.16
0.800 12.55 1.800 7.41 2.800 4.17 | 3.80 3.06
0.833 12.55 1.833 7.41 2.833 4.17 | 3.83 3.06
0.867 12.55 1.867 7.41 2.867 4.17 | 3.87 3.06
0.900 12.55 1.900 7.41 2.900 4.17 | 3.90 3.06
0.933 12.55 1.933 7.41 2.933 4.17 | 3.93 3.06
0.967 12.55 1.967 7.41 2.967 4.17 | 3.97 3.06
1.000 12.55 2.000 7.41 3.000 4.17 | 4.00 3.06

Unit Hyd Qpeak (cms)= 0.074

PEAK FLOW (cms)= 0.004 (i)
TIME TO PEAK (hrs)= 1.667
RUNOFF VOLUME (mm)= 3.464
TOTAL RAINFALL (mm)= 41.810
RUNOFF COEFFICIENT = 0.083

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

ADD HYD (0058) |

1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0204): 0.64 0.004 1.67 3.46
+ ID2= 2 (0057): 4.52 0.030 1.40 2.92
ID = 3 (0058): 5.16 0.033 1.40 2.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB |
STANDHYD (0201) | Area (ha)= 2.20
ID= 1 DT= 5.0 min | Total Imp(%)= 43.00 Dir. Conn.(%)= 21.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.95 1.25
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.00 1.00
Length (m)= 121.11 40.00
Hannings n = 0.013 0.250

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

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr
0.083 3.98 1.083 72.74 2.083 6.10 | 3.08 3.80
0.167 3.98 1.167 72.74 2.167 6.10 | 3.17 3.80
0.250 3.98 1.250 72.74 2.250 6.10 | 3.25 3.80
0.333 4.93 1.333 15.40 2.333 5.24 | 3.33 3.51
0.417 4.93 1.417 15.40 2.417 5.24 | 3.42 3.51
0.500 4.93 1.500 15.40 2.500 5.24 | 3.50 3.51
0.583 6.75 1.583 9.71 2.583 4.63 | 3.58 3.26
0.667 6.75 1.667 9.71 2.667 4.63 | 3.67 3.26
0.750 6.75 1.750 9.71 2.750 4.63 | 3.75 3.26
0.833 12.55 1.833 7.41 2.833 4.17 | 3.83 3.06
0.917 12.55 1.917 7.41 2.917 4.17 | 3.92 3.06
1.000 12.55 2.000 7.41 3.000 4.17 | 4.00 3.06

Max.Eff.Inten.(mm/hr)= 72.74 74.24
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.25 (ii) 13.04 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.08
PEAK FLOW (cms)= 0.09 0.13 *TOTALS*
TIME TO PEAK (hrs)= 1.25 1.33 0.197 (iii)
RUNOFF VOLUME (mm)= 40.81 12.20 18.21
TOTAL RAINFALL (mm)= 41.81 41.81 41.81
RUNOFF COEFFICIENT = 0.98 0.29 0.44

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

(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

OVERFLOW IS OFF
IN= 2----> OUT= 1
DT= 5.0 min
OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.1600 | 0.1590 0.5570
0.0440 0.2080 | 0.3520 0.7230
0.0990 0.3020 | 1.2920 0.9160
0.1320 0.4100 | 2.0620 1.0290

AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
INFLOW: ID= 2 (0201) 2.200 0.197 1.25 18.21
OUTFLOW: ID= 1 (0301) NaN 0.000 0.00 NaN
PEAK FLOW REDUCTION [Qout/Qin](%)= 0.00
TIME SHIFT OF PEAK FLOW (min)=75.00
MAXIMUM STORAGE USED (ha.m.)= 0.0096

ADD HYD (0059) |
1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0201): NaN 0.000 0.00 NaN
+ ID2= 2 (0058): 5.16 0.033 1.40 2.98
ID = 3 (0059): NaN 0.033 1.40 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB |
STANDHYD (0205) | Area (ha)= 0.03
ID= 1 DT= 5.0 min | Total Imp(%)= 56.00 Dir. Conn.(%)= 28.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.02 0.01
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.00 1.00
Length (m)= 14.14 20.00

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	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.98	1.083	72.74	2.083	6.10	3.08	3.80		
0.167	3.98	1.167	72.74	2.167	6.10	3.17	3.80		
0.250	3.98	1.250	72.74	2.250	6.10	3.25	3.80		
0.333	4.93	1.333	15.40	2.333	5.24	3.33	3.51		
0.417	4.93	1.417	15.40	2.417	5.24	3.42	3.51		
0.500	4.93	1.500	15.40	2.500	5.24	3.50	3.51		
0.583	6.75	1.583	9.71	2.583	4.63	3.58	3.26		
0.667	6.75	1.667	9.71	2.667	4.63	3.67	3.26		
0.750	6.75	1.750	9.71	2.750	4.63	3.75	3.26		
0.833	12.55	1.833	7.41	2.833	4.17	3.83	3.06		
0.917	12.55	1.917	7.41	2.917	4.17	3.92	3.06		
1.000	12.55	2.000	7.41	3.000	4.17	4.00	3.06		

Max.Eff.Inten.(mm/hr)= 72.74 94.41
over (min) 5.00 10.00
Storage Coeff. (min) 0.90 (ii) 6.76 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.34 0.14

TOTALS
PEAK FLOW (cms)= 0.00 0.00 0.004 (iii)
TIME TO PEAK (hrs)= 1.25 1.25 1.25
RUNOFF VOLUME (mm)= 40.81 20.64
TOTAL RAINFALL (mm)= 41.81 41.81 41.81
RUNOFF COEFFICIENT = 0.98 0.35 0.49

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

(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0060)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0205):	0.03	0.004	1.25	20.64
+ ID2= 2 (0059):	NaN	0.033	1.40	NaN
ID = 3 (0060):	NaN	0.034	1.40	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.52	Curve Number (CN)=	66.3
NASHVD (2071)	Ia	(mm)=	4.87	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.19			

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

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.98	1.083	72.74	2.083	6.10	3.08	3.80		
0.167	3.98	1.167	72.74	2.167	6.10	3.17	3.80		
0.250	3.98	1.250	72.74	2.250	6.10	3.25	3.80		
0.333	4.93	1.333	15.40	2.333	5.24	3.33	3.51		
0.417	4.93	1.417	15.40	2.417	5.24	3.42	3.51		
0.500	4.93	1.500	15.40	2.500	5.24	3.50	3.51		
0.583	6.75	1.583	9.71	2.583	4.63	3.58	3.26		
0.667	6.75	1.667	9.71	2.667	4.63	3.67	3.26		
0.750	6.75	1.750	9.71	2.750	4.63	3.75	3.26		
0.833	12.55	1.833	7.41	2.833	4.17	3.83	3.06		
0.917	12.55	1.917	7.41	2.917	4.17	3.92	3.06		
1.000	12.55	2.000	7.41	3.000	4.17	4.00	3.06		

Unit Hyd Qpeak (cms)= 0.105

PEAK FLOW (cms)= 0.011 (i)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 8.198
TOTAL RAINFALL (mm)= 41.810
RUNOFF COEFFICIENT = 0.196

(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 (2071):	0.52	0.011	1.33	8.20
+ ID2= 2 (0060):	NaN	0.034	1.40	NaN
ID = 3 (0061):	NaN	0.045	1.40	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.34	Curve Number (CN)=	66.3
NASHVD (2072)	Ia	(mm)=	4.87	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.19			

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

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.98	1.083	72.74	2.083	6.10	3.08	3.80		
0.167	3.98	1.167	72.74	2.167	6.10	3.17	3.80		
0.250	3.98	1.250	72.74	2.250	6.10	3.25	3.80		
0.333	4.93	1.333	15.40	2.333	5.24	3.33	3.51		
0.417	4.93	1.417	15.40	2.417	5.24	3.42	3.51		
0.500	4.93	1.500	15.40	2.500	5.24	3.50	3.51		
0.583	6.75	1.583	9.71	2.583	4.63	3.58	3.26		
0.667	6.75	1.667	9.71	2.667	4.63	3.67	3.26		
0.750	6.75	1.750	9.71	2.750	4.63	3.75	3.26		
0.833	12.55	1.833	7.41	2.833	4.17	3.83	3.06		
0.917	12.55	1.917	7.41	2.917	4.17	3.92	3.06		
1.000	12.55	2.000	7.41	3.000	4.17	4.00	3.06		

Unit Hyd Qpeak (cms)= 0.068

PEAK FLOW (cms)= 0.007 (1)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 8.198
TOTAL RAINFALL (mm)= 41.810
RUNOFF COEFFICIENT = 0.196

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

CALIB	Area	(ha)=	0.73	Total Imp(%)=	32.00	Dir. Conn.(%)=	13.00
STANDHYD (0206)	ID= 1 DT= 5.0 min						

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	0.23	0.50
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	2.00
Length	(m)=	69.76	40.00
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	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.98	1.083	72.74	2.083	6.10	3.08	3.80		
0.167	3.98	1.167	72.74	2.167	6.10	3.17	3.80		
0.250	3.98	1.250	72.74	2.250	6.10	3.25	3.80		
0.333	4.93	1.333	15.40	2.333	5.24	3.33	3.51		
0.417	4.93	1.417	15.40	2.417	5.24	3.42	3.51		
0.500	4.93	1.500	15.40	2.500	5.24	3.50	3.51		
0.583	6.75	1.583	9.71	2.583	4.63	3.58	3.26		
0.667	6.75	1.667	9.71	2.667	4.63	3.67	3.26		
0.750	6.75	1.750	9.71	2.750	4.63	3.75	3.26		
0.833	12.55	1.833	7.41	2.833	4.17	3.83	3.06		
0.917	12.55	1.917	7.41	2.917	4.17	3.92	3.06		
1.000	12.55	2.000	7.41	3.000	4.17	4.00	3.06		

Max.Eff.Inten.(mm/hr)= 72.74 65.64
over (min) 5.00 15.00
Storage Coeff. (min)= 2.34 (ii) 10.69 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS
PEAK FLOW (cms)= 0.02 0.05 0.059 (iii)
TIME TO PEAK (hrs)= 1.25 1.33 1.25
RUNOFF VOLUME (mm)= 40.81 11.29 15.12
TOTAL RAINFALL (mm)= 41.81 41.81 41.81
RUNOFF COEFFICIENT = 0.98 0.27 0.36

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0206):	0.73	0.059	1.25	15.12
+ ID2= 2 (2072):	0.34	0.007	1.33	8.20
ID = 3 (0062):	1.07	0.065	1.25	12.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0401)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
----- (ha) (cms) (hrs) (mm)
ID1= 1 (0061): NaN 0.045 1.40 NaN
+ ID2= 2 (0062): 1.07 0.065 1.25 12.92
=====

ID = 3 (0001): NaN 0.108 1.33 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.0.2006)
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
V I SSSSS UUUU A A LLLL

OOO TTTT TTTT H H Y Y M M OOO TM
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O O T T H H Y Y M M O O
OOO T T H H Y Y M M OOO

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-9ef7-c4eaf04675c3\012b618-a30d-4b2a-bd19-97a18941c079\scen
Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-9ef7-c4eaf04675c3\012b618-a30d-4b2a-bd19-97a18941c079\scen

DATE: 02-08-2021 TIME: 10:22:44

USER:

COMMENTS: CHI 10 year (POST)

** SIMULATION : Run 04 **

| CHICAGO STORM | IDF curve parameters: A= 563.357
| Ptotal= 48.78 mm | B= 0.000
C= 0.699
used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 15.00 min
Time to peak ratio = 0.33

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	4.65	1.25	84.86	2.25	7.12	3.25	4.44
0.50	5.75	1.50	17.97	2.50	6.12	3.50	4.09
0.75	7.87	1.75	11.33	2.75	5.40	3.75	3.81
1.00	14.64	2.00	8.64	3.00	4.86	4.00	3.56

| CALIB |
| NASHYO (0203) | Area (ha)= 2.89 Curve Number (CN)= 42.9
|ID= 1 DT= 2.0 min | Ia (mm)= 8.98 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.18

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	4.65	1.033	84.86	2.033	7.12	3.03	4.44
0.067	4.65	1.067	84.86	2.067	7.12	3.07	4.44
0.100	4.65	1.100	84.86	2.100	7.12	3.10	4.44
0.133	4.65	1.133	84.86	2.133	7.12	3.13	4.44
0.167	4.65	1.167	84.86	2.167	7.12	3.17	4.44
0.200	4.65	1.200	84.86	2.200	7.12	3.20	4.44
0.233	4.65	1.233	84.86	2.233	7.12	3.23	4.44
0.267	5.20	1.267	51.41	2.267	6.62	3.27	4.26
0.300	5.75	1.300	17.97	2.300	6.12	3.30	4.09
0.333	5.75	1.333	17.97	2.333	6.12	3.33	4.09
0.367	5.75	1.367	17.97	2.367	6.12	3.37	4.09
0.400	5.75	1.400	17.97	2.400	6.12	3.40	4.09
0.433	5.75	1.433	17.97	2.433	6.12	3.43	4.09
0.467	5.75	1.467	17.97	2.467	6.12	3.47	4.09
0.500	5.75	1.500	17.97	2.500	6.12	3.50	4.09
0.533	7.87	1.533	11.33	2.533	5.40	3.53	3.81
0.567	7.87	1.567	11.33	2.567	5.40	3.57	3.81
0.600	7.87	1.600	11.33	2.600	5.40	3.60	3.81
0.633	7.87	1.633	11.33	2.633	5.40	3.63	3.81
0.667	7.87	1.667	11.33	2.667	5.40	3.67	3.81
0.700	7.87	1.700	11.33	2.700	5.40	3.70	3.81
0.733	7.87	1.733	11.33	2.733	5.40	3.73	3.81
0.767	11.26	1.767	9.99	2.767	5.13	3.77	3.69
0.800	14.64	1.800	8.64	2.800	4.86	3.80	3.56
0.833	14.64	1.833	8.64	2.833	4.86	3.83	3.56
0.867	14.64	1.867	8.64	2.867	4.86	3.87	3.56
0.900	14.64	1.900	8.64	2.900	4.86	3.90	3.56
0.933	14.64	1.933	8.64	2.933	4.86	3.93	3.56
0.967	14.64	1.967	8.64	2.967	4.86	3.97	3.56
1.000	14.64	2.000	8.64	3.000	4.86	4.00	3.56

0.833	14.64	1.833	8.64	2.833	4.86	3.83	3.56
0.867	14.64	1.867	8.64	2.867	4.86	3.87	3.56
0.900	14.64	1.900	8.64	2.900	4.86	3.90	3.56
0.933	14.64	1.933	8.64	2.933	4.86	3.93	3.56
0.967	14.64	1.967	8.64	2.967	4.86	3.97	3.56
1.000	14.64	2.000	8.64	3.000	4.86	4.00	3.56

Unit Hyd Qpeak (cms)= 0.613

PEAK FLOW (cms)= 0.829 (1)

TIME TO PEAK (hrs)= 1.400

RUNOFF VOLUME (mm)= 4.196

TOTAL RAINFALL (mm)= 48.779

RUNOFF COEFFICIENT = 0.086

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

| CALIB |
| NASHYO (0202) | Area (ha)= 1.63 Curve Number (CN)= 44.1
|ID= 1 DT= 2.0 min | Ia (mm)= 9.62 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	4.65	1.033	84.86	2.033	7.12	3.03	4.44
0.067	4.65	1.067	84.86	2.067	7.12	3.07	4.44
0.100	4.65	1.100	84.86	2.100	7.12	3.10	4.44
0.133	4.65	1.133	84.86	2.133	7.12	3.13	4.44
0.167	4.65	1.167	84.86	2.167	7.12	3.17	4.44
0.200	4.65	1.200	84.86	2.200	7.12	3.20	4.44
0.233	4.65	1.233	84.86	2.233	7.12	3.23	4.44
0.267	5.20	1.267	51.41	2.267	6.62	3.27	4.26
0.300	5.75	1.300	17.97	2.300	6.12	3.30	4.09
0.333	5.75	1.333	17.97	2.333	6.12	3.33	4.09
0.367	5.75	1.367	17.97	2.367	6.12	3.37	4.09
0.400	5.75	1.400	17.97	2.400	6.12	3.40	4.09
0.433	5.75	1.433	17.97	2.433	6.12	3.43	4.09
0.467	5.75	1.467	17.97	2.467	6.12	3.47	4.09
0.500	5.75	1.500	17.97	2.500	6.12	3.50	4.09
0.533	7.87	1.533	11.33	2.533	5.40	3.53	3.81
0.567	7.87	1.567	11.33	2.567	5.40	3.57	3.81
0.600	7.87	1.600	11.33	2.600	5.40	3.60	3.81
0.633	7.87	1.633	11.33	2.633	5.40	3.63	3.81
0.667	7.87	1.667	11.33	2.667	5.40	3.67	3.81
0.700	7.87	1.700	11.33	2.700	5.40	3.70	3.81
0.733	7.87	1.733	11.33	2.733	5.40	3.73	3.81
0.767	11.26	1.767	9.99	2.767	5.13	3.77	3.69
0.800	14.64	1.800	8.64	2.800	4.86	3.80	3.56
0.833	14.64	1.833	8.64	2.833	4.86	3.83	3.56
0.867	14.64	1.867	8.64	2.867	4.86	3.87	3.56
0.900	14.64	1.900	8.64	2.900	4.86	3.90	3.56
0.933	14.64	1.933	8.64	2.933	4.86	3.93	3.56
0.967	14.64	1.967	8.64	2.967	4.86	3.97	3.56
1.000	14.64	2.000	8.64	3.000	4.86	4.00	3.56

Unit Hyd Qpeak (cms)= 0.366

PEAK FLOW (cms)= 0.017 (1)

TIME TO PEAK (hrs)= 1.367

RUNOFF VOLUME (mm)= 4.249

TOTAL RAINFALL (mm)= 48.779

RUNOFF COEFFICIENT = 0.087

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

| ADD HYD (0057)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
----- (ha) (cms) (hrs) (mm)
ID1= 1 (0202): 1.63 0.017 1.37 4.25
+ ID2= 2 (0203): 2.89 0.029 1.40 4.20
=====

ID = 3 (0057): 4.52 0.046 1.40 4.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYO (0204) | Area (ha)= 0.64 Curve Number (CN)= 48.1
|ID= 1 DT= 2.0 min | Ia (mm)= 9.20 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.33

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	4.65	1.033	84.86	2.033	7.12	3.03	4.44
0.067	4.65	1.067	84.86	2.067	7.12	3.07	4.44
0.100	4.65	1.100	84.86	2.100	7.12	3.10	4.44
0.133	4.65	1.133	84.86	2.133	7.12	3.13	4.44
0.167	4.65	1.167	84.86	2.167	7.12	3.17	4.44
0.200	4.65	1.200	84.86	2.200	7.12	3.20	4.44
0.233	4.65	1.233	84.86	2.233	7.12	3.23	4.44
0.267	5.20	1.267	51.41	2.267	6.62	3.27	4.26

0.300	5.75	1.300	17.97	2.300	6.12	3.30	4.09
0.333	5.75	1.333	17.97	2.333	6.12	3.33	4.09
5.75	1.367	17.97	2.367	6.12	3.37	4.09	
0.400	5.75	1.400	17.97	2.400	6.12	3.40	4.09
0.433	5.75	1.433	17.97	2.433	6.12	3.43	4.09
0.467	5.75	1.467	17.97	2.467	6.12	3.47	4.09
0.500	5.75	1.500	17.97	2.500	6.12	3.50	4.09
0.533	7.87	1.533	11.33	2.533	5.40	3.53	3.81
0.567	7.87	1.567	11.33	2.567	5.40	3.57	3.81
0.600	7.87	1.600	11.33	2.600	5.40	3.60	3.81
0.633	7.87	1.633	11.33	2.633	5.40	3.63	3.81
0.667	7.87	1.667	11.33	2.667	5.40	3.67	3.81
0.700	7.87	1.700	11.33	2.700	5.40	3.70	3.81
0.733	7.87	1.733	11.33	2.733	5.40	3.73	3.81
0.767	11.26	1.767	9.99	2.767	5.13	3.77	3.69
0.800	14.64	1.800	8.64	2.800	4.86	3.80	3.56
0.833	14.64	1.833	8.64	2.833	4.86	3.83	3.56
0.867	14.64	1.867	8.64	2.867	4.86	3.87	3.56
0.900	14.64	1.900	8.64	2.900	4.86	3.90	3.56
0.933	14.64	1.933	8.64	2.933	4.86	3.93	3.56
0.967	14.64	1.967	8.64	2.967	4.86	3.97	3.56
1.000	14.64	2.000	8.64	3.000	4.86	4.00	3.56

Unit Hyd Qpeak (cms)= 0.074

PEAK FLOW (cms)= 0.005 (1)
TIME TO PEAK (hrs)= 1.633
RUNOFF VOLUME (mm)= 4.990
TOTAL RAINFALL (mm)= 48.779
RUNOFF COEFFICIENT = 0.102

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

ADD HYD (0058)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0204):	0.64	0.005	1.63	4.99
+ ID2= 2 (0057):	4.52	0.046	1.40	4.22
=====				
ID = 3 (0058):	5.16	0.050	1.40	4.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	2.20
STANDHYD (0201)	Total Imp(%)=	43.00	Dir. Conn.(%)= 21.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (1)
Surface Area (ha)=	0.95	1.25
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	1.00
Length (m)=	121.11	40.00
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	4.65	1.083	84.86	2.083	7.12	3.08	4.44	
0.167	4.65	1.167	84.86	2.167	7.12	3.17	4.44	
0.250	4.65	1.250	84.86	2.250	7.12	3.25	4.44	
0.333	5.75	1.333	17.97	2.333	6.12	3.33	4.09	
0.417	5.75	1.417	17.97	2.417	6.12	3.42	4.09	
0.500	5.75	1.500	17.97	2.500	6.12	3.50	4.09	
0.583	7.87	1.583	11.33	2.583	5.40	3.50	3.81	
0.667	7.87	1.667	11.33	2.667	5.40	3.67	3.81	
0.750	7.87	1.750	11.33	2.750	5.40	3.75	3.81	
0.833	14.64	1.833	8.64	2.833	4.86	3.83	3.56	
0.917	14.64	1.917	8.64	2.917	4.86	3.92	3.56	
1.000	14.64	2.000	8.64	3.000	4.86	4.00	3.56	

Max.Eff.Inten.(mm/hr)= 84.86 92.85
over (min) 5.00 15.00
Storage Coeff. (min)= 3.06 (ii) 12.01 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.09

TOTALS

PEAK FLOW (cms)= 0.11 0.18 0.252 (iii)
TIME TO PEAK (hrs)= 1.33 1.25 1.33
RUNOFF VOLUME (mm)= 47.78 16.73 23.25
TOTAL RAINFALL (mm)= 48.78 48.78 48.78
RUNOFF COEFFICIENT = 0.98 0.34 0.48

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

- (i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0301)	OVERFLOW IS OFF
IN= 2--> OUT= 1	
DT= 5.0 min	
OUTFLOW	STORAGE
(cms)	(ha.m.)
OUTFLOW	STORAGE
(cms)	(ha.m.)

0.0000	0.1680	0.1590	0.5570
0.0440	0.2080	0.3520	0.7230
0.0090	0.3020	1.2920	0.9160
0.1320	0.4180	2.0620	1.0230

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0201):	2.200	0.252	1.25	23.25
OUTFLOW: ID= 1 (0301):	NaN	0.000	0.00	NaN

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.00
TIME SHIFT OF PEAK FLOW (min)=75.00
MAXIMUM STORAGE USED (ha.m.)= 0.0118

ADD HYD (0059)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0301):	NaN	0.000	0.00	NaN
+ ID2= 2 (0058):	5.16	0.050	1.40	4.31
=====				
ID = 3 (0059):	NaN	0.050	1.40	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.03
STANDHYD (0205)	Total Imp(%)=	56.00	Dir. Conn.(%)= 28.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (1)
Surface Area (ha)=	0.40	0.01
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	1.00
Length (m)=	14.14	20.00
Mannings n =	0.013	0.250

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

----- TRANSFORMED HYETROGRAM -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.65	1.083	84.86	2.083	7.12	3.08	4.44
0.167	4.65	1.167	84.86	2.167	7.12	3.17	4.44
0.250	4.65	1.250	84.86	2.250	7.12	3.25	4.44
0.333	5.75	1.333	17.97	2.333	6.12	3.33	4.09
0.417	5.75	1.417	17.97	2.417	6.12	3.42	4.09
0.500	5.75	1.500	17.97	2.500	6.12	3.50	4.09
0.583	7.87	1.583	11.33	2.583	5.40	3.58	3.81
0.667	7.87	1.667	11.33	2.667	5.40	3.67	3.81
0.750	7.87	1.750	11.33	2.750	5.40	3.75	3.81
0.833	14.64	1.833	8.64	2.833	4.86	3.83	3.56
0.917	14.64	1.917	8.64	2.917	4.86	3.92	3.56
1.000	14.64	2.000	8.64	3.000	4.86	4.00	3.56

Max.Eff.Inten.(mm/hr)= 84.86 116.32
over (min) 5.00 10.00
Storage Coeff. (min)= 0.84 (ii) 6.24 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.34 0.15

PEAK FLOW (cms)= 0.00 0.00 0.005 (iii)
TIME TO PEAK (hrs)= 1.25 1.25 1.25
RUNOFF VOLUME (mm)= 47.78 20.23 27.14
TOTAL RAINFALL (mm)= 48.78 48.78 48.78
RUNOFF COEFFICIENT = 0.98 0.41 0.56

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

- (i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0060)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0205):	0.03	0.005	1.25	27.14
+ ID2= 2 (0059):	NaN	0.050	1.40	NaN
=====				
ID = 3 (0060):	NaN	0.052	1.40	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.52	Curve Number (CN)=	66.3
NASHVD (2071)	Ia	(mm)=	4.87	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.19			

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

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

0.083	4.65	1.083	84.86	2.083	7.12	3.08	4.44
0.167	4.65	1.167	84.86	2.167	7.12	3.17	4.44
0.250	4.65	1.250	84.86	2.250	7.12	3.25	4.44
0.333	5.75	1.333	17.97	2.333	6.12	3.33	4.09
0.417	5.75	1.417	17.97	2.417	6.12	3.42	4.09
0.500	5.75	1.500	17.97	2.500	6.12	3.50	4.09
0.583	7.87	1.583	11.33	2.583	5.40	3.58	3.81
0.667	7.87	1.667	11.33	2.667	5.40	3.67	3.81
0.750	7.87	1.750	11.33	2.750	5.40	3.75	3.81
0.833	14.64	1.833	8.64	2.833	4.86	3.83	3.56
0.917	14.64	1.917	8.64	2.917	4.86	3.92	3.56
1.000	14.64	2.000	8.64	3.000	4.86	4.00	3.56

Unit Hyd Qpeak (cms)= 0.185

PEAK FLOW (cms)= 0.016 (1)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 11.117
TOTAL RAINFALL (mm)= 48.779
RUNOFF COEFFICIENT = 0.228

(1) 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 (2072):	0.52	0.016	1.33	11.12
+ ID2= 2 (0060):	NaN	0.052	1.40	NaN
ID = 3 (0061):	NaN	0.067	1.37	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.34	Curve Number (CN)=	66.3
NASHYD (2072)	Ia	(mm)=	4.87	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.19			

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.65	1.083	84.86	2.083	7.12	3.08	4.44
0.167	4.65	1.167	84.86	2.167	7.12	3.17	4.44
0.250	4.65	1.250	84.86	2.250	7.12	3.25	4.44
0.333	5.75	1.333	17.97	2.333	6.12	3.33	4.09
0.417	5.75	1.417	17.97	2.417	6.12	3.42	4.09
0.500	5.75	1.500	17.97	2.500	6.12	3.50	4.09
0.583	7.87	1.583	11.33	2.583	5.40	3.58	3.81
0.667	7.87	1.667	11.33	2.667	5.40	3.67	3.81
0.750	7.87	1.750	11.33	2.750	5.40	3.75	3.81
0.833	14.64	1.833	8.64	2.833	4.86	3.83	3.56
0.917	14.64	1.917	8.64	2.917	4.86	3.92	3.56
1.000	14.64	2.000	8.64	3.000	4.86	4.00	3.56

Unit Hyd Qpeak (cms)= 0.068

PEAK FLOW (cms)= 0.010 (1)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 11.116
TOTAL RAINFALL (mm)= 48.779
RUNOFF COEFFICIENT = 0.228

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

CALIB	Area	(ha)=	0.73
STANDHYD (0206)	Total Imp(%)=	32.00	Dir. Conn.(%)= 13.00
ID= 1 DT= 5.0 min			

Surface Area	(ha)=	0.23	0.50
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	2.00
Length	(m)=	69.76	40.00
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	4.65	1.083	84.86	2.083	7.12	3.08	4.44
0.167	4.65	1.167	84.86	2.167	7.12	3.17	4.44
0.250	4.65	1.250	84.86	2.250	7.12	3.25	4.44
0.333	5.75	1.333	17.97	2.333	6.12	3.33	4.09
0.417	5.75	1.417	17.97	2.417	6.12	3.42	4.09
0.500	5.75	1.500	17.97	2.500	6.12	3.50	4.09
0.583	7.87	1.583	11.33	2.583	5.40	3.58	3.81
0.667	7.87	1.667	11.33	2.667	5.40	3.67	3.81
0.750	7.87	1.750	11.33	2.750	5.40	3.75	3.81
0.833	14.64	1.833	8.64	2.833	4.86	3.83	3.56
0.917	14.64	1.917	8.64	2.917	4.86	3.92	3.56
1.000	14.64	2.000	8.64	3.000	4.86	4.00	3.56

Max.Eff.Inten.(mm/hr)= 84.86 82.84

over (min)	5.00	10.00
Storage Coeff. (min)=	2.20 (11)	9.81 (11)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.30	0.11
PEAK FLOW (cms)=	0.02	0.07
TIME TO PEAK (hrs)=	1.25	1.25
RUNOFF VOLUME (mm)=	47.78	15.35
TOTAL RAINFALL (mm)=	48.78	48.78
RUNOFF COEFFICIENT =	0.98	0.31

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

***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20% YOU SHOULD CONSIDER SPLITTING THE AREA.

- (1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0206):	0.73	0.096	1.25	19.56
+ ID2= 2 (2072):	0.34	0.010	1.33	11.12
ID = 3 (0062):	1.07	0.104	1.25	16.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0401)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0061):	NaN	0.067	1.37	NaN
+ ID2= 2 (0062):	1.07	0.104	1.25	16.88
ID = 3 (0401):	NaN	0.154	1.30	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

V V I SSSSS U U A A L (v 6.0.2006)
V V I SS U U A A L
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V V I SS U U A A L
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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eafb4675c3\57ecd02c-d849-44b6-a6da-b7397349b1ca\scen
Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eafb4675c3\57ecd02c-d849-44b6-a6da-b7397349b1ca\scen

DATE: 02-08-2021 TIME: 10:22:43

USER:

COMMENTS: CHI 25 year (POST)

***** SIMULATION - Run 05 *****

CHICAGO STORM	IDF curve parameters: A= 664.831
Ptotal= 57.56 mm	B= 0.000
	C= 0.699

used in: INTENSITY = A / (τ + B)^C

Duration of storm = 4.00 hrs
Storm time step = 15.00 min
Time to peak ratio = 0.33

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	5.48	1.25	100.14	2.25	8.40	3.25	5.24
0.50	6.79	1.50	21.21	2.50	7.22	3.50	4.83

0.75 9.29 | 1.75 13.37 | 2.75 6.38 | 3.75 4.49
1.00 17.28 | 2.00 10.20 | 3.00 5.74 | 4.00 4.21

CALIB
NASHYD (0203) | Area (ha)= 2.89 Curve Number (CN)= 42.9
ID= 1 DT= 2.0 min | Ia (mm)= 8.98 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.18

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	5.48	1.033	100.14	2.033	8.40	3.03	5.24
0.067	5.48	1.067	100.14	2.067	8.40	3.07	5.24
0.100	5.48	1.100	100.14	2.100	8.40	3.10	5.24
0.133	5.48	1.133	100.14	2.133	8.40	3.13	5.24
0.167	5.48	1.167	100.14	2.167	8.40	3.17	5.24
0.200	5.48	1.200	100.14	2.200	8.40	3.20	5.24
0.233	5.48	1.233	100.14	2.233	8.40	3.23	5.24
0.267	6.14	1.267	60.67	2.267	7.81	3.27	5.03
0.300	6.79	1.300	21.21	2.300	7.22	3.30	4.83
0.333	6.79	1.333	21.21	2.333	7.22	3.33	4.83
0.367	6.79	1.367	21.21	2.367	7.22	3.37	4.83
0.400	6.79	1.400	21.21	2.400	7.22	3.40	4.83
0.433	6.79	1.433	21.21	2.433	7.22	3.43	4.83
0.467	6.79	1.467	21.21	2.467	7.22	3.47	4.83
0.500	6.79	1.500	21.21	2.500	7.22	3.50	4.83
0.533	9.29	1.533	13.37	2.533	6.38	3.53	4.49
0.567	9.29	1.567	13.37	2.567	6.38	3.57	4.49
0.600	9.29	1.600	13.37	2.600	6.38	3.60	4.49
0.633	9.29	1.633	13.37	2.633	6.38	3.63	4.49
0.667	9.29	1.667	13.37	2.667	6.38	3.67	4.49
0.700	9.29	1.700	13.37	2.700	6.38	3.70	4.49
0.733	9.29	1.733	13.37	2.733	6.38	3.73	4.49
0.767	13.28	1.767	11.78	2.767	6.06	3.77	4.35
0.800	17.28	1.800	10.20	2.800	5.74	3.80	4.21
0.833	17.28	1.833	10.20	2.833	5.74	3.83	4.21
0.867	17.28	1.867	10.20	2.867	5.74	3.87	4.21
0.900	17.28	1.900	10.20	2.900	5.74	3.90	4.21
0.933	17.28	1.933	10.20	2.933	5.74	3.93	4.21
0.967	17.28	1.967	10.20	2.967	5.74	3.97	4.21
1.000	17.28	2.000	10.20	3.000	5.74	4.00	4.21

Unit Hyd Qpeak (cms)= 0.613

PEAK FLOW (cms)= 0.044 (i)
TIME TO PEAK (hrs)= 1.400
RUNOFF VOLUME (mm)= 6.111
TOTAL RAINFALL (mm)= 57.565
RUNOFF COEFFICIENT = 0.106

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

CALIB
NASHYD (0202) | Area (ha)= 1.63 Curve Number (CN)= 44.1
ID= 1 DT= 2.0 min | Ia (mm)= 9.62 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	5.48	1.033	100.14	2.033	8.40	3.03	5.24
0.067	5.48	1.067	100.14	2.067	8.40	3.07	5.24
0.100	5.48	1.100	100.14	2.100	8.40	3.10	5.24
0.133	5.48	1.133	100.14	2.133	8.40	3.13	5.24
0.167	5.48	1.167	100.14	2.167	8.40	3.17	5.24
0.200	5.48	1.200	100.14	2.200	8.40	3.20	5.24
0.233	5.48	1.233	100.14	2.233	8.40	3.23	5.24
0.267	6.14	1.267	60.67	2.267	7.81	3.27	5.03
0.300	6.79	1.300	21.21	2.300	7.22	3.30	4.83
0.333	6.79	1.333	21.21	2.333	7.22	3.33	4.83
0.367	6.79	1.367	21.21	2.367	7.22	3.37	4.83
0.400	6.79	1.400	21.21	2.400	7.22	3.40	4.83
0.433	6.79	1.433	21.21	2.433	7.22	3.43	4.83
0.467	6.79	1.467	21.21	2.467	7.22	3.47	4.83
0.500	6.79	1.500	21.21	2.500	7.22	3.50	4.83
0.533	9.29	1.533	13.37	2.533	6.38	3.53	4.49
0.567	9.29	1.567	13.37	2.567	6.38	3.57	4.49
0.600	9.29	1.600	13.37	2.600	6.38	3.60	4.49
0.633	9.29	1.633	13.37	2.633	6.38	3.63	4.49
0.667	9.29	1.667	13.37	2.667	6.38	3.67	4.49
0.700	9.29	1.700	13.37	2.700	6.38	3.70	4.49
0.733	9.29	1.733	13.37	2.733	6.38	3.73	4.49
0.767	13.28	1.767	11.78	2.767	6.06	3.77	4.35
0.800	17.28	1.800	10.20	2.800	5.74	3.80	4.21
0.833	17.28	1.833	10.20	2.833	5.74	3.83	4.21
0.867	17.28	1.867	10.20	2.867	5.74	3.87	4.21
0.900	17.28	1.900	10.20	2.900	5.74	3.90	4.21
0.933	17.28	1.933	10.20	2.933	5.74	3.93	4.21
0.967	17.28	1.967	10.20	2.967	5.74	3.97	4.21
1.000	17.28	2.000	10.20	3.000	5.74	4.00	4.21

Unit Hyd Qpeak (cms)= 0.366

PEAK FLOW (cms)= 0.026 (i)
TIME TO PEAK (hrs)= 1.367
RUNOFF VOLUME (mm)= 6.219
TOTAL RAINFALL (mm)= 57.565
RUNOFF COEFFICIENT = 0.108

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

ADD HYD (0057) | AREA QPEAK TPEAK R.V.
| 1 + 2 = 3 | (ha) (cms) (hrs) (mm)
ID1= 1 (0202): 1.63 0.026 1.37 6.22
+ ID2= 2 (0203): 2.89 0.044 1.40 6.11
===== ID = 3 (0057): 4.52 0.070 1.37 6.15

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0204) | Area (ha)= 0.64 Curve Number (CN)= 48.1
ID= 1 DT= 2.0 min | Ia (mm)= 9.20 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.33

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	5.48	1.033	100.14	2.033	8.40	3.03	5.24
0.067	5.48	1.067	100.14	2.067	8.40	3.07	5.24
0.100	5.48	1.100	100.14	2.100	8.40	3.10	5.24
0.133	5.48	1.133	100.14	2.133	8.40	3.13	5.24
0.167	5.48	1.167	100.14	2.167	8.40	3.17	5.24
0.200	5.48	1.200	100.14	2.200	8.40	3.20	5.24
0.233	5.48	1.233	100.14	2.233	8.40	3.23	5.24
0.267	6.14	1.267	60.67	2.267	7.81	3.27	5.03
0.300	6.79	1.300	21.21	2.300	7.22	3.30	4.83
0.333	6.79	1.333	21.21	2.333	7.22	3.33	4.83
0.367	6.79	1.367	21.21	2.367	7.22	3.37	4.83
0.400	6.79	1.400	21.21	2.400	7.22	3.40	4.83
0.433	6.79	1.433	21.21	2.433	7.22	3.43	4.83
0.467	6.79	1.467	21.21	2.467	7.22	3.47	4.83
0.500	6.79	1.500	21.21	2.500	7.22	3.50	4.83
0.533	9.29	1.533	13.37	2.533	6.38	3.53	4.49
0.567	9.29	1.567	13.37	2.567	6.38	3.57	4.49
0.600	9.29	1.600	13.37	2.600	6.38	3.60	4.49
0.633	9.29	1.633	13.37	2.633	6.38	3.63	4.49
0.667	9.29	1.667	13.37	2.667	6.38	3.67	4.49
0.700	9.29	1.700	13.37	2.700	6.38	3.70	4.49
0.733	9.29	1.733	13.37	2.733	6.38	3.73	4.49
0.767	13.28	1.767	11.78	2.767	6.06	3.77	4.35
0.800	17.28	1.800	10.20	2.800	5.74	3.80	4.21
0.833	17.28	1.833	10.20	2.833	5.74	3.83	4.21
0.867	17.28	1.867	10.20	2.867	5.74	3.87	4.21
0.900	17.28	1.900	10.20	2.900	5.74	3.90	4.21
0.933	17.28	1.933	10.20	2.933	5.74	3.93	4.21
0.967	17.28	1.967	10.20	2.967	5.74	3.97	4.21
1.000	17.28	2.000	10.20	3.000	5.74	4.00	4.21

Unit Hyd Qpeak (cms)= 0.074

PEAK FLOW (cms)= 0.008 (i)
TIME TO PEAK (hrs)= 1.633
RUNOFF VOLUME (mm)= 7.249
TOTAL RAINFALL (mm)= 57.565
RUNOFF COEFFICIENT = 0.126

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

ADD HYD (0058) | AREA QPEAK TPEAK R.V.
| 1 + 2 = 3 | (ha) (cms) (hrs) (mm)
ID1= 1 (0204): 0.64 0.008 1.63 7.25
+ ID2= 2 (0057): 4.52 0.070 1.37 6.15
===== ID = 3 (0058): 5.16 0.076 1.40 6.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0201) | Area (ha)= 2.20
ID= 1 DT= 5.0 min | Total Imp(%)= 43.00 Dir. Conn.(%)= 21.00
===== IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.95 1.25
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.00 1.00
Length (m)= 121.11 40.00
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	5.48	1.083	100.14	2.083	8.40	3.08	5.24	
0.167	5.48	1.167	100.14	2.167	8.40	3.17	5.24	
0.250	5.48	1.250	100.14	2.250	8.40	3.25	5.24	
0.333	6.79	1.333	21.21	2.333	7.22	3.33	4.83	
0.417	6.79	1.417	21.21	2.417	7.22	3.42	4.83	
0.500	6.79	1.500	21.21	2.500	7.22	3.50	4.83	
0.583	9.29	1.583	13.37	2.583	6.38	3.58	4.49	
0.667	9.29	1.667	13.37	2.667	6.38	3.67	4.49	
0.750	9.29	1.750	13.37	2.750	6.38	3.75	4.49	
0.833	17.28	1.833	10.20	2.833	5.74	3.83	4.21	
0.917	17.28	1.917	10.20	2.917	5.74	3.92	4.21	
1.000	17.28	2.000	10.20	3.000	5.74	4.00	4.21	

Max.Eff.Inten.(mm/hr)= 100.14 116.25
over (min) 5.00 15.00
Storage Coeff. (min)= 2.86 (i1) 11.05 (i1)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.09

*****TOTALS*
PEAK FLOW (cms)= 0.13 0.24 0.323 (i11)
TIME TO PEAK (hrs)= 1.25 1.33 1.25
RUNOFF VOLUME (mm)= 56.56 23.86 30.73
TOTAL RAINFALL (mm)= 57.56 57.56
RUNOFF COEFFICIENT = 0.98 0.41 0.53

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

- (1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0301)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.1680	0.1590	0.5570
	0.0440	0.2000	0.3520	0.7230
	0.0090	0.3020	1.2920	0.9160
	0.1320	0.4180	2.0620	1.0230

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
2.200	0.323	1.25	30.73

INFLOW : ID= 2 (0201)
OUTFLOW: ID= 1 (0301)

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.00
TIME SHIFT OF PEAK FLOW (min)= -75.00
MAXIMUM STORAGE USED (ha.m.)= 0.0146

ADD HYD (0059)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0301):	NaN	0.000	0.00	NaN
+ ID2= 2 (0058):	5.16	0.076	1.40	6.29
ID = 3 (0059):	NaN	0.076	1.40	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0205)	Area (ha)= 0.03			
ID= 1 DT= 5.0 min	Total Imp(%)= 56.00	Dir. Conn.(%)= 28.00		

SURFACE AREA (ha)= 0.02	IMPERVIOUS (1)= 0.01
Dep. Storage (mm)= 1.00	PERVIOUS (1)= 1.50
Average Slope (%)= 1.00	
Length (m)= 14.14	
Mannings n = 0.013	0.250

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	5.48	1.083	100.14	2.083	8.40	3.08	5.24	
0.167	5.48	1.167	100.14	2.167	8.40	3.17	5.24	
0.250	5.48	1.250	100.14	2.250	8.40	3.25	5.24	
0.333	6.79	1.333	21.21	2.333	7.22	3.33	4.83	
0.417	6.79	1.417	21.21	2.417	7.22	3.42	4.83	
0.500	6.79	1.500	21.21	2.500	7.22	3.50	4.83	
0.583	9.29	1.583	13.37	2.583	6.38	3.58	4.49	
0.667	9.29	1.667	13.37	2.667	6.38	3.67	4.49	
0.750	9.29	1.750	13.37	2.750	6.38	3.75	4.49	
0.833	17.28	1.833	10.20	2.833	5.74	3.83	4.21	
0.917	17.28	1.917	10.20	2.917	5.74	3.92	4.21	
1.000	17.28	2.000	10.20	3.000	5.74	4.00	4.21	

Max.Eff.Inten.(mm/hr)= 100.14 143.70
over (min) 5.00 10.00
Storage Coeff. (min)= 0.79 (i1) 5.75 (i1)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.34 0.15

*****TOTALS*
PEAK FLOW (cms)= 0.00 0.00 0.007 (i11)
TIME TO PEAK (hrs)= 1.25 1.25 1.25
RUNOFF VOLUME (mm)= 56.56 28.04 35.73
TOTAL RAINFALL (mm)= 57.56 57.56 57.56
RUNOFF COEFFICIENT = 0.98 0.49 0.62

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

- (1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0060)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0205):	0.83	0.007	1.25	35.73
+ ID2= 2 (0059):	NaN	0.076	1.40	NaN
ID = 3 (0060):	NaN	0.079	1.37	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (2071)	Area (ha)= 0.52	Curve Number (CN)= 66.3		
ID= 1 DT= 5.0 min	Ia (mm)= 4.87	# of Linear Res. (N)= 3.00		
	U.H. Tp(hrs)= 0.19			

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	5.48	1.083	100.14	2.083	8.40	3.08	5.24	
0.167	5.48	1.167	100.14	2.167	8.40	3.17	5.24	
0.250	5.48	1.250	100.14	2.250	8.40	3.25	5.24	
0.333	6.79	1.333	21.21	2.333	7.22	3.33	4.83	
0.417	6.79	1.417	21.21	2.417	7.22	3.42	4.83	
0.500	6.79	1.500	21.21	2.500	7.22	3.50	4.83	
0.583	9.29	1.583	13.37	2.583	6.38	3.58	4.49	
0.667	9.29	1.667	13.37	2.667	6.38	3.67	4.49	
0.750	9.29	1.750	13.37	2.750	6.38	3.75	4.49	
0.833	17.28	1.833	10.20	2.833	5.74	3.83	4.21	
0.917	17.28	1.917	10.20	2.917	5.74	3.92	4.21	
1.000	17.28	2.000	10.20	3.000	5.74	4.00	4.21	

Unit Hyd Qpeak (cms)= 0.105

PEAK FLOW (cms)= 0.022 (1)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 15.237
TOTAL RAINFALL (mm)= 57.565
RUNOFF COEFFICIENT = 0.265

(1) 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 (2071):	0.52	0.022	1.33	15.24
+ ID2= 2 (0060):	NaN	0.079	1.37	NaN
ID = 3 (0061):	NaN	0.101	1.37	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (2072)	Area (ha)= 0.34	Curve Number (CN)= 66.3		
ID= 1 DT= 5.0 min	Ia (mm)= 4.87	# of Linear Res. (N)= 3.00		
	U.H. Tp(hrs)= 0.19			

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	5.48	1.083	100.14	2.083	8.40	3.08	5.24	
0.167	5.48	1.167	100.14	2.167	8.40	3.17	5.24	
0.250	5.48	1.250	100.14	2.250	8.40	3.25	5.24	
0.333	6.79	1.333	21.21	2.333	7.22	3.33	4.83	
0.417	6.79	1.417	21.21	2.417	7.22	3.42	4.83	
0.500	6.79	1.500	21.21	2.500	7.22	3.50	4.83	
0.583	9.29	1.583	13.37	2.583	6.38	3.58	4.49	
0.667	9.29	1.667	13.37	2.667	6.38	3.67	4.49	
0.750	9.29	1.750	13.37	2.750	6.38	3.75	4.49	
0.833	17.28	1.833	10.20	2.833	5.74	3.83	4.21	
0.917	17.28	1.917	10.20	2.917	5.74	3.92	4.21	
1.000	17.28	2.000	10.20	3.000	5.74	4.00	4.21	

Unit Hyd Qpeak (cms)= 0.068

PEAK FLOW (cms)= 0.014 (i)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 15.237
TOTAL RAINFALL (mm)= 57.565
RUNOFF COEFFICIENT = 0.265

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

CALIB
STANDHYD (0206)
ID= 1 DT= 5.0 min

Area (ha)= 0.73
Total Imp(%)= 32.00
Dir. Conn.(%)= 13.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.23 0.50
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.00 2.00
Length (m)= 69.76 40.00
Manning's 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 5.48 1.083 100.14 2.083 8.40 3.08 5.24
0.167 5.48 1.167 100.14 2.167 8.40 3.17 5.24
0.250 5.48 1.250 100.14 2.250 8.40 3.25 5.24
0.333 6.79 1.333 21.21 2.333 7.22 3.33 4.83
0.417 6.79 1.417 21.21 2.417 7.22 3.42 4.83
0.500 6.79 1.500 21.21 2.500 7.22 3.50 4.83
0.583 9.29 1.583 13.37 2.583 6.38 3.58 4.49
0.667 9.29 1.667 13.37 2.667 6.38 3.67 4.49
0.750 9.29 1.750 13.37 2.750 6.38 3.75 4.49
0.833 17.28 1.833 10.20 2.833 5.74 3.83 4.21
0.917 17.28 1.917 10.20 2.917 5.74 3.92 4.21
1.000 17.28 2.000 10.20 3.000 5.74 4.00 4.21

Max.Eff.Inten.(mm/hr)= 100.14 104.47
over (min) 5.00 10.00
Storage Coeff. (min)= 2.06 (ii) 8.99 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.12

TOTALS
PEAK FLOW (cms)= 0.03 0.10 0.125 (iii)
TIME TO PEAK (hrs)= 1.25 1.25 1.25
RUNOFF VOLUME (mm)= 56.56 21.84 26.35
TOTAL RAINFALL (mm)= 57.56 57.56 57.56
RUNOFF COEFFICIENT 0.58 0.38 0.46

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0206): 0.73 0.125 1.25 26.35
+ ID2= 2 (2072): 0.34 0.014 1.33 15.24
=====

ID = 3 (0062): 1.07 0.137 1.25 22.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0401)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0061): NaN 0.101 1.37 NaN
+ ID2= 2 (0062): 1.07 0.137 1.25 22.82
=====

ID = 3 (0401): NaN 0.215 1.30 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.0.2006)
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 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 H M O O
O O T T H H Y Y M M O O
000 T T H H Y Y M M 000

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

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Output filename: C:\Users\ASchoof\AppData\Local\Civica\VMS\8194ef53-adad-4f15-90f7-c4eaf4675c3\9564b7c2-4102-435e-b3e8-7a7d44503e51\scen
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DATE: 02-08-2021 TIME: 10:22:44

USER:

COMMENTS: CHI 50 year (POST)

** SIMULATION : Run 06 **

CHICAGO STORM IDF curve parameters: A= 738.312
Ptotal= 63.93 mm B= 0.000
C= 0.699

used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 15.00 min
Time to peak ratio = 0.33

TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.25 6.09 1.25 111.21 2.25 9.33 3.25 5.82
0.50 7.54 1.50 23.55 2.50 8.02 3.50 5.36
0.75 10.32 1.75 14.85 2.75 7.08 3.75 4.99
1.00 19.19 2.00 11.32 3.00 6.37 4.00 4.67

CALIB
NASHYD (0203)
ID= 1 DT= 2.0 min

Area (ha)= 2.89
Ia (mm)= 8.98
U.H. Tp(hrs)= 0.18

Curve Number (CN)= 42.9
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.033 6.09 1.033 111.21 2.033 9.33 3.03 5.82
0.067 6.09 1.067 111.21 2.067 9.33 3.07 5.82
0.100 6.09 1.100 111.21 2.100 9.33 3.10 5.82
0.133 6.09 1.133 111.21 2.133 9.33 3.13 5.82
0.167 6.09 1.167 111.21 2.167 9.33 3.17 5.82
0.200 6.09 1.200 111.21 2.200 9.33 3.20 5.82
0.233 6.09 1.233 111.21 2.233 9.33 3.23 5.82
0.267 6.82 1.267 67.38 2.267 8.67 3.27 5.59
0.300 7.54 1.300 23.55 2.300 8.02 3.30 5.36
0.333 7.54 1.333 23.55 2.333 8.02 3.33 5.36
0.367 7.54 1.367 23.55 2.367 8.02 3.37 5.36
0.400 7.54 1.400 23.55 2.400 8.02 3.40 5.36
0.433 7.54 1.433 23.55 2.433 8.02 3.43 5.36
0.467 7.54 1.467 23.55 2.467 8.02 3.47 5.36
0.500 7.54 1.500 23.55 2.500 8.02 3.50 5.36
0.533 10.32 1.533 14.85 2.533 7.08 3.53 4.99
0.567 10.32 1.567 14.85 2.567 7.08 3.57 4.99
0.600 10.32 1.600 14.85 2.600 7.08 3.60 4.99
0.633 10.32 1.633 14.85 2.633 7.08 3.63 4.99
0.667 10.32 1.667 14.85 2.667 7.08 3.67 4.99
0.700 10.32 1.700 14.85 2.700 7.08 3.70 4.99
0.733 10.32 1.733 14.85 2.733 7.08 3.73 4.99
0.767 14.75 1.767 13.09 2.767 6.73 3.77 4.83
0.800 19.19 1.800 11.32 2.800 6.37 3.80 4.67
0.833 19.19 1.833 11.32 2.833 6.37 3.83 4.67
0.867 19.19 1.867 11.32 2.867 6.37 3.87 4.67
0.900 19.19 1.900 11.32 2.900 6.37 3.90 4.67
0.933 19.19 1.933 11.32 2.933 6.37 3.93 4.67
0.967 19.19 1.967 11.32 2.967 6.37 3.97 4.67
1.000 19.19 2.000 11.32 3.000 6.37 4.00 4.67

Unit Hyd Qpeak (cms)= 0.613

PEAK FLOW (cms)= 0.057 (i)
TIME TO PEAK (hrs)= 1.367
RUNOFF VOLUME (mm)= 7.689
TOTAL RAINFALL (mm)= 63.927
RUNOFF COEFFICIENT = 0.120

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

CALIB
NASHYD (0202)
ID= 1 DT= 2.0 min

Area (ha)= 1.63
Ia (mm)= 9.62
U.H. Tp(hrs)= 0.17

Curve Number (CN)= 44.1
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
-----	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0206):	0.73	0.146	1.25	31.85
+ ID2= 2 (2072):	0.34	0.018	1.33	18.49
=====				
ID = 3 (0062):	1.07	0.161	1.25	27.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0401)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0061):	NaN	0.128	1.37	NaN
+ ID2= 2 (0062):	1.07	0.161	1.25	27.60
=====				
ID = 3 (0401):	NaN	0.263	1.33	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V	V	I	SSSSS	U	U	A	L	(v 6.0.2006)
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
V	V	I	SSSSS	UUUUU	A	A	LLLLL	

000	TTTT	TTTT	H	H	Y	Y	M	M	000	TH
0	O	T	T	H	H	Y	Y	MM	MM	O
0	O	T	T	H	H	Y	Y	M	M	O
000	T	T	H	H	Y	Y	M	M	000	

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

Input File name: C:\Program Files (x86)\Visual OTHYMO 6.0\VO2\voin.dat
Output File name: C:\Users\ASchoof\AppData\Local\Civica\VHS\B194ef53-adad-4f15-90f7-c4eafb4675c3\0a81e16a-433a-4b48-809c-8d4ca7d70f6\scen
Summary File name: C:\Users\ASchoof\AppData\Local\Civica\VHS\B194ef53-adad-4f15-90f7-c4eafb4675c3\0a81e16a-433a-4b48-809c-8d4ca7d70f6\scen

DATE: 02-08-2021 TIME: 10:22:43

USER:

COMMENTS: CHI 100 year (POST)

** SIMULATION : Run 07 **

CHICAGO STORM	IDF curve parameters: A= 811.794
Ptotal= 70.29 mm	B= 0.000
-----	C= 0.699

used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 15.00 min
Time to peak ratio = 0.33

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.25	6.69	1.25	122.28		2.25	10.26		3.25	6.39
0.50	8.29	1.50	25.89		2.50	8.82		3.50	5.90
0.75	11.34	1.75	16.33		2.75	7.79		3.75	5.48
1.00	21.10	2.00	12.45		3.00	7.01		4.00	5.14

CALIB				
NASHYD (0203)	Area	(ha)=	2.89	Curve Number (CN)= 42.9
ID= 1 DT= 2.0 min	Ia	(mm)=	8.98	# of Linear Res.(N)= 3.00
-----	U.H. Tp(hrs)=	0.18		

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	6.69	1.033	122.28	2.033	10.26			3.03	6.39
0.067	6.69	1.067	122.28	2.067	10.26			3.07	6.39
0.100	6.69	1.100	122.28	2.100	10.26			3.10	6.39
0.133	6.69	1.133	122.28	2.133	10.26			3.13	6.39
0.167	6.69	1.167	122.28	2.167	10.26			3.17	6.39
0.200	6.69	1.200	122.28	2.200	10.26			3.20	6.39
0.233	6.69	1.233	122.28	2.233	10.26			3.23	6.39
0.267	7.49	1.267	74.09	2.267	9.54			3.27	6.15
0.300	8.29	1.300	25.89	2.300	8.82			3.30	5.90
0.333	8.29	1.333	25.89	2.333	8.82			3.33	5.90
0.367	8.29	1.367	25.89	2.367	8.82			3.37	5.90
0.400	8.29	1.400	25.89	2.400	8.82			3.40	5.90
0.433	8.29	1.433	25.89	2.433	8.82			3.43	5.90

0.467	8.29	1.467	25.89		2.467	8.82		3.47	5.90
0.500	8.29	1.500	25.89		2.500	8.82		3.50	5.90
0.533	11.34	1.533	16.33		2.533	7.79		3.53	5.48
0.567	11.34	1.567	16.33		2.567	7.79		3.57	5.48
0.600	11.34	1.600	16.33		2.600	7.79		3.60	5.48
0.633	11.34	1.633	16.33		2.633	7.79		3.63	5.48
0.667	11.34	1.667	16.33		2.667	7.79		3.67	5.48
0.700	11.34	1.700	16.33		2.700	7.79		3.70	5.48
0.733	11.34	1.733	16.33		2.733	7.79		3.73	5.48
0.767	16.22	1.767	14.39		2.767	7.40		3.77	5.31
0.800	21.10	1.800	12.45		2.800	7.01		3.80	5.14
0.833	21.10	1.833	12.45		2.833	7.01		3.83	5.14
0.867	21.10	1.867	12.45		2.867	7.01		3.87	5.14
0.900	21.10	1.900	12.45		2.900	7.01		3.90	5.14
0.933	21.10	1.933	12.45		2.933	7.01		3.93	5.14
0.967	21.10	1.967	12.45		2.967	7.01		3.97	5.14
1.000	21.10	2.000	12.45		3.000	7.01		4.00	5.14

Unit Hyd Qpeak (cms)= 0.613

PEAK FLOW (cms)= 0.071 (1)
TIME TO PEAK (hrs)= 1.367
RUNOFF VOLUME (mm)= 9.421
TOTAL RAINFALL (mm)= 70.290
RUNOFF COEFFICIENT = 0.134

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

CALIB				
NASHYD (0202)	Area	(ha)=	1.63	Curve Number (CN)= 44.1
ID= 1 DT= 2.0 min	Ia	(mm)=	9.62	# of Linear Res.(N)= 3.00
-----	U.H. Tp(hrs)=	0.17		

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TRANSFORMED HYETROGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	6.69	1.033	122.28	2.033	10.26	3.03	6.39	4.03	6.39
0.067	6.69	1.067	122.28	2.067	10.26	3.07	6.39	4.07	6.39
0.100	6.69	1.100	122.28	2.100	10.26	3.10	6.39	4.10	6.39
0.133	6.69	1.133	122.28	2.133	10.26	3.13	6.39	4.13	6.39
0.167	6.69	1.167	122.28	2.167	10.26	3.17	6.39	4.17	6.39
0.200	6.69	1.200	122.28	2.200	10.26	3.20	6.39	4.20	6.39
0.233	6.69	1.233	122.28	2.233	10.26	3.23	6.39	4.23	6.39
0.267	7.49	1.267	74.09	2.267	9.54	3.27	6.15	4.27	6.15
0.300	8.29	1.300	25.89	2.300	8.82	3.30	5.90	4.30	5.90
0.333	8.29	1.333	25.89	2.333	8.82	3.33	5.90	4.33	5.90
0.367	8.29	1.367	25.89	2.367	8.82	3.37	5.90	4.37	5.90
0.400	8.29	1.400	25.89	2.400	8.82	3.40	5.90	4.40	5.90
0.433	8.29	1.433	25.89	2.433	8.82	3.43	5.90	4.43	5.90
0.467	8.29	1.467	25.89	2.467	8.82	3.47	5.90	4.47	5.90
0.500	8.29	1.500	25.89	2.500	8.82	3.50	5.90	4.50	5.90
0.533	11.34	1.533	16.33	2.533	7.79	3.53	5.48	4.53	5.48
0.567	11.34	1.567	16.33	2.567	7.79	3.57	5.48	4.57	5.48
0.600	11.34	1.600	16.33	2.600	7.79	3.60	5.48	4.60	5.48
0.633	11.34	1.633	16.33	2.633	7.79	3.63	5.48	4.63	5.48
0.667	11.34	1.667	16.33	2.667	7.79	3.67	5.48	4.67	5.48
0.700	11.34	1.700	16.33	2.700	7.79	3.70	5.48	4.70	5.48
0.733	11.34	1.733	16.33	2.733	7.79	3.73	5.48	4.73	5.48
0.767	16.22	1.767	14.39	2.767	7.40	3.77	5.31	4.77	5.31
0.800	21.10	1.800	12.45	2.800	7.01	3.80	5.14	4.80	5.14
0.833	21.10	1.833	12.45	2.833	7.01	3.83	5.14	4.83	5.14
0.867	21.10	1.867	12.45	2.867	7.01	3.87	5.14	4.87	5.14
0.900	21.10	1.900	12.45	2.900	7.01	3.90	5.14	4.90	5.14
0.933	21.10	1.933	12.45	2.933	7.01	3.93	5.14	4.93	5.14
0.967	21.10	1.967	12.45	2.967	7.01	3.97	5.14	4.97	5.14
1.000	21.10	2.000	12.45	3.000	7.01	4.00	5.14	5.00	5.14

Unit Hyd Qpeak (cms)= 0.366

PEAK FLOW (cms)= 0.042 (1)
TIME TO PEAK (hrs)= 1.367
RUNOFF VOLUME (mm)= 9.627
TOTAL RAINFALL (mm)= 70.290
RUNOFF COEFFICIENT = 0.137

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

ADD HYD (0057)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0202):	1.63	0.042	1.37	9.63
+ ID2= 2 (0203):	2.89	0.071	1.37	9.42
=====				
ID = 3 (0057):	4.52	0.113	1.37	9.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0204)	Area	(ha)=	0.64	Curve Number (CN)= 48.1
ID= 1 DT= 2.0 min	Ia	(mm)=	9.20	# of Linear Res.(N)= 3.00
-----	U.H. Tp(hrs)=	0.33		

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	6.69	1.033	122.28	2.033	10.26	3.03	6.39
0.067	6.69	1.067	122.28	2.067	10.26	3.07	6.39
0.100	6.69	1.100	122.28	2.100	10.26	3.10	6.39
0.133	6.69	1.133	122.28	2.133	10.26	3.13	6.39
0.167	6.69	1.167	122.28	2.167	10.26	3.17	6.39
0.200	6.69	1.200	122.28	2.200	10.26	3.20	6.39
0.233	6.69	1.233	122.28	2.233	10.26	3.23	6.39
0.267	7.49	1.267	74.09	2.267	9.54	3.27	6.15
0.300	8.29	1.300	25.89	2.300	8.82	3.30	5.90
0.333	8.29	1.333	25.89	2.333	8.82	3.33	5.90
0.367	8.29	1.367	25.89	2.367	8.82	3.37	5.90
0.400	8.29	1.400	25.89	2.400	8.82	3.40	5.90
0.433	8.29	1.433	25.89	2.433	8.82	3.43	5.90
0.467	8.29	1.467	25.89	2.467	8.82	3.47	5.90
0.500	8.29	1.500	25.89	2.500	8.82	3.50	5.90
0.533	11.34	1.533	16.33	2.533	7.79	3.53	5.48
0.567	11.34	1.567	16.33	2.567	7.79	3.57	5.48
0.600	11.34	1.600	16.33	2.600	7.79	3.60	5.48
0.633	11.34	1.633	16.33	2.633	7.79	3.63	5.48
0.667	11.34	1.667	16.33	2.667	7.79	3.67	5.48
0.700	11.34	1.700	16.33	2.700	7.79	3.70	5.48
0.733	11.34	1.733	16.33	2.733	7.79	3.73	5.48
0.767	16.22	1.767	14.39	2.767	7.40	3.77	5.31
0.800	21.10	1.800	12.45	2.800	7.01	3.80	5.14
0.833	21.10	1.833	12.45	2.833	7.01	3.83	5.14
0.867	21.10	1.867	12.45	2.867	7.01	3.87	5.14
0.900	21.10	1.900	12.45	2.900	7.01	3.90	5.14
0.933	21.10	1.933	12.45	2.933	7.01	3.93	5.14
0.967	21.10	1.967	12.45	2.967	7.01	3.97	5.14
1.000	21.10	2.000	12.45	3.000	7.01	4.00	5.14

Unit Hyd Qpeak (cms) = 0.074

PEAK FLOW (cms) = 0.013 (1)
TIME TO PEAK (hrs) = 1.600
RUNOFF VOLUME (mm) = 11.126
TOTAL RAINFALL (mm) = 70.290
RUNOFF COEFFICIENT = 0.158

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

ADD HYD (0058)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):	0.64	0.013	1.60	11.13
+ ID2= 2 (0057):	4.52	0.113	1.37	9.49
=====				
ID = 3 (0058):	5.16	0.122	1.40	9.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0201)				
ID= 1 DT= 5.0 min				
	Area	(ha)= 2.20		
	Total Imp(%)=	43.00	Dir. Conn.(%)=	21.00
	IMPERVIOUS		PERVIOUS (1)	
Surface Area	(ha)=	0.05	1.25	
Dep. Storage	(mm)=	1.00	1.50	
Average Slope	(%)=	1.00	1.00	
Length	(n)=	121.11	40.00	
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	6.69	1.083	122.28	2.083	10.26	3.08	6.39
0.167	6.69	1.167	122.28	2.167	10.26	3.17	6.39
0.250	6.69	1.250	122.28	2.250	10.26	3.25	6.39
0.333	8.29	1.333	25.89	2.333	8.82	3.33	5.90
0.417	8.29	1.417	25.89	2.417	8.82	3.42	5.90
0.500	8.29	1.500	25.89	2.500	8.82	3.50	5.90
0.583	11.34	1.583	16.33	2.583	7.79	3.58	5.48
0.667	11.34	1.667	16.33	2.667	7.79	3.67	5.48
0.750	11.34	1.750	16.33	2.750	7.79	3.75	5.48
0.833	21.10	1.833	12.45	2.833	7.01	3.83	5.14
0.917	21.10	1.917	12.45	2.917	7.01	3.92	5.14
1.000	21.10	2.000	12.45	3.000	7.01	4.00	5.14
Max.Eff.Inten.(mm/hr)=	122.28	149.72					
over (min)	5.00	15.00					
Storage Coeff. (min)=	2.64 (11)	10.04 (11)					
Unit Hyd. Tpeak (min)=	5.00	15.00					
Unit Hyd. peak (cms)=	0.29	0.10					
PEAK FLOW (cms)=	0.16	0.33	*TOTALS*				
TIME TO PEAK (hrs)=	1.25	1.33	0.432 (111)				
RUNOFF VOLUME (mm)=	69.29	35.26	42.40				
TOTAL RAINFALL (mm)=	70.29	70.29	70.29				
RUNOFF COEFFICIENT =	0.99	0.50	0.60				

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

(1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00

Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0301)				
IN= 2 ---> OUT= 1				
DT= 5.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.1680	0.1590	0.5570
	0.0040	0.2000	0.3520	0.7230
	0.0990	0.3020	1.2920	0.9160
	0.1320	0.4180	2.0620	1.0230
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0201)	2.200	0.432	1.25	42.40
OUTFLOW: ID= 1 (0301)	NaN	0.000	0.00	NaN

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.00
TIME SHIFT OF PEAK FLOW (min)= -75.00
MAXIMUM STORAGE USED (ha.m.)= 0.0189

ADD HYD (0059)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0301):	NaN	0.000	0.00	NaN
+ ID2= 2 (0058):	5.16	0.122	1.40	9.70
=====				
ID = 3 (0059):	NaN	0.122	1.40	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0205)				
ID= 1 DT= 5.0 min				
	Area	(ha)= 0.03		
	Total Imp(%)=	56.00	Dir. Conn.(%)=	28.00
	IMPERVIOUS		PERVIOUS (1)	
Surface Area	(ha)=	0.02	0.01	
Dep. Storage	(mm)=	1.00	1.50	
Average Slope	(%)=	1.00	1.00	
Length	(n)=	14.14	20.00	
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	6.69	1.083	122.28	2.083	10.26	3.08	6.39
0.167	6.69	1.167	122.28	2.167	10.26	3.17	6.39
0.250	6.69	1.250	122.28	2.250	10.26	3.25	6.39
0.333	8.29	1.333	25.89	2.333	8.82	3.33	5.90
0.417	8.29	1.417	25.89	2.417	8.82	3.42	5.90
0.500	8.29	1.500	25.89	2.500	8.82	3.50	5.90
0.583	11.34	1.583	16.33	2.583	7.79	3.58	5.48
0.667	11.34	1.667	16.33	2.667	7.79	3.67	5.48
0.750	11.34	1.750	16.33	2.750	7.79	3.75	5.48
0.833	21.10	1.833	12.45	2.833	7.01	3.83	5.14
0.917	21.10	1.917	12.45	2.917	7.01	3.92	5.14
1.000	21.10	2.000	12.45	3.000	7.01	4.00	5.14

Max.Eff.Inten.(mm/hr)= 122.28 181.70
over (min)= 5.00 10.00
Storage Coeff. (min)= 0.73 (11) 5.24 (11)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.34 0.16

PEAK FLOW (cms)= 0.00 0.01 0.009 (111)
TIME TO PEAK (hrs)= 1.25 1.25 1.25
RUNOFF VOLUME (mm)= 69.29 40.28 48.36
TOTAL RAINFALL (mm)= 70.29 70.29 70.29
RUNOFF COEFFICIENT = 0.99 0.57 0.69

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

(1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0060)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0205):	0.03	0.009	1.25	48.36
+ ID2= 2 (0059):	NaN	0.122	1.40	NaN
=====				
ID = 3 (0060):	NaN	0.127	1.37	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (2871)
ID= 1 DT= 5.0 min
Area (ha)= 0.52 Curve Number (CN)= 66.3
Imp(%)= 4.87 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.19

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

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.083	6.69	1.083	122.28	2.083	10.26	3.08	6.39				
0.167	6.69	1.167	122.28	2.167	10.26	3.17	6.39				
0.250	6.69	1.250	122.28	2.250	10.26	3.25	6.39				
0.333	8.29	1.333	25.89	2.333	8.82	3.33	5.90				
0.417	8.29	1.417	25.89	2.417	8.82	3.42	5.90				
0.500	8.29	1.500	25.89	2.500	8.82	3.50	5.90				
0.583	11.34	1.583	16.33	2.583	7.79	3.58	5.48				
0.667	11.34	1.667	16.33	2.667	7.79	3.67	5.48				
0.750	11.34	1.750	16.33	2.750	7.79	3.75	5.48				
0.833	21.10	1.833	12.45	2.833	7.01	3.83	5.14				
0.917	21.10	1.917	12.45	2.917	7.01	3.92	5.14				
1.000	21.10	2.000	12.45	3.000	7.01	4.00	5.14				

Unit Hyd Qpeak (cms)= 0.105

PEAK FLOW (cms)= 0.033 (i)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 21.949
TOTAL RAINFALL (mm)= 70.290
RUNOFF COEFFICIENT = 0.312

(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 (2871): 0.52 0.033 1.33 21.95
+ ID2= 2 (0060): NaN 0.127 1.37 NaN
ID = 3 (0061): NaN 0.159 1.37 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (2872)
ID= 1 DT= 5.0 min
Area (ha)= 0.34 Curve Number (CN)= 66.3
Imp(%)= 4.87 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.19

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

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.083	6.69	1.083	122.28	2.083	10.26	3.08	6.39				
0.167	6.69	1.167	122.28	2.167	10.26	3.17	6.39				
0.250	6.69	1.250	122.28	2.250	10.26	3.25	6.39				
0.333	8.29	1.333	25.89	2.333	8.82	3.33	5.90				
0.417	8.29	1.417	25.89	2.417	8.82	3.42	5.90				
0.500	8.29	1.500	25.89	2.500	8.82	3.50	5.90				
0.583	11.34	1.583	16.33	2.583	7.79	3.58	5.48				
0.667	11.34	1.667	16.33	2.667	7.79	3.67	5.48				
0.750	11.34	1.750	16.33	2.750	7.79	3.75	5.48				
0.833	21.10	1.833	12.45	2.833	7.01	3.83	5.14				
0.917	21.10	1.917	12.45	2.917	7.01	3.92	5.14				
1.000	21.10	2.000	12.45	3.000	7.01	4.00	5.14				

Unit Hyd Qpeak (cms)= 0.068

PEAK FLOW (cms)= 0.021 (i)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 21.948
TOTAL RAINFALL (mm)= 70.290
RUNOFF COEFFICIENT = 0.312

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

CALIB
STANDHYD (0206)
ID= 1 DT= 5.0 min
Area (ha)= 0.73
Total Imp(%)= 32.00 Dir. Conn.(%)= 13.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.23 0.50
Dep. Storage (mm)= 1.00 1.50
Average Slope (S)= 1.00 2.00
Length (n)= 69.76 40.00
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	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs
0.083	6.69	1.083	122.28	2.083	10.26	3.08	6.39				
0.167	6.69	1.167	122.28	2.167	10.26	3.17	6.39				
0.250	6.69	1.250	122.28	2.250	10.26	3.25	6.39				

0.333	8.29	1.333	25.89	2.333	8.82	3.33	5.90
0.417	8.29	1.417	25.89	2.417	8.82	3.42	5.90
0.500	8.29	1.500	25.89	2.500	8.82	3.50	5.90
0.583	11.34	1.583	16.33	2.583	7.79	3.58	5.48
0.667	11.34	1.667	16.33	2.667	7.79	3.67	5.48
0.750	11.34	1.750	16.33	2.750	7.79	3.75	5.48
0.833	21.10	1.833	12.45	2.833	7.01	3.83	5.14
0.917	21.10	1.917	12.45	2.917	7.01	3.92	5.14
1.000	21.10	2.000	12.45	3.000	7.01	4.00	5.14

Max.Eff.Inten.(mm/hr)= 122.28 135.68
over (min)= 5.00 10.00
Storage Coeff. (min)= 1.98 (ii) 8.15 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.13
PEAK FLOW (cms)= 0.03 0.14 *TOTALS*
TIME TO PEAK (hrs)= 1.25 1.25 0.168 (iii)
RUNOFF VOLUME (mm)= 69.29 32.82 37.56
TOTAL RAINFALL (mm)= 70.29 70.29 70.29
RUNOFF COEFFICIENT = 0.99 0.47 0.53

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

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20% YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0206): 0.73 0.168 1.25 37.56
+ ID2= 2 (2872): 0.34 0.021 1.33 21.95
ID = 3 (0062): 1.07 0.186 1.25 32.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0401)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0061): NaN 0.159 1.37 NaN
+ ID2= 2 (0062): 1.07 0.186 1.25 32.60
ID = 3 (0401): NaN 0.315 1.33 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.0.2006)
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 UUUU A A LLLLL
000 TTTT TTTT H H Y V M M 000 TM
O O T T H H Y V M M 0 O
O O T T H H Y V M M O O
000 T T H H Y V 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 OTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eaf64675c3\3d055f87-6b72-41dc-b942-ff51592d0b82\scen
Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eaf64675c3\3d055f87-6b72-41dc-b942-ff51592d0b82\scen

DATE: 02-08-2021 TIME: 10:22:43

USER:

COMMENTS: Regional (POST)

** SIMULATION : Run 08 **

READ STORM File name: C:\Users\ASchoof\AppData\Local\Temp\809933a8-a1c4-42d4-bd01-632d4e7443c3\4c311f83
Ptotal=193.00 mm Comments: TIMMINS REGIONAL 12 HOUR DURATION STORM


```
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 20.00 | 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 52.10
over (min) = 5.00 20.00
Storage Coeff. (min)= 4.02 (11) 15.30 (11)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.24 0.07

*TOTALS*
PEAK FLOW (cms)= 0.06 0.18 0.232 (111)
TIME TO PEAK (hrs)= 6.52 7.00 7.00
RUNOFF VOLUME (mm)= 192.00 115.25 131.36
TOTAL RAINFALL (mm)= 193.00 193.00 193.00
RUNOFF COEFFICIENT = 0.99 0.60 0.68
```

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

(1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
RESERVOIR( 0301) OVERFLOW IS OFF
IN= 2--> OUT= 1
DT= 5.0 min

OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.1680 | 0.1590 0.5570
0.0440 0.2080 | 0.3520 0.7230
0.0990 0.3020 | 1.2920 0.9160
0.1320 0.4180 | 2.0620 1.0230

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 ( 0201) 2.200 0.232 7.00 131.36
OUTFLOW: ID= 1 ( 0301) 2.200 0.052 11.00 54.90
```

PEAK FLOW REDUCTION [Qout/Qin](%)= 22.58
TIME SHIFT OF PEAK FLOW (min)=240.00
MAXIMUM STORAGE USED (ha.m.)= 0.1898

```
ADD HYD ( 0059)
1 + 2 = 3

ID1= 1 ( 0301): 2.20 0.052 11.00 54.90
+ ID2= 2 ( 0058): 5.16 0.247 7.03 66.53
=====
ID = 3 ( 0059): 7.36 0.247 7.03 63.06
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
CALIB
STANDHYD ( 0205) Area (ha)= 0.03
ID= 1 DT= 5.0 min Total Imp(%)= 56.00 Dir. Conn.(%)= 28.00

IMPERVIOUS PERVIOUS (1)
Surface Area (ha)= 0.02 0.01
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.00 1.00
Length (m)= 14.14 20.00
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 62.86
over (min) = 5.00 10.00
Storage Coeff. (min)= 1.11 (11) 8.01 (11)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.34 0.13
PEAK FLOW (cms)= 0.00 0.00 0.003 (111)
TIME TO PEAK (hrs)= 6.25 7.00 7.00
RUNOFF VOLUME (mm)= 192.00 125.73 144.09
TOTAL RAINFALL (mm)= 193.00 193.00 193.00
RUNOFF COEFFICIENT = 0.99 0.65 0.75

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

(1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
ADD HYD ( 0060)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 ( 0205): 0.03 0.003 7.00 144.09
+ ID2= 2 ( 0059): 7.36 0.247 7.03 63.06
=====
ID = 3 ( 0060): 7.39 0.250 7.00 63.38
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
CALIB
NASHYD ( 2071) Area (ha)= 0.52 Curve Number (CN)= 66.3
ID= 1 DT= 5.0 min Ia (mm)= 4.87 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.19
```

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

```
----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 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)= 0.105

PEAK FLOW (cms)= 0.042 (1)
TIME TO PEAK (hrs)= 7.000
RUNOFF VOLUME (mm)= 111.306
TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.577

(1) 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 (2071):	0.52	0.042	7.00	111.31
+ ID2= 2 (0060):	7.39	0.250	7.00	66.53
=====				
ID = 3 (0061):	7.91	0.292	7.00	66.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.34	Curve Number (CN)=	66.3
NASHYD (2072)	Ia	(mm)=	4.87	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=		0.19		

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

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	15.00	3.083	3.00	6.083	43.00
0.167	15.00	3.167	3.00	6.167	43.00
0.250	15.00	3.250	3.00	6.250	43.00
0.333	15.00	3.333	3.00	6.333	43.00
0.417	15.00	3.417	3.00	6.417	43.00
0.500	15.00	3.500	3.00	6.500	43.00
0.583	15.00	3.583	3.00	6.583	43.00
0.667	15.00	3.667	3.00	6.667	43.00
0.750	15.00	3.750	3.00	6.750	43.00
0.833	15.00	3.833	3.00	6.833	43.00
0.917	15.00	3.917	3.00	6.917	43.00
1.000	15.00	4.000	3.00	7.000	43.00
1.083	20.00	4.083	5.00	7.083	20.00
1.167	20.00	4.167	5.00	7.167	20.00
1.250	20.00	4.250	5.00	7.250	20.00
1.333	20.00	4.333	5.00	7.333	20.00
1.417	20.00	4.417	5.00	7.417	20.00
1.500	20.00	4.500	5.00	7.500	20.00
1.583	20.00	4.583	5.00	7.583	20.00
1.667	20.00	4.667	5.00	7.667	20.00
1.750	20.00	4.750	5.00	7.750	20.00
1.833	20.00	4.833	5.00	7.833	20.00
1.917	20.00	4.917	5.00	7.917	20.00
2.000	20.00	5.000	5.00	8.000	20.00
2.083	10.00	5.083	20.00	8.083	23.00
2.167	10.00	5.167	20.00	8.167	23.00
2.250	10.00	5.250	20.00	8.250	23.00
2.333	10.00	5.333	20.00	8.333	23.00
2.417	10.00	5.417	20.00	8.417	23.00
2.500	10.00	5.500	20.00	8.500	23.00
2.583	10.00	5.583	20.00	8.583	23.00
2.667	10.00	5.667	20.00	8.667	23.00
2.750	10.00	5.750	20.00	8.750	23.00
2.833	10.00	5.833	20.00	8.833	23.00
2.917	10.00	5.917	20.00	8.917	23.00
3.000	10.00	6.000	20.00	9.000	23.00

Unit Hyd Qpeak (cms)= 0.068

PEAK FLOW (cms)= 0.028 (1)
TIME TO PEAK (hrs)= 7.000
RUNOFF VOLUME (mm)= 111.305
TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.577

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

CALIB	Area	(ha)=	0.73
STANDHYD (0206)	Total Imp(%)=	32.00	Dir. Conn.(%)= 13.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (1)
Surface Area	(ha)= 0.23	0.50
Dep. Storage	(mm)= 1.00	1.50
Average Slope	(%)= 1.00	2.00
Length	(m)= 69.76	40.00
Mannings n	= 0.013	0.250

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

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	15.00	3.083	3.00	6.083	43.00
0.167	15.00	3.167	3.00	6.167	43.00
0.250	15.00	3.250	3.00	6.250	43.00
0.333	15.00	3.333	3.00	6.333	43.00
0.417	15.00	3.417	3.00	6.417	43.00
0.500	15.00	3.500	3.00	6.500	43.00
0.583	15.00	3.583	3.00	6.583	43.00
0.667	15.00	3.667	3.00	6.667	43.00
0.750	15.00	3.750	3.00	6.750	43.00
0.833	15.00	3.833	3.00	6.833	43.00
0.917	15.00	3.917	3.00	6.917	43.00
1.000	15.00	4.000	3.00	7.000	43.00
1.083	20.00	4.083	5.00	7.083	20.00
1.167	20.00	4.167	5.00	7.167	20.00
1.250	20.00	4.250	5.00	7.250	20.00
1.333	20.00	4.333	5.00	7.333	20.00
1.417	20.00	4.417	5.00	7.417	20.00
1.500	20.00	4.500	5.00	7.500	20.00
1.583	20.00	4.583	5.00	7.583	20.00
1.667	20.00	4.667	5.00	7.667	20.00
1.750	20.00	4.750	5.00	7.750	20.00
1.833	20.00	4.833	5.00	7.833	20.00
1.917	20.00	4.917	5.00	7.917	20.00
2.000	20.00	5.000	5.00	8.000	20.00
2.083	10.00	5.083	20.00	8.083	23.00
2.167	10.00	5.167	20.00	8.167	23.00
2.250	10.00	5.250	20.00	8.250	23.00
2.333	10.00	5.333	20.00	8.333	23.00
2.417	10.00	5.417	20.00	8.417	23.00
2.500	10.00	5.500	20.00	8.500	23.00
2.583	10.00	5.583	20.00	8.583	23.00
2.667	10.00	5.667	20.00	8.667	23.00
2.750	10.00	5.750	20.00	8.750	23.00
2.833	10.00	5.833	20.00	8.833	23.00
2.917	10.00	5.917	20.00	8.917	23.00
3.000	10.00	6.000	20.00	9.000	23.00

Max.Eff.Inten.(mm/hr)= 43.00 47.51
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.88 (11) 12.39 (11)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.08

PEAK FLOW (cms)= 0.01 0.06 *TOTALS* (111)
TIME TO PEAK (hrs)= 6.83 7.00
RUNOFF VOLUME (mm)= 192.00 109.90 120.57
TOTAL RAINFALL (mm)= 193.00 193.00 193.00
RUNOFF COEFFICIENT = 0.99 0.57 0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(1) HORTONS EQUATION SELECTED FOR PVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0206):	0.73	0.076	7.00	120.57
+ ID2= 2 (2072):	0.34	0.028	7.00	111.31
=====				
ID = 3 (0062):	1.07	0.104	7.00	117.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0401)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0061):	7.91	0.292	7.00	66.53
+ ID2= 2 (0062):	1.07	0.104	7.00	117.62
=====				
ID = 3 (0401):	8.98	0.396	7.00	72.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0201) 2.200 0.217 11.75 22.51
OUTFLOW: ID= 1 (0301) NaN 0.000 0.00 NaN

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.00
TIME SHIFT OF PEAK FLOW (min)=*****
MAXIMUM STORAGE USED (ha.m.)= 0.0219

| ADD HYD (0059) |
1 + 2 = 3
ID1= 1 (0301): NaN 0.000 0.00 NaN
+ ID2= 2 (0050): 5.16 0.064 11.83 5.39

ID = 3 (0059): NaN 0.064 11.83 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANHYD (0205) | Area (ha)= 0.03
| ID= 1 DT= 5.0 min | Total Imp(%)= 56.00 Dir. Conn.(%)= 28.00

IMPERVIOUS PERVIOUS (1)
Surface Area (ha)= 0.02 0.01
Dep. Storage (m)= 1.00 1.50
Average Slope (%)= 1.00 1.00
Length (m)= 14.14 20.00
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 0.65 6.083 1.08 12.083 7.76 18.08 0.86
0.167 0.65 6.167 1.08 12.167 7.76 18.17 0.86
0.250 0.65 6.250 1.08 12.250 7.76 18.25 0.86
0.333 0.43 6.333 0.86 12.333 4.10 18.33 1.08
0.417 0.43 6.417 0.86 12.417 4.10 18.42 1.08
0.500 0.43 6.500 0.86 12.500 4.10 18.50 1.08
0.583 0.65 6.583 1.08 12.583 3.88 18.58 0.86
0.667 0.65 6.667 1.08 12.667 3.88 18.67 0.86
0.750 0.65 6.750 1.08 12.750 3.88 18.75 0.86
0.833 0.65 6.833 1.08 12.833 3.02 18.83 1.08
0.917 0.65 6.917 1.08 12.917 3.02 18.92 1.08
1.000 0.65 7.000 1.08 13.000 3.02 19.00 1.08
1.083 0.65 7.083 1.29 13.083 2.80 19.08 0.86
1.167 0.65 7.167 1.29 13.167 2.80 19.17 0.86
1.250 0.65 7.250 1.29 13.250 2.80 19.25 0.86
1.333 0.43 7.333 1.08 13.333 2.37 19.33 1.08
1.417 0.43 7.417 1.08 13.417 2.37 19.42 1.08
1.500 0.43 7.500 1.08 13.500 2.37 19.50 1.08
1.583 0.65 7.583 1.29 13.583 2.16 19.58 0.86
1.667 0.65 7.667 1.29 13.667 2.16 19.67 0.86
1.750 0.65 7.750 1.29 13.750 2.16 19.75 0.86
1.833 0.65 7.833 1.29 13.833 1.72 19.83 0.65
1.917 0.65 7.917 1.29 13.917 1.72 19.92 0.65
2.000 0.65 8.000 1.29 14.000 1.72 20.00 0.65
2.083 0.86 8.083 1.51 14.083 1.51 20.08 0.65
2.167 0.86 8.167 1.51 14.167 1.51 20.17 0.65
2.250 0.86 8.250 1.51 14.250 1.51 20.25 0.65
2.333 0.65 8.333 1.51 14.333 1.72 20.33 0.65
2.417 0.65 8.417 1.51 14.417 1.72 20.42 0.65
2.500 0.65 8.500 1.51 14.500 1.72 20.50 0.65
2.583 0.65 8.583 1.51 14.583 1.51 20.58 0.65
2.667 0.65 8.667 1.51 14.667 1.51 20.67 0.65
2.750 0.65 8.750 1.51 14.750 1.51 20.75 0.65
2.833 0.65 8.833 1.72 14.833 1.72 20.83 0.65
2.917 0.65 8.917 1.72 14.917 1.72 20.92 0.65
3.000 0.65 9.000 1.72 15.000 1.72 21.00 0.65
3.083 0.86 9.083 1.72 15.083 1.51 21.08 0.65
3.167 0.86 9.167 1.72 15.167 1.51 21.17 0.65
3.250 0.86 9.250 1.72 15.250 1.51 21.25 0.65
3.333 0.65 9.333 1.94 15.333 1.72 21.33 0.65
3.417 0.65 9.417 1.94 15.417 1.72 21.42 0.65
3.500 0.65 9.500 1.94 15.500 1.72 21.50 0.65
3.583 0.65 9.583 1.94 15.583 1.51 21.58 0.65
3.667 0.65 9.667 1.94 15.667 1.51 21.67 0.65
3.750 0.65 9.750 1.94 15.750 1.51 21.75 0.65
3.833 0.86 9.833 2.37 15.833 1.08 21.83 0.65
3.917 0.86 9.917 2.37 15.917 1.08 21.92 0.65
4.000 0.86 10.000 2.37 16.000 1.08 22.00 0.65
4.083 0.86 10.083 2.59 16.083 0.86 22.08 0.65
4.167 0.86 10.167 2.59 16.167 0.86 22.17 0.65
4.250 0.86 10.250 2.59 16.250 0.86 22.25 0.65
4.333 0.86 10.333 3.23 16.333 1.08 22.33 0.65
4.417 0.86 10.417 3.23 16.417 1.08 22.42 0.65
4.500 0.86 10.500 3.23 16.500 1.08 22.50 0.65
4.583 0.86 10.583 3.45 16.583 0.86 22.58 0.65
4.667 0.86 10.667 3.45 16.667 0.86 22.67 0.65
4.750 0.86 10.750 3.45 16.750 0.86 22.75 0.65
4.833 0.86 10.833 5.17 16.833 1.08 22.83 0.65
4.917 0.86 10.917 5.17 16.917 1.08 22.92 0.65
5.000 0.86 11.000 5.17 17.000 1.08 23.00 0.65
5.083 0.86 11.083 5.17 17.083 0.86 23.08 0.65
5.167 0.86 11.167 5.17 17.167 0.86 23.17 0.65
5.250 0.86 11.250 5.17 17.250 0.86 23.25 0.65
5.333 0.86 11.333 15.95 17.333 1.08 23.33 0.65

5.417 0.86 11.417 15.95 17.417 1.08 23.42 0.65
5.500 0.86 11.500 15.95 17.500 1.08 23.50 0.65
5.583 0.86 11.583 65.97 17.583 0.86 23.58 0.65
5.667 0.86 11.667 65.97 17.667 0.86 23.67 0.65
5.750 0.86 11.750 65.97 17.750 0.86 23.75 0.65
5.833 0.86 11.833 7.77 17.833 1.08 23.83 0.65
5.917 0.86 11.917 7.76 17.917 1.08 23.92 0.65
6.000 0.86 12.000 7.76 18.000 1.08 24.00 0.65

Max.Eff.Inten.(mm/hr)= 65.97 97.48
Storage Coeff. over (min)= 5.00 10.00
Storage Coeff. (min)= 0.93 (11) 6.72 (11)
Unit Hyd. Peak (min)= 5.00 10.00
Unit Hyd. Peak (cms)= 0.34 0.14
PEAK FLOW (cms)= 0.00 0.00 *TOTALS* (111)
TIME TO PEAK (hrs)= 11.75 11.75 11.75
RUNOFF VOLUME (mm)= 52.74 17.06 23.42
TOTAL RAINFALL (mm)= 53.74 53.74 53.74
RUNOFF COEFFICIENT = 0.98 0.32 0.44

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

(1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0060) |
1 + 2 = 3
ID1= 1 (0205): 0.83 0.005 11.75 22.42
+ ID2= 2 (0059): NaN 0.064 11.83 NaN

ID = 3 (0060): NaN 0.067 11.83 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (2071) | Area (ha)= 0.52 Curve Number (CN)= 66.3
| ID= 1 DT= 5.0 min | In (mm)= 4.87 # of Linear Res. (N)= 3.00

U.H. Tp(hrs)= 0.19

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 0.65 6.083 1.08 12.083 7.76 18.08 0.86
0.167 0.65 6.167 1.08 12.167 7.76 18.17 0.86
0.250 0.65 6.250 1.08 12.250 7.76 18.25 0.86
0.333 0.43 6.333 0.86 12.333 4.10 18.33 1.08
0.417 0.43 6.417 0.86 12.417 4.10 18.42 1.08
0.500 0.43 6.500 0.86 12.500 4.10 18.50 1.08
0.583 0.65 6.583 1.08 12.583 3.88 18.58 0.86
0.667 0.65 6.667 1.08 12.667 3.88 18.67 0.86
0.750 0.65 6.750 1.08 12.750 3.88 18.75 0.86
0.833 0.65 6.833 1.08 12.833 3.02 18.83 1.08
0.917 0.65 6.917 1.08 12.917 3.02 18.92 1.08
1.000 0.65 7.000 1.08 13.000 3.02 19.00 1.08
1.083 0.65 7.083 1.29 13.083 2.80 19.08 0.86
1.167 0.65 7.167 1.29 13.167 2.80 19.17 0.86
1.250 0.65 7.250 1.29 13.250 2.80 19.25 0.86
1.333 0.43 7.333 1.08 13.333 2.37 19.33 1.08
1.417 0.43 7.417 1.08 13.417 2.37 19.42 1.08
1.500 0.43 7.500 1.08 13.500 2.37 19.50 1.08
1.583 0.65 7.583 1.29 13.583 2.16 19.58 0.86
1.667 0.65 7.667 1.29 13.667 2.16 19.67 0.86
1.750 0.65 7.750 1.29 13.750 2.16 19.75 0.86
1.833 0.65 7.833 1.29 13.833 1.72 19.83 0.65
1.917 0.65 7.917 1.29 13.917 1.72 19.92 0.65
2.000 0.65 8.000 1.29 14.000 1.72 20.00 0.65
2.083 0.86 8.083 1.51 14.083 1.51 20.08 0.65
2.167 0.86 8.167 1.51 14.167 1.51 20.17 0.65
2.250 0.86 8.250 1.51 14.250 1.51 20.25 0.65
2.333 0.65 8.333 1.51 14.333 1.72 20.33 0.65
2.417 0.65 8.417 1.51 14.417 1.72 20.42 0.65
2.500 0.65 8.500 1.51 14.500 1.72 20.50 0.65
2.583 0.65 8.583 1.51 14.583 1.51 20.58 0.65
2.667 0.65 8.667 1.51 14.667 1.51 20.67 0.65
2.750 0.65 8.750 1.51 14.750 1.51 20.75 0.65
2.833 0.65 8.833 1.72 14.833 1.72 20.83 0.65
2.917 0.65 8.917 1.72 14.917 1.72 20.92 0.65
3.000 0.65 9.000 1.72 15.000 1.72 21.00 0.65
3.083 0.86 9.083 1.72 15.083 1.51 21.08 0.65
3.167 0.86 9.167 1.72 15.167 1.51 21.17 0.65
3.250 0.86 9.250 1.72 15.250 1.51 21.25 0.65
3.333 0.65 9.333 1.94 15.333 1.72 21.33 0.65
3.417 0.65 9.417 1.94 15.417 1.72 21.42 0.65
3.500 0.65 9.500 1.94 15.500 1.72 21.50 0.65
3.583 0.65 9.583 1.94 15.583 1.51 21.58 0.65
3.667 0.65 9.667 1.94 15.667 1.51 21.67 0.65
3.750 0.65 9.750 1.94 15.750 1.51 21.75 0.65
3.833 0.86 9.833 2.37 15.833 1.08 21.83 0.65
3.917 0.86 9.917 2.37 15.917 1.08 21.92 0.65
4.000 0.86 10.000 2.37 16.000 1.08 22.00 0.65
4.083 0.86 10.083 2.59 16.083 0.86 22.08 0.65

4.167 0.86 10.167 2.59 16.167 0.86 22.17 0.65
4.250 0.86 10.250 2.59 16.250 0.86 22.25 0.65
4.333 0.86 10.333 3.23 16.333 1.08 22.33 0.65
4.417 0.86 10.417 3.23 16.417 1.08 22.42 0.65
4.500 0.86 10.500 3.23 16.500 1.08 22.50 0.65
4.583 0.86 10.583 3.45 16.583 0.86 22.58 0.65
4.667 0.86 10.667 3.45 16.667 0.86 22.67 0.65
4.750 0.86 10.750 3.45 16.750 0.86 22.75 0.65
4.833 0.86 10.833 5.17 16.833 1.08 22.83 0.65
4.917 0.86 10.917 5.17 16.917 1.08 22.92 0.65
5.000 0.86 11.000 5.17 17.000 1.08 23.00 0.65
5.083 0.86 11.083 5.17 17.083 0.86 23.08 0.65
5.167 0.86 11.167 5.17 17.167 0.86 23.17 0.65
5.250 0.86 11.250 5.17 17.250 0.86 23.25 0.65
5.333 0.86 11.333 15.95 17.333 1.08 23.33 0.65
5.417 0.86 11.417 15.95 17.417 1.08 23.42 0.65
5.500 0.86 11.500 15.95 17.500 1.08 23.50 0.65
5.583 0.86 11.583 65.97 17.583 0.86 23.58 0.65
5.667 0.86 11.667 65.97 17.667 0.86 23.67 0.65
5.750 0.86 11.750 65.97 17.750 0.86 23.75 0.65
5.833 0.86 11.833 7.77 17.833 1.08
5.917 0.86 11.917 7.76 17.917 1.08
6.000 0.86 12.000 7.76 18.000 1.08

Unit Hyd Opeak (cms)= 0.105

PEAK FLOW (cms)= 0.018 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 13.386
TOTAL RAINFALL (mm)= 53.738
RUNOFF COEFFICIENT = 0.249

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

ADD HYD (0061)
1 + 2 = 3

ID1= 1 (2071): AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
+ ID2= 2 (0060): NaN 0.067 11.83 NaN
===== ID= 3 (0061): NaN 0.085 11.83 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (2072)
ID= 1 DT= 5.0 min
U.H. T(hrs)= 0.19
Area (ha)= 0.34 Curve Number (CN)= 66.3
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 0.65 6.083 1.08 12.083 7.76 18.08 0.86
0.167 0.65 6.167 1.08 12.167 7.76 18.17 0.86
0.250 0.65 6.250 1.08 12.250 7.76 18.25 0.86
0.333 0.43 6.333 0.86 12.333 4.10 18.33 1.08
0.417 0.43 6.417 0.86 12.417 4.10 18.42 1.08
0.500 0.43 6.500 0.86 12.500 4.10 18.50 1.08
0.583 0.65 6.583 1.08 12.583 3.88 18.58 0.86
0.667 0.65 6.667 1.08 12.667 3.88 18.67 0.86
0.750 0.65 6.750 1.08 12.750 3.88 18.75 0.86
0.833 0.65 6.833 1.08 12.833 3.02 18.83 1.08
0.917 0.65 6.917 1.08 12.917 3.02 18.92 1.08
1.000 0.65 7.000 1.08 13.000 3.02 19.00 1.08
1.083 0.65 7.083 1.29 13.083 2.80 19.08 0.86
1.167 0.65 7.167 1.29 13.167 2.80 19.17 0.86
1.250 0.65 7.250 1.29 13.250 2.80 19.25 0.86
1.333 0.43 7.333 1.08 13.333 2.37 19.33 1.08
1.417 0.43 7.417 1.08 13.417 2.37 19.42 1.08
1.500 0.43 7.500 1.08 13.500 2.37 19.50 1.08
1.583 0.65 7.583 1.29 13.583 2.16 19.58 0.86
1.667 0.65 7.667 1.29 13.667 2.16 19.67 0.86
1.750 0.65 7.750 1.29 13.750 2.16 19.75 0.86
1.833 0.65 7.833 1.29 13.833 1.72 19.83 0.65
1.917 0.65 7.917 1.29 13.917 1.72 19.92 0.65
2.000 0.65 8.000 1.29 14.000 1.72 20.00 0.65
2.083 0.86 8.083 1.51 14.083 1.51 20.08 0.65
2.167 0.86 8.167 1.51 14.167 1.51 20.17 0.65
2.250 0.86 8.250 1.51 14.250 1.51 20.25 0.65
2.333 0.65 8.333 1.51 14.333 1.72 20.33 0.65
2.417 0.65 8.417 1.51 14.417 1.72 20.42 0.65
2.500 0.65 8.500 1.51 14.500 1.72 20.50 0.65
2.583 0.65 8.583 1.51 14.583 1.51 20.58 0.65
2.667 0.65 8.667 1.51 14.667 1.51 20.67 0.65
2.750 0.65 8.750 1.51 14.750 1.51 20.75 0.65
2.833 0.65 8.833 1.72 14.833 1.72 20.83 0.65
2.917 0.65 8.917 1.72 14.917 1.72 20.92 0.65
3.000 0.65 9.000 1.72 15.000 1.72 21.00 0.65
3.083 0.86 9.083 1.72 15.083 1.51 21.08 0.65
3.167 0.86 9.167 1.72 15.167 1.51 21.17 0.65
3.250 0.86 9.250 1.72 15.250 1.51 21.25 0.65
3.333 0.65 9.333 1.94 15.333 1.72 21.33 0.65
3.417 0.65 9.417 1.94 15.417 1.72 21.42 0.65
3.500 0.65 9.500 1.94 15.500 1.72 21.50 0.65
3.583 0.65 9.583 1.94 15.583 1.51 21.58 0.65
3.667 0.65 9.667 1.94 15.667 1.51 21.67 0.65
3.750 0.65 9.750 1.94 15.750 1.51 21.75 0.65

3.833 0.86 9.833 2.37 15.833 1.08 21.83 0.65
3.917 0.86 9.917 2.37 15.917 1.08 21.92 0.65
4.000 0.86 10.000 2.37 16.000 1.08 22.00 0.65
4.083 0.86 10.083 2.59 16.083 0.86 22.08 0.65
4.167 0.86 10.167 2.59 16.167 0.86 22.17 0.65
4.250 0.86 10.250 2.59 16.250 0.86 22.25 0.65
4.333 0.86 10.333 3.23 16.333 1.08 22.33 0.65
4.417 0.86 10.417 3.23 16.417 1.08 22.42 0.65
4.500 0.86 10.500 3.23 16.500 1.08 22.50 0.65
4.583 0.86 10.583 3.45 16.583 0.86 22.58 0.65
4.667 0.86 10.667 3.45 16.667 0.86 22.67 0.65
4.750 0.86 10.750 3.45 16.750 0.86 22.75 0.65
4.833 0.86 10.833 5.17 16.833 1.08 22.83 0.65
4.917 0.86 10.917 5.17 16.917 1.08 22.92 0.65
5.000 0.86 11.000 5.17 17.000 1.08 23.00 0.65
5.083 0.86 11.083 5.17 17.083 0.86 23.08 0.65
5.167 0.86 11.167 5.17 17.167 0.86 23.17 0.65
5.250 0.86 11.250 5.17 17.250 0.86 23.25 0.65
5.333 0.86 11.333 15.95 17.333 1.08 23.33 0.65
5.417 0.86 11.417 15.95 17.417 1.08 23.42 0.65
5.500 0.86 11.500 15.95 17.500 1.08 23.50 0.65
5.583 0.86 11.583 65.97 17.583 0.86 23.58 0.65
5.667 0.86 11.667 65.97 17.667 0.86 23.67 0.65
5.750 0.86 11.750 65.97 17.750 0.86 23.75 0.65
5.833 0.86 11.833 7.77 17.833 1.08
5.917 0.86 11.917 7.76 17.917 1.08
6.000 0.86 12.000 7.76 18.000 1.08

Unit Hyd Opeak (cms)= 0.068

PEAK FLOW (cms)= 0.012 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 13.386
TOTAL RAINFALL (mm)= 53.738
RUNOFF COEFFICIENT = 0.249

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

CALIB
STANDHYD (0206)
ID= 1 DT= 5.0 min
Area (ha)= 0.73
Total Imp(%)= 32.00 Dir. Conn.(%)= 13.00

IMPERVIOUS PERVIOUS (1)
Surface Area (ha)= 0.23 0.50
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.00 2.00
Length (m)= 69.76 40.00
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 0.65 6.083 1.08 12.083 7.76 18.08 0.86
0.167 0.65 6.167 1.08 12.167 7.76 18.17 0.86
0.250 0.65 6.250 1.08 12.250 7.76 18.25 0.86
0.333 0.43 6.333 0.86 12.333 4.10 18.33 1.08
0.417 0.43 6.417 0.86 12.417 4.10 18.42 1.08
0.500 0.43 6.500 0.86 12.500 4.10 18.50 1.08
0.583 0.65 6.583 1.08 12.583 3.88 18.58 0.86
0.667 0.65 6.667 1.08 12.667 3.88 18.67 0.86
0.750 0.65 6.750 1.08 12.750 3.88 18.75 0.86
0.833 0.65 6.833 1.08 12.833 3.02 18.83 1.08
0.917 0.65 6.917 1.08 12.917 3.02 18.92 1.08
1.000 0.65 7.000 1.08 13.000 3.02 19.00 1.08
1.083 0.65 7.083 1.29 13.083 2.80 19.08 0.86
1.167 0.65 7.167 1.29 13.167 2.80 19.17 0.86
1.250 0.65 7.250 1.29 13.250 2.80 19.25 0.86
1.333 0.43 7.333 1.08 13.333 2.37 19.33 1.08
1.417 0.43 7.417 1.08 13.417 2.37 19.42 1.08
1.500 0.43 7.500 1.08 13.500 2.37 19.50 1.08
1.583 0.65 7.583 1.29 13.583 2.16 19.58 0.86
1.667 0.65 7.667 1.29 13.667 2.16 19.67 0.86
1.750 0.65 7.750 1.29 13.750 2.16 19.75 0.86
1.833 0.65 7.833 1.29 13.833 1.72 19.83 0.65
1.917 0.65 7.917 1.29 13.917 1.72 19.92 0.65
2.000 0.65 8.000 1.29 14.000 1.72 20.00 0.65
2.083 0.86 8.083 1.51 14.083 1.51 20.08 0.65
2.167 0.86 8.167 1.51 14.167 1.51 20.17 0.65
2.250 0.86 8.250 1.51 14.250 1.51 20.25 0.65
2.333 0.65 8.333 1.51 14.333 1.72 20.33 0.65
2.417 0.65 8.417 1.51 14.417 1.72 20.42 0.65
2.500 0.65 8.500 1.51 14.500 1.72 20.50 0.65
2.583 0.65 8.583 1.51 14.583 1.51 20.58 0.65
2.667 0.65 8.667 1.51 14.667 1.51 20.67 0.65
2.750 0.65 8.750 1.51 14.750 1.51 20.75 0.65
2.833 0.65 8.833 1.72 14.833 1.72 20.83 0.65
2.917 0.65 8.917 1.72 14.917 1.72 20.92 0.65
3.000 0.65 9.000 1.72 15.000 1.72 21.00 0.65
3.083 0.86 9.083 1.72 15.083 1.51 21.08 0.65
3.167 0.86 9.167 1.72 15.167 1.51 21.17 0.65
3.250 0.86 9.250 1.72 15.250 1.51 21.25 0.65
3.333 0.65 9.333 1.94 15.333 1.72 21.33 0.65
3.417 0.65 9.417 1.94 15.417 1.72 21.42 0.65
3.500 0.65 9.500 1.94 15.500 1.72 21.50 0.65
3.583 0.65 9.583 1.94 15.583 1.51 21.58 0.65
3.667 0.65 9.667 1.94 15.667 1.51 21.67 0.65
3.750 0.65 9.750 1.94 15.750 1.51 21.75 0.65
3.833 0.86 9.833 2.37 15.833 1.08 21.83 0.65
3.917 0.86 9.917 2.37 15.917 1.08 21.92 0.65

4.000 0.86 10.000 2.37 16.000 1.08 22.00 0.65
4.083 0.86 10.083 2.59 16.083 0.86 22.08 0.65
4.167 0.86 10.167 2.59 16.167 0.86 22.17 0.65
4.250 0.86 10.250 2.59 16.250 0.86 22.25 0.65
4.333 0.86 10.333 3.23 16.333 1.08 22.33 0.65
4.417 0.86 10.417 3.23 16.417 1.08 22.42 0.65
4.500 0.86 10.500 3.23 16.500 1.08 22.50 0.65
4.583 0.86 10.583 3.45 16.583 0.86 22.58 0.65
4.667 0.86 10.667 3.45 16.667 0.86 22.67 0.65
4.750 0.86 10.750 3.45 16.750 0.86 22.75 0.65
4.833 0.86 10.833 5.17 16.833 1.08 22.83 0.65
4.917 0.86 10.917 5.17 16.917 1.08 22.92 0.65
5.000 0.86 11.000 5.17 17.000 1.08 23.00 0.65
5.083 0.86 11.083 5.17 17.083 0.86 23.08 0.65
5.167 0.86 11.167 5.17 17.167 0.86 23.17 0.65
5.250 0.86 11.250 5.17 17.250 0.86 23.25 0.65
5.333 0.86 11.333 15.95 17.333 1.08 23.33 0.65
5.417 0.86 11.417 15.95 17.417 1.08 23.42 0.65
5.500 0.86 11.500 15.95 17.500 1.08 23.50 0.65
5.583 0.86 11.583 65.97 17.583 0.86 23.58 0.65
5.667 0.86 11.667 65.97 17.667 0.86 23.67 0.65
5.750 0.86 11.750 65.97 17.750 0.86 23.75 0.65
5.833 0.86 11.833 7.76 17.833 1.08
5.917 0.86 11.917 7.76 17.917 1.08
6.000 0.86 12.000 7.76 18.000 1.08
Max. Eff. Inten. (mm/hr)= 65.97 71.30
over (min) 5.00 15.00
Storage Coeff. (min)= 2.43 (ii) 10.51 (ii)
Unit Hyd. Tpeak (min)= 5.00 11.75
Unit Hyd. peak (cms)= 0.30 0.09
PEAK FLOW (cms)= 0.02 0.06 0.067 (iii)
TIME TO PEAK (hrs)= 11.75 11.83
RUNOFF VOLUME (mm)= 52.74 18.34
TOTAL RAINFALL (mm)= 53.74 53.74
RUNOFF COEFFICIENT = 0.98 0.25 0.34

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 28%
YOU SHOULD CONSIDER SPLITTING THE AREA.
(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum. Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0206): 0.73 0.067 11.75 18.34
+ ID2= 2 (2072): 0.34 0.012 11.83 13.39
ID = 3 (0062): 1.07 0.078 11.75 16.77
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
ADD HYD (0401)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0061): NaN 0.085 11.83 NaN
+ ID2= 2 (0062): 1.07 0.078 11.75 16.77
ID = 3 (0401): NaN 0.159 11.83 NaN
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

V V I SSSSS U U A L (v 6.0.2006)
V V I SS U U AAA L
V V I SS U U AAAAA L
V V I SS U U A A L
V I SSSSS UUUU A A LLLL
OOO TTTT TTTT H H Y Y M M OOO TM
O O T T H H Y Y M M O O
O O T T H H Y Y M M O O
OOO T T T H H Y Y M M OOO
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***** DETAILED OUTPUT *****
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-9ef7-c4eaf04675c3\68e88851-3d1b-4c94-8888-01892bc62f02\scen
Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-9ef7-c4eaf04675c3\68e88851-3d1b-4c94-8888-01892bc62f02\scen
DATE: 02-08-2021 TIME: 10:21:44

USER:

SCS 5 year (POST)

COMMENTS:

** SIMULATION : Run 02 **

MASS STORM
Filename: C:\Users\ASchoof\AppData\Local\Temp\
5a271c17-2368-4eb5-a75b-54bb5056c8de\9fd102dc
Comments: SCS Type II 24 HR MASS CURVE
Duration of storm = 23.75 hrs
Mass curve time step = 15.00 min
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.25 0.86 6.25 1.44 12.25 10.34 18.25 1.15
0.50 0.57 6.50 1.15 12.50 5.46 18.50 1.44
0.75 0.86 6.75 1.44 12.75 5.17 18.75 1.15
1.00 0.86 7.00 1.44 13.00 4.02 19.00 1.44
1.25 0.86 7.25 1.72 13.25 3.73 19.25 1.15
1.50 0.57 7.50 1.44 13.50 3.16 19.50 1.44
1.75 0.86 7.75 1.72 13.75 2.87 19.75 1.15
2.00 0.86 8.00 1.72 14.00 2.30 20.00 0.86
2.25 1.15 8.25 2.01 14.25 2.01 20.25 0.86
2.50 0.86 8.50 2.01 14.50 2.30 20.50 0.86
2.75 0.86 8.75 2.01 14.75 2.01 20.75 0.86
3.00 0.86 9.00 2.30 15.00 2.30 21.00 0.86
3.25 1.15 9.25 2.30 15.25 2.01 21.25 0.86
3.50 0.86 9.50 2.58 15.50 2.30 21.50 0.86
3.75 0.86 9.75 2.58 15.75 2.01 21.75 0.86
4.00 1.15 10.00 3.16 16.00 1.44 22.00 0.86
4.25 1.15 10.25 3.45 16.25 1.15 22.25 0.86
4.50 1.15 10.50 4.31 16.50 1.44 22.50 0.86
4.75 1.15 10.75 4.60 16.75 1.15 22.75 0.86
5.00 1.15 11.00 6.41 17.00 1.44 23.00 0.86
5.25 1.15 11.25 6.89 17.25 1.15 23.25 0.86
5.50 1.15 11.50 21.25 17.50 1.44 23.50 0.86
5.75 1.15 11.75 87.88 17.75 1.15 23.75 0.86
6.00 1.15 12.00 10.34 18.00 1.44

CALTB
NASHVD (0202)
ID= 1 DT= 2.0 min Ia (mm)= 9.62
U.H. Tp(hrs)= 0.17 Area (ha)= 1.63 Curve Number (CN)= 44.1
of Linear Res. (N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.033 0.86 6.000 1.15 11.967 10.34 17.93 1.44
0.067 0.86 6.033 1.44 12.000 10.34 17.97 1.44
0.100 0.86 6.067 1.44 12.033 10.34 18.00 1.44
0.133 0.86 6.100 1.44 12.067 10.34 18.03 1.15
0.167 0.86 6.133 1.44 12.100 10.34 18.07 1.15
0.200 0.86 6.167 1.44 12.133 10.34 18.10 1.15
0.233 0.86 6.200 1.44 12.167 10.34 18.13 1.15
0.267 0.72 6.233 1.44 12.200 10.34 18.17 1.15
0.300 0.57 6.267 1.29 12.233 10.34 18.20 1.15
0.333 0.57 6.300 1.15 12.267 7.89 18.23 1.15
0.367 0.57 6.333 1.15 12.300 5.46 18.27 1.29
0.400 0.57 6.367 1.15 12.333 5.46 18.30 1.44
0.433 0.57 6.400 1.15 12.367 5.46 18.33 1.44
0.467 0.57 6.433 1.15 12.400 5.46 18.37 1.44
0.500 0.57 6.467 1.15 12.433 5.46 18.40 1.44
0.533 0.86 6.500 1.15 12.467 5.46 18.43 1.44
0.567 0.86 6.533 1.44 12.500 5.46 18.47 1.44
0.600 0.86 6.567 1.44 12.533 5.17 18.50 1.44
0.633 0.86 6.600 1.44 12.567 5.17 18.53 1.15
0.667 0.86 6.633 1.44 12.600 5.17 18.57 1.15
0.700 0.86 6.667 1.44 12.633 5.17 18.60 1.15
0.733 0.86 6.700 1.44 12.667 5.17 18.63 1.15
0.767 0.86 6.733 1.44 12.700 5.17 18.67 1.15
0.800 0.86 6.767 1.44 12.733 5.17 18.70 1.15
0.833 0.86 6.800 1.44 12.767 4.59 18.73 1.15
0.867 0.86 6.833 1.44 12.800 4.02 18.77 1.29
0.900 0.86 6.867 1.44 12.833 4.02 18.80 1.44
0.933 0.86 6.900 1.44 12.867 4.02 18.83 1.44
0.967 0.86 6.933 1.44 12.900 4.02 18.87 1.44
1.000 0.86 6.967 1.44 12.933 4.02 18.90 1.44
1.033 0.86 7.000 1.44 12.967 4.02 18.93 1.44
1.067 0.86 7.033 1.72 13.000 4.02 18.97 1.44
1.100 0.86 7.067 1.72 13.033 3.73 19.00 1.44
1.133 0.86 7.100 1.72 13.067 3.73 19.03 1.15
1.167 0.86 7.133 1.72 13.100 3.73 19.07 1.15
1.200 0.86 7.167 1.72 13.133 3.73 19.10 1.15
1.233 0.86 7.200 1.72 13.167 3.73 19.13 1.15
1.267 0.72 7.233 1.72 13.200 3.73 19.17 1.15
1.300 0.57 7.267 1.58 13.233 3.73 19.20 1.15
1.333 0.57 7.300 1.44 13.267 3.45 19.23 1.15
1.367 0.57 7.333 1.44 13.300 3.16 19.27 1.29
1.400 0.57 7.367 1.44 13.333 3.16 19.30 1.44

1.600 0.86 7.567 1.72 13.533 2.87 19.50 1.44
1.633 0.86 7.600 1.72 13.567 2.87 19.53 1.15
1.666 0.86 7.633 1.72 13.600 2.87 19.57 1.15
1.700 0.86 7.667 1.72 13.633 2.87 19.60 1.15
1.733 0.86 7.700 1.72 13.667 2.87 19.63 1.15
1.767 0.86 7.733 1.72 13.700 2.87 19.67 1.15
1.800 0.86 7.767 1.72 13.733 2.87 19.70 1.15
1.833 0.86 7.800 1.72 13.767 2.58 19.73 1.15
1.867 0.86 7.833 1.72 13.800 2.30 19.77 1.00
1.900 0.86 7.867 1.72 13.833 2.30 19.80 0.86
1.933 0.86 7.900 1.72 13.867 2.30 19.83 0.86
1.967 0.86 7.933 1.72 13.900 2.30 19.87 0.86
2.000 0.86 7.967 1.72 13.933 2.30 19.90 0.86
2.033 1.15 8.000 1.72 13.967 2.30 19.93 0.86
2.067 1.15 8.033 2.01 14.000 2.30 19.97 0.86
2.100 1.15 8.067 2.01 14.033 2.01 20.00 0.86
2.133 1.15 8.100 2.01 14.067 2.01 20.03 0.86
2.167 1.15 8.133 2.01 14.100 2.01 20.07 0.86
2.200 1.15 8.167 2.01 14.133 2.01 20.10 0.86
2.233 1.15 8.200 2.01 14.167 2.01 20.13 0.86
2.267 1.01 8.233 2.01 14.200 2.01 20.17 0.86
2.300 0.86 8.267 2.01 14.233 2.01 20.20 0.86
2.333 0.86 8.300 2.01 14.267 2.15 20.23 0.86
2.367 0.86 8.333 2.01 14.300 2.30 20.27 0.86
2.400 0.86 8.367 2.01 14.333 2.30 20.30 0.86
2.433 0.86 8.400 2.01 14.367 2.30 20.33 0.86
2.467 0.86 8.433 2.01 14.400 2.30 20.37 0.86
2.500 0.86 8.467 2.01 14.433 2.30 20.40 0.86
2.533 0.86 8.500 2.01 14.467 2.30 20.43 0.86
2.567 0.86 8.533 2.01 14.500 2.30 20.47 0.86
2.600 0.86 8.567 2.01 14.533 2.01 20.50 0.86
2.633 0.86 8.600 2.01 14.567 2.01 20.53 0.86
2.667 0.86 8.633 2.01 14.600 2.01 20.57 0.86
2.700 0.86 8.667 2.01 14.633 2.01 20.60 0.86
2.733 0.86 8.700 2.01 14.667 2.01 20.63 0.86
2.767 0.86 8.733 2.01 14.700 2.01 20.67 0.86
2.800 0.86 8.767 2.15 14.733 2.01 20.70 0.86
2.833 0.86 8.800 2.30 14.767 2.15 20.73 0.86
2.867 0.86 8.833 2.30 14.800 2.30 20.77 0.86
2.900 0.86 8.867 2.30 14.833 2.30 20.80 0.86
2.933 0.86 8.900 2.30 14.867 2.30 20.83 0.86
2.967 0.86 8.933 2.30 14.900 2.30 20.87 0.86
3.000 0.86 8.967 2.30 14.933 2.30 20.90 0.86
3.033 1.15 9.000 2.30 14.967 2.30 20.93 0.86
3.067 1.15 9.033 2.30 15.000 2.30 20.97 0.86
3.100 1.15 9.067 2.30 15.033 2.01 21.00 0.86
3.133 1.15 9.100 2.30 15.067 2.01 21.03 0.86
3.167 1.15 9.133 2.30 15.100 2.01 21.07 0.86
3.200 1.15 9.167 2.30 15.133 2.01 21.10 0.86
3.233 1.15 9.200 2.30 15.167 2.01 21.13 0.86
3.267 1.01 9.233 2.30 15.200 2.01 21.17 0.86
3.300 0.86 9.267 2.44 15.233 2.01 21.20 0.86
3.333 0.86 9.300 2.58 15.267 2.15 21.23 0.86
3.367 0.86 9.333 2.58 15.300 2.30 21.27 0.86
3.400 0.86 9.367 2.58 15.333 2.30 21.30 0.86
3.433 0.86 9.400 2.58 15.367 2.30 21.33 0.86
3.467 0.86 9.433 2.58 15.400 2.30 21.37 0.86
3.500 0.86 9.467 2.58 15.433 2.30 21.40 0.86
3.533 0.86 9.500 2.58 15.467 2.30 21.43 0.86
3.567 0.86 9.533 2.58 15.500 2.30 21.47 0.86
3.600 0.86 9.567 2.58 15.533 2.01 21.50 0.86
3.633 0.86 9.600 2.58 15.567 2.01 21.53 0.86
3.667 0.86 9.633 2.58 15.600 2.01 21.57 0.86
3.700 0.86 9.667 2.58 15.633 2.01 21.60 0.86
3.733 0.86 9.700 2.58 15.667 2.01 21.63 0.86
3.767 1.01 9.733 2.58 15.700 2.01 21.67 0.86
3.800 1.15 9.767 2.87 15.733 2.01 21.70 0.86
3.833 1.15 9.800 3.16 15.767 1.72 21.73 0.86
3.867 1.15 9.833 3.16 15.800 1.44 21.77 0.86
3.900 1.15 9.867 3.16 15.833 1.44 21.80 0.86
3.933 1.15 9.900 3.16 15.867 1.44 21.83 0.86
3.967 1.15 9.933 3.16 15.900 1.44 21.87 0.86
4.000 1.15 9.967 3.16 15.933 1.44 21.90 0.86
4.033 1.15 10.000 3.16 15.967 1.44 21.93 0.86
4.067 1.15 10.033 3.45 16.000 1.44 21.97 0.86
4.100 1.15 10.067 3.45 16.033 1.15 22.00 0.86
4.133 1.15 10.100 3.45 16.067 1.15 22.03 0.86
4.167 1.15 10.133 3.45 16.100 1.15 22.07 0.86
4.200 1.15 10.167 3.45 16.133 1.15 22.10 0.86
4.233 1.15 10.200 3.45 16.167 1.15 22.13 0.86
4.267 1.15 10.233 3.45 16.200 1.15 22.17 0.86
4.300 1.15 10.267 3.88 16.233 1.15 22.20 0.86
4.333 1.15 10.300 4.31 16.267 1.29 22.23 0.86
4.367 1.15 10.333 4.31 16.300 1.44 22.27 0.86
4.400 1.15 10.367 4.31 16.333 1.44 22.30 0.86
4.433 1.15 10.400 4.31 16.367 1.44 22.33 0.86
4.467 1.15 10.433 4.31 16.400 1.44 22.37 0.86
4.500 1.15 10.467 4.31 16.433 1.44 22.40 0.86
4.533 1.15 10.500 4.31 16.467 1.44 22.43 0.86
4.567 1.15 10.533 4.60 16.500 1.44 22.47 0.86
4.600 1.15 10.567 4.60 16.533 1.15 22.50 0.86
4.633 1.15 10.600 4.60 16.567 1.15 22.53 0.86
4.667 1.15 10.633 4.60 16.600 1.15 22.57 0.86
4.700 1.15 10.667 4.60 16.633 1.15 22.60 0.86
4.733 1.15 10.700 4.60 16.667 1.15 22.63 0.86
4.767 1.15 10.733 4.60 16.700 1.15 22.67 0.86
4.800 1.15 10.767 5.75 16.733 1.15 22.70 0.86
4.833 1.15 10.800 5.89 16.767 1.15 22.73 0.86
4.867 1.15 10.833 6.89 16.800 1.44 22.77 0.86
4.900 1.15 10.867 6.89 16.833 1.44 22.80 0.86
4.933 1.15 10.900 6.89 16.867 1.44 22.83 0.86
4.967 1.15 10.933 6.89 16.900 1.44 22.87 0.86
5.000 1.15 10.967 6.89 16.933 1.44 22.90 0.86
5.033 1.15 11.000 6.89 16.967 1.44 22.93 0.86

5.067 1.15 11.033 6.89 17.000 1.44 22.97 0.86
5.100 1.15 11.067 6.89 17.033 1.15 23.00 0.86
5.133 1.15 11.100 6.89 17.067 1.15 23.03 0.86
5.167 1.15 11.133 6.89 17.100 1.15 23.07 0.86
5.200 1.15 11.167 6.89 17.133 1.15 23.10 0.86
5.233 1.15 11.200 6.89 17.167 1.15 23.13 0.86
5.267 1.15 11.233 6.89 17.200 1.15 23.17 0.86
5.300 1.15 11.267 14.09 17.233 1.15 23.20 0.86
5.333 1.15 11.300 21.25 17.267 1.29 23.23 0.86
5.367 1.15 11.333 21.25 17.300 1.44 23.27 0.86
5.400 1.15 11.367 21.25 17.333 1.44 23.30 0.86
5.433 1.15 11.400 21.25 17.367 1.44 23.33 0.86
5.467 1.15 11.433 21.25 17.400 1.44 23.37 0.86
5.500 1.15 11.467 21.25 17.433 1.44 23.40 0.86
5.533 1.15 11.500 21.33 17.467 1.44 23.43 0.86
5.567 1.15 11.533 87.88 17.500 1.44 23.47 0.86
5.600 1.15 11.567 87.88 17.533 1.15 23.50 0.86
5.633 1.15 11.600 87.88 17.567 1.15 23.53 0.86
5.667 1.15 11.633 87.88 17.600 1.15 23.57 0.86
5.700 1.15 11.667 87.88 17.633 1.15 23.60 0.86
5.733 1.15 11.700 87.88 17.667 1.15 23.63 0.86
5.767 1.15 11.733 87.88 17.700 1.15 23.67 0.86
5.800 1.15 11.767 49.01 17.733 1.15 23.70 0.86
5.833 1.15 11.800 10.34 17.767 1.29 23.73 0.86
5.867 1.15 11.833 10.34 17.800 1.44 23.77 0.43
5.900 1.15 11.867 10.34 17.833 1.44 |
5.933 1.15 11.900 10.34 17.867 1.44 |
5.967 1.15 11.933 10.34 17.900 1.44 |

Unit Hyd Qpeak (cms)= 0.613

PEAK FLOW (cms)= 0.071 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm) 9.791
TOTAL RAINFALL (mm)= 71.584
RUNOFF COEFFICIENT = 0.137

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

ADD HYD (0057)
1 + 2 =
ID1= 1 (0202): 1.63 0.043 11.83 10.01
+ ID2= 2 (0203): 2.89 0.071 11.83 9.79

ID = 3 (0057): 4.52 0.114 11.83 9.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

NASHYD (0204)
ID= 1 DT= 2.0 min
Area (ha)= 0.64
Curve Number (CN)= 48.1
U.H. Tp(hrs)= 0.33
of Linear Res. (N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr
0.033 0.86 6.000 1.15 11.967 10.34 17.93 1.44
0.067 0.86 6.033 1.44 12.000 10.34 17.97 1.44
0.100 0.86 6.067 1.44 12.033 10.34 18.00 1.44
0.133 0.86 6.100 1.44 12.067 10.34 18.03 1.15
0.167 0.86 6.133 1.44 12.100 10.34 18.07 1.15
0.200 0.86 6.167 1.44 12.133 10.34 18.10 1.15
0.233 0.86 6.200 1.44 12.167 10.34 18.13 1.15
0.267 0.72 6.233 1.44 12.200 10.34 18.17 1.15
0.300 0.57 6.267 1.29 12.233 10.34 18.20 1.15
0.333 0.57 6.300 1.15 12.267 7.89 18.23 1.15
0.367 0.57 6.333 1.15 12.300 5.46 18.27 1.29
0.400 0.57 6.367 1.15 12.333 5.46 18.30 1.44
0.433 0.57 6.400 1.15 12.367 5.46 18.33 1.44
0.467 0.57 6.433 1.15 12.400 5.46 18.37 1.44
0.500 0.57 6.467 1.15 12.433 5.46 18.40 1.44
0.533 0.86 6.500 1.15 12.467 5.46 18.43 1.44
0.567 0.86 6.533 1.44 12.500 5.46 18.47 1.44
0.600 0.86 6.567 1.44 12.533 5.17 18.50 1.44
0.633 0.86 6.600 1.44 12.567 5.17 18.53 1.15
0.667 0.86 6.633 1.44 12.600 5.17 18.57 1.15
0.700 0.86 6.667 1.44 12.633 5.17 18.60 1.15
0.733 0.86 6.700 1.44 12.667 5.17 18.63 1.15
0.767 0.86 6.733 1.44 12.700 5.17 18.67 1.15
0.800 0.86 6.767 1.44 12.733 5.17 18.70 1.15
0.833 0.86 6.800 1.44 12.767 4.59 18.73 1.15
0.867 0.86 6.833 1.44 12.800 4.02 18.77 1.29
0.900 0.86 6.867 1.44 12.833 4.02 18.80 1.44
0.933 0.86 6.900 1.44 12.867 4.02 18.83 1.44
0.967 0.86 6.933 1.44 12.900 4.02 18.87 1.44
1.000 0.86 6.967 1.44 12.933 4.02 18.90 1.44
1.033 0.86 7.000 1.44 12.967 4.02 18.93 1.44
1.067 0.86 7.033 1.72 13.000 4.02 18.97 1.44
1.100 0.86 7.067 1.72 13.033 3.73 19.00 1.44
1.133 0.86 7.100 1.72 13.067 3.73 19.03 1.15
1.167 0.86 7.133 1.72 13.100 3.73 19.07 1.15
1.200 0.86 7.167 1.72 13.133 3.73 19.10 1.15
1.233 0.86 7.200 1.72 13.167 3.73 19.13 1.15
1.267 0.72 7.233 1.72 13.200 3.73 19.17 1.15
1.300 0.57 7.267 1.58 13.233 3.73 19.20 1.15
1.333 0.57 7.300 1.44 13.267 3.45 19.23 1.15


```
2.333 0.86 | 8.333 2.01 | 14.333 2.30 | 20.33 0.86
2.417 0.86 8.417 2.01 | 14.417 2.30 | 20.42 0.86
2.500 0.86 8.500 2.01 | 14.500 2.30 | 20.50 0.86
2.583 0.86 8.583 2.01 | 14.583 2.01 | 20.58 0.86
2.667 0.86 8.667 2.01 | 14.667 2.01 | 20.67 0.86
2.750 0.86 8.750 2.01 | 14.750 2.01 | 20.75 0.86
2.833 0.86 8.833 2.30 | 14.833 2.30 | 20.83 0.86
2.917 0.86 8.917 2.30 | 14.917 2.30 | 20.92 0.86
3.000 0.86 9.000 2.30 | 15.000 2.30 | 21.00 0.86
3.083 1.15 9.083 2.30 | 15.083 2.01 | 21.00 0.86
3.167 1.15 9.167 2.30 | 15.167 2.01 | 21.17 0.86
3.250 1.15 9.250 2.30 | 15.250 2.01 | 21.25 0.86
3.333 0.86 9.333 2.58 | 15.333 2.30 | 21.33 0.86
3.417 0.86 9.417 2.58 | 15.417 2.30 | 21.42 0.86
3.500 0.86 9.500 2.58 | 15.500 2.30 | 21.50 0.86
3.583 0.86 9.583 2.58 | 15.583 2.01 | 21.58 0.86
3.667 0.86 9.667 2.58 | 15.667 2.01 | 21.67 0.86
3.750 0.86 9.750 2.58 | 15.750 2.01 | 21.75 0.86
3.833 1.15 9.833 3.16 | 15.833 1.44 | 21.83 0.86
3.917 1.15 9.917 3.16 | 15.917 1.44 | 21.92 0.86
4.000 1.15 10.000 3.16 | 16.000 1.44 | 22.00 0.86
4.083 1.15 10.083 3.45 | 16.083 1.15 | 22.08 0.86
4.167 1.15 10.167 3.45 | 16.167 1.15 | 22.17 0.86
4.250 1.15 10.250 3.45 | 16.250 1.15 | 22.25 0.86
4.333 1.15 10.333 4.31 | 16.333 1.44 | 22.33 0.86
4.417 1.15 10.417 4.31 | 16.417 1.44 | 22.42 0.86
4.500 1.15 10.500 4.31 | 16.500 1.44 | 22.50 0.86
4.583 1.15 10.583 4.60 | 16.583 1.15 | 22.58 0.86
4.667 1.15 10.667 4.60 | 16.667 1.15 | 22.67 0.86
4.750 1.15 10.750 4.60 | 16.750 1.15 | 22.75 0.86
4.833 1.15 10.833 6.89 | 16.833 1.44 | 22.83 0.86
4.917 1.15 10.917 6.89 | 16.917 1.44 | 22.92 0.86
5.000 1.15 11.000 6.89 | 17.000 1.44 | 23.00 0.86
5.083 1.15 11.083 6.89 | 17.083 1.15 | 23.08 0.86
5.167 1.15 11.167 6.89 | 17.167 1.15 | 23.17 0.86
5.250 1.15 11.250 6.89 | 17.250 1.15 | 23.25 0.86
5.333 1.15 11.333 21.25 | 17.333 1.44 | 23.33 0.86
5.417 1.15 11.417 21.25 | 17.417 1.44 | 23.42 0.86
5.500 1.15 11.500 21.25 | 17.500 1.44 | 23.50 0.86
5.583 1.15 11.583 87.88 | 17.583 1.15 | 23.58 0.86
5.667 1.15 11.667 87.88 | 17.667 1.15 | 23.67 0.86
5.750 1.15 11.750 87.88 | 17.750 1.15 | 23.75 0.86
5.833 1.15 11.833 10.35 | 17.833 1.44 |
5.917 1.15 11.917 10.34 | 17.917 1.44 |
6.000 1.15 12.000 10.34 | 18.000 1.44 |

Max.Eff.Inten.(mm/hr)= 87.88 112.48
over (min) 5.00 15.00
Storage Coeff. (min)= 3.02 (ii) 11.31 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.09

*TOTALS*
PEAK FLOW (cms)= 0.11 0.25 0.336 (iii)
TIME TO PEAK (hrs)= 11.75 11.75 11.75
RUNOFF VOLUME (mm)= 70.58 24.66 34.30
TOTAL RAINFALL (mm)= 71.58 71.58 71.58
RUNOFF COEFFICIENT = 0.99 0.34 0.48

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

(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

RESERVOIR (0301)	OVERFLOW IS OFF			
IN= 2---> OUT= 1	OUTFLOW		STORAGE	
DT= 5.0 min	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.1680	0.1500	0.5570
	0.0040	0.2080	0.3520	0.7230
	0.0090	0.3020	1.2920	0.9160
	0.1320	0.4180	2.0620	1.0230

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
2.200	0.336	11.75	34.30
NaN	0.000	0.00	NaN

PEAK FLOW	REDUCTION	[Qout/Qin](%)= 0.00
TIME SHIFT OF PEAK FLOW	(min)	*****
MAXIMUM STORAGE USED	(ha.m.)=	0.0339

```
-----
| ADD HYD ( 0059) |
| I = 2 = 3 |
|-----|
ID1= 1 ( 0301): NaN 0.000 0.00 NaN
+ ID2= 2 ( 0050): 5.16 0.124 11.83 10.00
*****
ID = 3 ( 0059): NaN 0.124 11.83 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-----
| CALIB |
| STANDBYD ( 0205) |
ID= 1 DT= 5.0 min Total Imp(%)= 56.00 Dir. Conn.(%)= 28.00
```

```
-----
Surface Area (ha)= 8.00 0.01
Dep. Storage (cm)= 1.00 1.50
Average Slope (%)= 1.00 1.00
Length (m)= 14.14 20.00
Hannings 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 0.86 | 0.083 1.44 | 12.083 10.34 | 18.08 1.15
0.167 0.86 | 0.167 1.44 | 12.167 10.34 | 18.17 1.15
0.250 0.86 | 0.250 1.44 | 12.250 10.34 | 18.25 1.15
0.333 0.57 | 0.333 1.15 | 12.333 5.46 | 18.33 1.44
0.417 0.57 | 0.417 1.15 | 12.417 5.46 | 18.42 1.44
0.500 0.57 | 0.500 1.15 | 12.500 5.46 | 18.50 1.44
0.583 0.86 | 0.583 1.44 | 12.583 5.17 | 18.58 1.15
0.667 0.86 | 0.667 1.44 | 12.667 5.17 | 18.67 1.15
0.750 0.86 | 0.750 1.44 | 12.750 5.17 | 18.75 1.15
0.833 0.86 | 0.833 1.44 | 12.833 4.02 | 18.83 1.44
0.917 0.86 | 0.917 1.44 | 12.917 4.02 | 18.92 1.44
1.000 0.86 | 7.000 1.44 | 13.000 4.02 | 19.00 1.44
1.083 0.86 | 7.083 1.72 | 13.083 3.73 | 19.08 1.15
1.167 0.86 | 7.167 1.72 | 13.167 3.73 | 19.17 1.15
1.250 0.86 | 7.250 1.72 | 13.250 3.73 | 19.25 1.15
1.333 0.57 | 7.333 1.44 | 13.333 3.16 | 19.33 1.44
1.417 0.57 | 7.417 1.44 | 13.417 3.16 | 19.42 1.44
1.500 0.57 | 7.500 1.44 | 13.500 3.16 | 19.50 1.44
1.583 0.86 | 7.583 1.72 | 13.583 2.87 | 19.58 1.15
1.667 0.86 | 7.667 1.72 | 13.667 2.87 | 19.67 1.15
1.750 0.86 | 7.750 1.72 | 13.750 2.87 | 19.75 1.15
1.833 0.86 | 7.833 1.72 | 13.833 2.30 | 19.83 0.86
1.917 0.86 | 7.917 1.72 | 13.917 2.30 | 19.92 0.86
2.000 0.86 | 8.000 1.72 | 14.000 2.30 | 20.00 0.86
2.083 1.15 | 8.083 2.01 | 14.083 2.01 | 20.08 0.86
2.167 1.15 | 8.167 2.01 | 14.167 2.01 | 20.17 0.86
2.250 1.15 | 8.250 2.01 | 14.250 2.01 | 20.25 0.86
2.333 0.86 | 8.333 2.01 | 14.333 2.30 | 20.33 0.86
2.417 0.86 | 8.417 2.01 | 14.417 2.30 | 20.42 0.86
2.500 0.86 | 8.500 2.01 | 14.500 2.30 | 20.50 0.86
2.583 0.86 | 8.583 2.01 | 14.583 2.01 | 20.58 0.86
2.667 0.86 | 8.667 2.01 | 14.667 2.01 | 20.67 0.86
2.750 0.86 | 8.750 2.01 | 14.750 2.01 | 20.75 0.86
2.833 0.86 | 8.833 2.30 | 14.833 2.30 | 20.83 0.86
2.917 0.86 | 8.917 2.30 | 14.917 2.30 | 20.92 0.86
3.000 0.86 | 9.000 2.30 | 15.000 2.30 | 21.00 0.86
3.083 1.15 | 9.083 2.30 | 15.083 2.01 | 21.00 0.86
3.167 1.15 | 9.167 2.30 | 15.167 2.01 | 21.17 0.86
3.250 1.15 | 9.250 2.30 | 15.250 2.01 | 21.25 0.86
3.333 0.86 | 9.333 2.58 | 15.333 2.30 | 21.33 0.86
3.417 0.86 | 9.417 2.58 | 15.417 2.30 | 21.42 0.86
3.500 0.86 | 9.500 2.58 | 15.500 2.30 | 21.50 0.86
3.583 0.86 | 9.583 2.58 | 15.583 2.01 | 21.58 0.86
3.667 0.86 | 9.667 2.58 | 15.667 2.01 | 21.67 0.86
3.750 0.86 | 9.750 2.58 | 15.750 2.01 | 21.75 0.86
3.833 1.15 | 9.833 3.16 | 15.833 1.44 | 21.83 0.86
3.917 1.15 | 9.917 3.16 | 15.917 1.44 | 21.92 0.86
4.000 1.15 | 10.000 3.16 | 16.000 1.44 | 22.00 0.86
4.083 1.15 | 10.083 3.45 | 16.083 1.15 | 22.08 0.86
4.167 1.15 | 10.167 3.45 | 16.167 1.15 | 22.17 0.86
4.250 1.15 | 10.250 3.45 | 16.250 1.15 | 22.25 0.86
4.333 1.15 | 10.333 4.31 | 16.333 1.44 | 22.33 0.86
4.417 1.15 | 10.417 4.31 | 16.417 1.44 | 22.42 0.86
4.500 1.15 | 10.500 4.31 | 16.500 1.44 | 22.50 0.86
4.583 1.15 | 10.583 4.60 | 16.583 1.15 | 22.58 0.86
4.667 1.15 | 10.667 4.60 | 16.667 1.15 | 22.67 0.86
4.750 1.15 | 10.750 4.60 | 16.750 1.15 | 22.75 0.86
4.833 1.15 | 10.833 6.89 | 16.833 1.44 | 22.83 0.86
4.917 1.15 | 10.917 6.89 | 16.917 1.44 | 22.92 0.86
5.000 1.15 | 11.000 6.89 | 17.000 1.44 | 23.00 0.86
5.083 1.15 | 11.083 6.89 | 17.083 1.15 | 23.08 0.86
5.167 1.15 | 11.167 6.89 | 17.167 1.15 | 23.17 0.86
5.250 1.15 | 11.250 6.89 | 17.250 1.15 | 23.25 0.86
5.333 1.15 | 11.333 21.25 | 17.333 1.44 | 23.33 0.86
5.417 1.15 | 11.417 21.25 | 17.417 1.44 | 23.42 0.86
5.500 1.15 | 11.500 21.25 | 17.500 1.44 | 23.50 0.86
5.583 1.15 | 11.583 87.88 | 17.583 1.15 | 23.58 0.86
5.667 1.15 | 11.667 87.88 | 17.667 1.15 | 23.67 0.86
5.750 1.15 | 11.750 87.88 | 17.750 1.15 | 23.75 0.86
5.833 1.15 | 11.833 10.35 | 17.833 1.44 |
5.917 1.15 | 11.917 10.34 | 17.917 1.44 |
6.000 1.15 | 12.000 10.34 | 18.000 1.44 |

Max.Eff.Inten.(mm/hr)= 87.88 135.56
over (min) 5.00 10.00
Storage Coeff. (min)= 0.83 (ii) 5.91 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.34 0.15

*TOTALS*
PEAK FLOW (cms)= 0.00 0.00 0.006 (iii)
TIME TO PEAK (hrs)= 11.75 11.75 11.75
RUNOFF VOLUME (mm)= 70.58 27.10 34.87
TOTAL RAINFALL (mm)= 71.58 71.58 71.58
RUNOFF COEFFICIENT = 0.99 0.38 0.49

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

(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
```


6.000 1.15 12.000 10.34 18.000 1.44 |
Unit Hyd Qpeak (cms)= 0.068
PEAK FLOW (cms)= 0.020 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 22.075
TOTAL RAINFALL (mm)= 71.585
RUNOFF COEFFICIENT = 0.317
(1) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
CALIB
STANDHYD (0206)
Area (ha)= 0.73
Total Imp(%)= 32.00 Dir. Conn.(%)= 13.00
IMPERVIOUS PERVIOUS (1)
Surface Area (ha)= 0.23 0.50
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.00 2.00
Length (m)= 69.76 40.00
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 0.86 6.083 1.44 12.083 10.34 18.08 1.15
0.167 0.86 6.167 1.44 12.167 10.34 18.17 1.15
0.250 0.86 6.250 1.44 12.250 10.34 18.25 1.15
0.333 0.57 6.333 1.15 12.333 5.46 18.33 1.44
0.417 0.57 6.417 1.15 12.417 5.46 18.42 1.44
0.500 0.57 6.500 1.15 12.500 5.46 18.50 1.44
0.583 0.86 6.583 1.44 12.583 5.17 18.58 1.15
0.667 0.86 6.667 1.44 12.667 5.17 18.67 1.15
0.750 0.86 6.750 1.44 12.750 5.17 18.75 1.15
0.833 0.86 6.833 1.44 12.833 4.02 18.83 1.44
0.917 0.86 6.917 1.44 12.917 4.02 18.92 1.44
1.000 0.86 7.000 1.44 13.000 4.02 19.00 1.44
1.083 0.86 7.083 1.72 13.083 3.73 19.08 1.15
1.167 0.86 7.167 1.72 13.167 3.73 19.17 1.15
1.250 0.86 7.250 1.72 13.250 3.73 19.25 1.15
1.333 0.57 7.333 1.44 13.333 3.16 19.33 1.44
1.417 0.57 7.417 1.44 13.417 3.16 19.42 1.44
1.500 0.57 7.500 1.44 13.500 3.16 19.50 1.44
1.583 0.86 7.583 1.72 13.583 2.87 19.58 1.15
1.667 0.86 7.667 1.72 13.667 2.87 19.67 1.15
1.750 0.86 7.750 1.72 13.750 2.87 19.75 1.15
1.833 0.86 7.833 1.72 13.833 2.30 19.83 0.86
1.917 0.86 7.917 1.72 13.917 2.30 19.92 0.86
2.000 0.86 8.000 1.72 14.000 2.30 20.00 0.86
2.083 1.15 8.083 2.01 14.083 2.01 20.08 0.86
2.167 1.15 8.167 2.01 14.167 2.01 20.17 0.86
2.250 1.15 8.250 2.01 14.250 2.01 20.25 0.86
2.333 0.86 8.333 2.01 14.333 2.30 20.33 0.86
2.417 0.86 8.417 2.01 14.417 2.30 20.42 0.86
2.500 0.86 8.500 2.01 14.500 2.30 20.50 0.86
2.583 0.86 8.583 2.01 14.583 2.01 20.58 0.86
2.667 0.86 8.667 2.01 14.667 2.01 20.67 0.86
2.750 0.86 8.750 2.01 14.750 2.01 20.75 0.86
2.833 0.86 8.833 2.30 14.833 2.30 20.83 0.86
2.917 0.86 8.917 2.30 14.917 2.30 20.92 0.86
3.000 0.86 9.000 2.30 15.000 2.30 21.00 0.86
3.083 1.15 9.083 2.30 15.083 2.01 21.08 0.86
3.167 1.15 9.167 2.30 15.167 2.01 21.17 0.86
3.250 1.15 9.250 2.30 15.250 2.01 21.25 0.86
3.333 0.86 9.333 2.58 15.333 2.30 21.33 0.86
3.417 0.86 9.417 2.58 15.417 2.30 21.42 0.86
3.500 0.86 9.500 2.58 15.500 2.30 21.50 0.86
3.583 0.86 9.583 2.58 15.583 2.01 21.58 0.86
3.667 0.86 9.667 2.58 15.667 2.01 21.67 0.86
3.750 0.86 9.750 2.58 15.750 2.01 21.75 0.86
3.833 1.15 9.833 3.16 15.833 1.44 21.83 0.86
3.917 1.15 9.917 3.16 15.917 1.44 21.92 0.86
4.000 1.15 10.000 3.16 16.000 1.44 22.00 0.86
4.083 1.15 10.083 3.45 16.083 1.15 22.08 0.86
4.167 1.15 10.167 3.45 16.167 1.15 22.17 0.86
4.250 1.15 10.250 3.45 16.250 1.15 22.25 0.86
4.333 1.15 10.333 4.31 16.333 1.44 22.33 0.86
4.417 1.15 10.417 4.31 16.417 1.44 22.42 0.86
4.500 1.15 10.500 4.31 16.500 1.44 22.50 0.86
4.583 1.15 10.583 4.60 16.583 1.15 22.58 0.86
4.667 1.15 10.667 4.60 16.667 1.15 22.67 0.86
4.750 1.15 10.750 4.60 16.750 1.15 22.75 0.86
4.833 1.15 10.833 6.89 16.833 1.44 22.83 0.86
4.917 1.15 10.917 6.89 16.917 1.44 22.92 0.86
5.000 1.15 11.000 6.89 17.000 1.44 23.00 0.86
5.083 1.15 11.083 6.89 17.083 1.15 23.08 0.86
5.167 1.15 11.167 6.89 17.167 1.15 23.17 0.86
5.250 1.15 11.250 6.89 17.250 1.15 23.25 0.86
5.333 1.15 11.333 21.25 17.333 1.44 23.33 0.86
5.417 1.15 11.417 21.25 17.417 1.44 23.42 0.86
5.500 1.15 11.500 21.25 17.500 1.44 23.50 0.86
5.583 1.15 11.583 87.88 17.583 1.15 23.58 0.86
5.667 1.15 11.667 87.88 17.667 1.15 23.67 0.86
5.750 1.15 11.750 87.88 17.750 1.15 23.75 0.86
5.833 1.15 11.833 10.35 17.833 1.44 |
5.917 1.15 11.917 10.34 17.917 1.44 |
6.000 1.15 12.000 10.34 18.000 1.44 |

Max.Eff.Inten.(mm/hr)= 87.88 102.37
over (min) 5.00 10.00
Storage Coeff. (min)= 2.17 (ii) 9.16 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.12
PEAK FLOW (cms)= 0.02 0.11 *TOTALS*
TIME TO PEAK (hrs)= 11.75 11.75 0.129 (iii)
RUNOFF VOLUME (mm)= 70.58 23.43 29.56
TOTAL RAINFALL (mm)= 71.58 71.58 71.58
RUNOFF COEFFICIENT = 0.99 0.33 0.41
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.
(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)
1 + 2 = 3 AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0062): 0.73 0.129 11.75 29.56
+ ID2= 2 (2072): 0.34 0.020 11.83 22.67
ID = 3 (0062): 1.07 0.147 11.75 27.37
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
ADD HYD (0401)
1 + 2 = 3 AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0061): NaN 0.158 11.83 NaN
+ ID2= 2 (0062): 1.07 0.147 11.75 27.37
ID = 3 (0401): NaN 0.286 11.80 NaN
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
V V I SSSSS U U A L (v 6.0.2006)
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 V Y M M 000 TM
O O T T H H V Y M M M O O
O O T T H H V Y M M O O O
000 T T H H V N M M 000
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***** DETAILED OUTPUT *****
Input filename: C:\Program Files (x86)\Visual OTHYMO 6.0\VO2\voim.dat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eafb4675c3\ba78b52b-a171-43ed-bdf8-5b1c3e4de92d\scen
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DATE: 02-08-2021 TIME: 10:21:44
USER:
COMMENTS: SCS 10 year (POST)

** SIMULATION : Run 03 **

MASS STORM
Filename: C:\Users\ASchoof\AppData\Local\Temp\
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Comments: SCS Type II 24 HR MASS CURVE
Duration of storm = 23.75 hrs
Mass curve time step = 15.00 min
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.25 1.01 6.25 1.68 12.25 12.07 18.25 1.34
0.50 0.67 6.50 1.34 12.50 6.37 18.50 1.68
0.75 1.01 6.75 1.68 12.75 6.03 18.75 1.34
1.00 1.01 7.00 1.68 13.00 4.69 19.00 1.68
1.25 1.01 7.25 2.01 13.25 4.36 19.25 1.34
1.50 0.67 7.50 1.68 13.50 3.69 19.50 1.68

1.75	1.01	7.75	2.01	13.75	3.35	19.75	1.34
2.00	1.01	8.00	2.01	14.00	2.68	20.00	1.01
2.25	1.34	8.25	2.35	14.25	3.35	20.25	1.01
2.50	1.01	8.50	2.35	14.50	2.68	20.50	1.01
2.75	1.01	8.75	2.35	14.75	2.35	20.75	1.01
3.00	1.01	9.00	2.68	15.00	2.68	21.00	1.01
3.25	1.34	9.25	2.68	15.25	2.35	21.25	1.01
3.50	1.01	9.50	3.02	15.50	2.68	21.50	1.01
3.75	1.01	9.75	3.02	15.75	2.35	21.75	1.01
4.00	1.34	10.00	3.69	16.00	1.68	22.00	1.01
4.25	1.34	10.25	4.02	16.25	1.34	22.25	1.01
4.50	1.34	10.50	5.03	16.50	1.68	22.50	1.01
4.75	1.34	10.75	5.36	16.75	1.34	22.75	1.01
5.00	1.34	11.00	8.04	17.00	1.68	23.00	1.01
5.25	1.34	11.25	8.04	17.25	1.34	23.25	1.01
5.50	1.34	11.50	24.80	17.50	1.68	23.50	1.01
5.75	1.34	11.75	102.57	17.75	1.34	23.75	1.01
6.00	1.34	12.00	12.07	18.00	1.68		

CALIB	
NASHVD (0202)	
ID= 1 DT= 2.0 min	Area (ha)= 1.63 Curve Number (CN)= 44.1
	Ia (mm)= 9.62 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.033	1.01	6.000	1.34	11.967	12.07	17.93	1.68
0.067	1.01	6.033	1.68	12.000	12.07	18.20	1.68
0.100	1.01	6.067	1.68	12.033	12.07	18.00	1.68
0.133	1.01	6.100	1.68	12.067	12.07	18.03	1.34
0.167	1.01	6.133	1.68	12.100	12.07	18.07	1.34
0.200	1.01	6.167	1.68	12.133	12.07	18.10	1.34
0.233	1.01	6.200	1.68	12.167	12.07	18.13	1.34
0.267	0.84	6.233	1.68	12.200	12.07	18.17	1.34
0.300	0.67	6.267	1.51	12.233	12.07	18.20	1.34
0.333	0.67	6.300	1.34	12.267	9.21	18.23	1.34
0.367	0.67	6.333	1.34	12.300	6.37	18.27	1.51
0.400	0.67	6.367	1.34	12.333	3.37	18.30	1.68
0.433	0.67	6.400	1.34	12.367	6.37	18.33	1.68
0.467	0.67	6.433	1.34	12.400	6.37	18.37	1.68
0.500	0.67	6.467	1.34	12.433	6.37	18.40	1.68
0.533	1.01	6.500	1.34	12.467	6.37	18.43	1.68
0.567	1.01	6.533	1.68	12.500	6.37	18.47	1.68
0.600	1.01	6.567	1.68	12.533	6.03	18.50	1.68
0.633	1.01	6.600	1.68	12.567	6.03	18.53	1.34
0.667	1.01	6.633	1.68	12.600	6.03	18.57	1.34
0.700	1.01	6.667	1.68	12.633	6.03	18.60	1.34
0.733	1.01	6.700	1.68	12.667	6.03	18.63	1.34
0.767	1.01	6.733	1.68	12.700	6.03	18.67	1.34
0.800	1.01	6.767	1.68	12.733	6.03	18.70	1.34
0.833	1.01	6.800	1.68	12.767	5.36	18.73	1.34
0.867	1.01	6.833	1.68	12.800	4.69	18.77	1.51
0.900	1.01	6.867	1.68	12.833	4.69	18.80	1.68
0.933	1.01	6.900	1.68	12.867	4.69	18.83	1.68
0.967	1.01	6.933	1.68	12.900	4.69	18.87	1.68
1.000	1.01	6.967	1.68	12.933	4.69	18.90	1.68
1.033	1.01	7.000	1.68	12.967	4.69	18.93	1.68
1.067	1.01	7.033	2.01	13.000	4.69	18.97	1.68
1.100	1.01	7.067	2.01	13.033	3.36	19.00	1.68
1.133	1.01	7.100	2.01	13.067	4.36	19.03	1.34
1.167	1.01	7.133	2.01	13.100	4.36	19.07	1.34
1.200	1.01	7.167	2.01	13.133	4.36	19.10	1.34
1.233	1.01	7.200	2.01	13.167	4.36	19.13	1.34
1.267	0.84	7.233	2.01	13.200	4.36	19.17	1.34
1.300	0.67	7.267	1.84	13.233	4.36	19.20	1.34
1.333	0.67	7.300	1.68	13.267	4.02	19.23	1.34
1.367	0.67	7.333	1.68	13.300	3.69	19.27	1.51
1.400	0.67	7.367	1.68	13.333	3.69	19.30	1.68
1.433	0.67	7.400	1.68	13.367	3.69	19.33	1.68
1.467	0.67	7.433	1.68	13.400	3.69	19.37	1.68
1.500	0.67	7.467	1.68	13.433	3.69	19.40	1.68
1.533	1.01	7.500	1.68	13.467	3.69	19.43	1.68
1.567	1.01	7.533	2.01	13.500	3.69	19.47	1.68
1.600	1.01	7.567	2.01	13.533	3.35	19.50	1.68
1.633	1.01	7.600	2.01	13.567	3.35	19.53	1.34
1.667	1.01	7.633	2.01	13.600	3.35	19.57	1.34
1.700	1.01	7.667	2.01	13.633	3.35	19.60	1.34
1.733	1.01	7.700	2.01	13.667	3.35	19.63	1.34
1.767	1.01	7.733	2.01	13.700	3.35	19.67	1.34
1.800	1.01	7.767	2.01	13.733	3.35	19.70	1.34
1.833	1.01	7.800	2.01	13.767	3.02	19.73	1.34
1.867	1.01	7.833	2.01	13.800	2.68	19.77	1.17
1.900	1.01	7.867	2.01	13.833	2.68	19.80	1.01
1.933	1.01	7.900	2.01	13.867	2.68	19.83	1.01
1.967	1.01	7.933	2.01	13.900	2.68	19.87	1.01
2.000	1.01	7.967	2.01	13.933	2.68	19.90	1.01
2.033	1.34	8.000	2.01	13.967	2.68	19.93	1.01
2.067	1.34	8.033	2.35	14.000	2.68	19.97	1.01
2.100	1.34	8.067	2.35	14.033	2.35	20.00	1.01
2.133	1.34	8.100	2.35	14.067	2.35	20.03	1.01
2.167	1.34	8.133	2.35	14.100	2.35	20.07	1.01
2.200	1.34	8.167	2.35	14.133	2.35	20.10	1.01
2.233	1.34	8.200	2.35	14.167	2.35	20.13	1.01
2.267	1.17	8.233	2.35	14.200	2.35	20.17	1.01
2.300	1.01	8.267	2.35	14.233	2.35	20.20	1.01
2.333	1.01	8.300	2.35	14.267	2.51	20.23	1.01
2.367	1.01	8.333	2.35	14.300	2.68	20.27	1.01
2.400	1.01	8.367	2.35	14.333	2.68	20.30	1.01

2.433	1.01	8.400	2.35	14.367	2.68	20.33	1.01
2.467	1.01	8.433	2.35	14.400	2.68	20.37	1.01
2.500	1.01	8.467	2.35	14.433	2.68	20.40	1.01
2.533	1.01	8.500	2.35	14.467	2.68	20.43	1.01
2.567	1.01	8.533	2.35	14.500	2.68	20.47	1.01
2.600	1.01	8.567	2.35	14.533	2.35	20.50	1.01
2.633	1.01	8.600	2.35	14.567	2.35	20.53	1.01
2.667	1.01	8.633	2.35	14.600	2.35	20.57	1.01
2.700	1.01	8.667	2.35	14.633	2.35	20.60	1.01
2.733	1.01	8.700	2.35	14.667	2.35	20.63	1.01
2.767	1.01	8.733	2.35	14.700	2.35	20.67	1.01
2.800	1.01	8.767	2.51	14.733	2.35	20.70	1.01
2.833	1.01	8.800	2.68	14.767	2.51	20.73	1.01
2.867	1.01	8.833	2.68	14.800	2.68	20.77	1.01
2.900	1.01	8.867	2.68	14.833	2.68	20.80	1.01
2.933	1.01	8.900	2.68	14.867	2.68	20.83	1.01
2.967	1.01	8.933	2.68	14.900	2.68	20.87	1.01
3.000	1.01	8.967	2.68	14.933	2.68	20.90	1.01
3.033	1.34	9.000	2.68	14.967	2.68	20.93	1.01
3.067	1.34	9.033	2.68	15.000	2.68	20.97	1.01
3.100	1.34	9.067	2.68	15.033	2.35	21.00	1.01
3.133	1.34	9.100	2.68	15.067	2.35	21.03	1.01
3.167	1.34	9.133	2.68	15.100	2.35	21.07	1.01
3.200	1.34	9.167	2.68	15.133	2.35	21.10	1.01
3.233	1.34	9.200	2.68	15.167	2.35	21.13	1.01
3.267	1.17	9.233	2.68	15.200	2.35	21.17	1.01
3.300	1.01	9.267	2.85	15.233	2.35	21.20	1.01
3.333	1.01	9.300	3.02	15.267	2.51	21.23	1.01
3.367	1.01	9.333	3.02	15.300	2.68	21.27	1.01
3.400	1.01	9.367	3.02	15.333	2.68	21.30	1.01
3.433	1.01	9.400	3.02	15.367	2.68	21.33	1.01
3.467	1.01	9.433	3.02	15.400	2.68	21.37	1.01
3.500	1.01	9.467	3.02	15.433	2.68	21.40	1.01
3.533	1.01	9.500	3.02	15.467	2.68	21.43	1.01
3.567	1.01	9.533	3.02	15.500	2.68	21.47	1.01
3.600	1.01	9.567	3.02	15.533	2.35	21.50	1.01
3.633	1.01	9.600	3.02	15.567	2.35	21.53	1.01
3.667	1.01	9.633	3.02	15.600	2.35	21.57	1.01
3.700	1.01	9.667	3.02	15.633	2.35	21.60	1.01
3.733	1.01	9.700	3.02	15.667	2.35	21.63	1.01
3.767	1.17	9.733	3.02	15.700	2.35	21.67	1.01
3.800	1.34	9.767	3.35	15.733	2.35	21.70	1.01
3.833	1.34	9.800	3.69	15.767	2.01	21.73	1.01
3.867	1.34	9.833	3.69	15.800	1.68	21.77	1.01
3.900	1.34	9.867	3.69	15.833	1.68	21.80	1.01
3.933	1.34	9.900	3.69	15.867	1.68	21.83	1.01
3.967	1.34	9.933	3.69	15.900	1.68	21.87	1.01
4.000	1.34	9.967	3.69	15.933	1.68	21.90	1.01
4.033	1.34	10.000	3.69	15.967	1.68	21.93	1.01
4.067	1.34	10.033	4.02	16.000	1.68	21.97	1.01
4.100	1.34	10.067	4.02	16.033	1.34	22.00	1.01
4.133	1.34	10.100	4.02	16.067	1.34	22.03	1.01
4.167	1.34	10.133	4.02	16.100	1.34	22.07	1.01
4.200	1.34	10.167	4.02	16.133	1.34	22.10	1.01
4.233	1.34	10.200	4.02	16.167	1.34	22.13	1.01
4.267	1.34	10.233	4.02	16.200	1.34	22.17	1.01
4.300	1.34	10.267	4.53	16.233	1.34	22.20	1.01
4.333	1.34	10.300	4.53	16.267	1.34	22.23	1.01
4.367	1.34	10.333	5.03	16.300	1.68	22.27	1.01
4.400	1.34	10.367	5.03	16.333	1.68	22.30	1.01
4.433	1.34	10.400	5.03	16.367	1.68	22.33	1.01
4.467	1.34	10.433	5.03	16.400	1.68	22.37	1.01
4.500	1.34	10.467	5.03	16.433	1.68	22.40	1.01
4.533	1.34	10.500	5.03	16.467	1.68	22.43	1.01
4.567	1.34	10.533	5.03	16.500	1.68	22.47	1.01
4.600	1.34	10.567	5.36	16.533	1.34	22.50	1.01
4.633	1.34	10.600	5.36	16.567	1.34	22.53	1.01
4.667	1.34	10.633	5.36	16.600	1.34	22.57	1.01
4.700	1.34	10.667	5.36	16.633	1.34	22.60	1.01
4.733	1.34	10.700	5.36	16.667	1.34	22.63	1.01
4.767	1.34	10.733	5.36	16.700	1.34	22.67	1.01
4.800	1.34	10.767	5.36	16.733	1.34	22.70	1.01
4.833	1.34	10.800	5.84	16.767	1.51	22.73	1.01
4.867	1.34	10.833	5.84	16.800	1.68	22.77	1.01
4.900	1.34	10.867	5.84	16.833	1.68	22.80	1.01
4.933	1.34	10.900	5.84	16.867	1.68	22.83	1.01
4.967	1.34	10.933	5.84	16.900	1.68	22.87	1.01
5.000	1.34	10.967	5.84	16.933	1.68	22.90	1.01
5.033	1.34	11.000	5.84	16.967	1.68	22.93	1.01
5.067	1.34	11.033	5.84	17.000	1.68	22.97	1.01
5.100	1.34	11.067	5.84	17.033	1.34	23.00	1.01
5.133	1.34	11.100	5.84	17.067	1.34	23.03	1.01
5.167	1.34	11.133	5.84	17.100	1.34	23.07	1.01
5.200	1.34	11.167	5.84	17.133	1.34	23.10	1.01
5.233	1.34	11.200	5.84	17.167	1.34	23.13	1.01
5.267	1.34	11.233	5.84	17.200	1.34	23.17	1.01
5.300	1.34	11.267	16.44	17.233	1.34	23.20	1.01
5.333	1.34	11.300	24.80	17.267	1.51	23.23	1.01
5.367	1.34	11.333	24.80	17.300	1.51	23.27	1.01
5.400	1.34	11.367	24.80	17.333	1.51	23.30	1.01
5.433	1.34	11.400	24.80	17.367	1.68	23.33	1.01
5.467	1.34	11.433	24.80	17.400	1.68	23.37	1.01
5.500	1.34	11.467	24.80	17.433	1.68	23.40	1.01
5.533	1.34	11.500	24.80	17.467	1.68	23.43	1.01
5.567	1.34	11.533	102.57	17.500	1.68	23.47	1.01
5.600	1.34	11.567	102.57	17.533	1.68	23.50	1.01
5.633	1.34	11.600	102.57	17.567	1.68	23.53	1.01
5.667	1.34	11.633	102.57	17.600	1.34	23.57	1.01
5.700	1.34	11.667	102.57	17.633	1.34	23.60	1.01
5.733	1.34	11.700	102.57	17.667	1.34	23.63	1.01
5.767	1.34	11.733	102.57	17.700	1.34	23.67	1.01
5.800	1.34	11.767	12.28	17.733	1.34	23.70	1.01
5.833	1.34	11.800	12.28	17.767	1.34	23.73	1.01
5.867	1.34	11.833	12.07	17.800	1.68	23.77	0.50

5.900 1.34 11.867 12.07 17.833 1.68 |
5.933 1.34 11.900 12.07 17.867 1.68 |
5.967 1.34 11.933 12.07 17.900 1.68 |
Unit Hyd Qpeak (cms)= 0.366
PEAK FLOW (cms)= 0.059 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 13.815
TOTAL RAINFALL (mm)= 83.548
RUNOFF COEFFICIENT = 0.165

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

CALIB
NASHYD (0203) | Area (ha)= 2.89 Curve Number (CN)= 42.9
ID= 1 DT= 2.0 min | Ia (mm)= 8.98 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.18

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.033 1.01 6.000 1.34 11.967 12.07 17.93 1.68
0.067 1.01 6.033 1.68 12.000 12.07 17.97 1.68
0.100 1.01 6.067 1.68 12.033 12.07 18.00 1.68
0.133 1.01 6.100 1.68 12.067 12.07 18.03 1.34
0.167 1.01 6.133 1.68 12.100 12.07 18.07 1.34
0.200 1.01 6.167 1.68 12.133 12.07 18.10 1.34
0.233 1.01 6.200 1.68 12.167 12.07 18.13 1.34
0.267 0.84 6.233 1.68 12.200 12.07 18.17 1.34
0.300 0.67 6.267 1.51 12.233 12.07 18.20 1.34
0.333 1.01 6.300 1.34 12.267 9.21 18.23 1.34
0.367 0.67 6.333 1.34 12.300 6.37 18.27 1.51
0.400 0.67 6.367 1.34 12.333 6.37 18.30 1.68
0.433 0.67 6.400 1.34 12.367 6.37 18.33 1.68
0.467 0.67 6.433 1.34 12.400 6.37 18.37 1.68
0.500 0.67 6.467 1.34 12.433 6.37 18.40 1.68
0.533 1.01 6.500 1.34 12.467 6.37 18.43 1.68
0.567 1.01 6.533 1.68 12.500 6.37 18.47 1.68
0.600 1.01 6.567 1.68 12.533 6.03 18.50 1.68
0.633 1.01 6.600 1.68 12.567 6.03 18.53 1.34
0.667 1.01 6.633 1.68 12.600 6.03 18.57 1.34
0.700 1.01 6.667 1.68 12.633 6.03 18.60 1.34
0.733 1.01 6.700 1.68 12.667 6.03 18.63 1.34
0.767 1.01 6.733 1.68 12.700 6.03 18.67 1.34
0.800 1.01 6.767 1.68 12.733 6.03 18.70 1.34
0.833 1.01 6.800 1.68 12.767 5.36 18.73 1.34
0.867 1.01 6.833 1.68 12.800 4.69 18.77 1.51
0.900 1.01 6.867 1.68 12.833 4.69 18.80 1.68
0.933 1.01 6.900 1.68 12.867 4.69 18.83 1.68
0.967 1.01 6.933 1.68 12.900 4.69 18.87 1.68
1.000 1.01 6.967 1.68 12.933 4.69 18.90 1.68
1.033 1.01 7.000 1.68 12.967 4.69 18.93 1.68
1.067 1.01 7.033 2.01 13.000 4.69 18.97 1.68
1.100 1.01 7.067 2.01 13.033 4.36 19.00 1.68
1.133 1.01 7.100 2.01 13.067 4.36 19.03 1.34
1.167 1.01 7.133 2.01 13.100 4.36 19.07 1.34
1.200 1.01 7.167 2.01 13.133 4.36 19.10 1.34
1.233 1.01 7.200 2.01 13.167 4.36 19.13 1.34
1.267 0.84 7.233 2.01 13.200 4.36 19.17 1.34
1.300 0.67 7.267 1.84 13.233 4.36 19.20 1.34
1.333 0.67 7.300 1.68 13.267 4.02 19.23 1.34
1.367 0.67 7.333 1.68 13.300 3.69 19.27 1.51
1.400 0.67 7.367 1.68 13.333 3.69 19.30 1.68
1.433 0.67 7.400 1.68 13.367 3.69 19.33 1.68
1.467 0.67 7.433 1.68 13.400 3.69 19.37 1.68
1.500 0.67 7.467 1.68 13.433 3.69 19.40 1.68
1.533 1.01 7.500 1.68 13.467 3.69 19.43 1.68
1.567 1.01 7.533 2.01 13.500 3.69 19.47 1.68
1.600 1.01 7.567 2.01 13.533 3.35 19.50 1.68
1.633 1.01 7.600 2.01 13.567 3.35 19.53 1.34
1.667 1.01 7.633 2.01 13.600 3.35 19.57 1.34
1.700 1.01 7.667 2.01 13.633 3.35 19.60 1.34
1.733 1.01 7.700 2.01 13.667 3.35 19.63 1.34
1.767 1.01 7.733 2.01 13.700 3.35 19.67 1.34
1.800 1.01 7.767 2.01 13.733 3.35 19.70 1.34
1.833 1.01 7.800 2.01 13.767 3.02 19.73 1.34
1.867 1.01 7.833 2.01 13.800 2.68 19.77 1.17
1.900 1.01 7.867 2.01 13.833 2.68 19.80 1.01
1.933 1.01 7.900 2.01 13.867 2.68 19.83 1.01
1.967 1.01 7.933 2.01 13.900 2.68 19.87 1.01
2.000 1.01 7.967 2.01 13.933 2.68 19.90 1.01
2.033 1.34 8.000 2.02 13.967 2.68 19.93 1.01
2.067 1.34 8.033 2.35 14.000 2.68 19.97 1.01
2.100 1.34 8.067 2.35 14.033 2.35 20.00 1.01
2.133 1.34 8.100 2.35 14.067 2.35 20.03 1.01
2.167 1.34 8.133 2.35 14.100 2.35 20.07 1.01
2.200 1.34 8.167 2.35 14.133 2.35 20.10 1.01
2.233 1.34 8.200 2.35 14.167 2.35 20.13 1.01
2.267 1.17 8.233 2.35 14.200 2.35 20.17 1.01
2.300 1.01 8.267 2.35 14.233 2.35 20.20 1.01
2.333 1.01 8.300 2.35 14.267 2.51 20.23 1.01
2.367 1.01 8.333 2.35 14.300 2.68 20.27 1.01
2.400 1.01 8.367 2.35 14.333 2.68 20.30 1.01
2.433 1.01 8.400 2.35 14.367 2.68 20.33 1.01
2.467 1.01 8.433 2.35 14.400 2.68 20.37 1.01
2.500 1.01 8.467 2.35 14.433 2.68 20.40 1.01
2.533 1.01 8.500 2.35 14.467 2.68 20.43 1.01
2.567 1.01 8.533 2.35 14.500 2.68 20.47 1.01

2.600 1.01 8.567 2.35 14.533 2.35 20.50 1.01
2.633 1.01 8.600 2.35 14.567 2.35 20.53 1.01
2.667 1.01 8.633 2.35 14.600 2.35 20.57 1.01
2.700 1.01 8.667 2.35 14.633 2.35 20.60 1.01
2.733 1.01 8.700 2.35 14.667 2.35 20.63 1.01
2.767 1.01 8.733 2.35 14.700 2.35 20.67 1.01
2.800 1.01 8.767 2.51 14.733 2.35 20.70 1.01
2.833 1.01 8.800 2.68 14.767 2.51 20.73 1.01
2.867 1.01 8.833 2.68 14.800 2.68 20.77 1.01
2.900 1.01 8.867 2.68 14.833 2.68 20.80 1.01
2.933 1.01 8.900 2.68 14.867 2.68 20.83 1.01
2.967 1.01 8.933 2.68 14.900 2.68 20.87 1.01
3.000 1.01 8.967 2.68 14.933 2.68 20.90 1.01
3.033 1.34 9.000 2.68 14.967 2.68 20.93 1.01
3.067 1.34 9.033 2.68 15.000 2.68 20.97 1.01
3.100 1.34 9.067 2.68 15.033 2.35 21.00 1.01
3.133 1.34 9.100 2.68 15.067 2.35 21.03 1.01
3.167 1.34 9.133 2.68 15.100 2.35 21.07 1.01
3.200 1.34 9.167 2.68 15.133 2.35 21.10 1.01
3.233 1.34 9.200 2.68 15.167 2.35 21.13 1.01
3.267 1.17 9.233 2.68 15.200 2.35 21.17 1.01
3.300 1.01 9.267 2.85 15.233 2.35 21.20 1.01
3.333 1.01 9.300 3.02 15.267 2.51 21.23 1.01
3.367 1.01 9.333 3.02 15.300 2.68 21.27 1.01
3.400 1.01 9.367 3.02 15.333 2.68 21.30 1.01
3.433 1.01 9.400 3.02 15.367 2.68 21.33 1.01
3.467 1.01 9.433 3.02 15.400 2.68 21.37 1.01
3.500 1.01 9.467 3.02 15.433 2.68 21.40 1.01
3.533 1.01 9.500 3.02 15.467 2.68 21.43 1.01
3.567 1.01 9.533 3.02 15.500 2.68 21.47 1.01
3.600 1.01 9.567 3.02 15.533 2.35 21.50 1.01
3.633 1.01 9.600 3.02 15.567 2.35 21.53 1.01
3.667 1.01 9.633 3.02 15.600 2.35 21.57 1.01
3.700 1.01 9.667 3.02 15.633 2.35 21.60 1.01
3.733 1.01 9.700 3.02 15.667 2.35 21.63 1.01
3.767 1.17 9.733 3.02 15.700 2.35 21.67 1.01
3.800 1.34 9.767 3.15 15.733 2.35 21.70 1.01
3.833 1.34 9.800 3.69 15.767 2.01 21.73 1.01
3.867 1.34 9.833 3.69 15.800 1.68 21.77 1.01
3.900 1.34 9.867 3.69 15.833 1.68 21.80 1.01
3.933 1.34 9.900 3.69 15.867 1.68 21.83 1.01
3.967 1.34 9.933 3.69 15.900 1.68 21.87 1.01
4.000 1.34 9.967 3.69 15.933 1.68 21.90 1.01
4.033 1.34 10.000 3.69 15.967 1.68 21.93 1.01
4.067 1.34 10.033 4.02 16.000 1.68 21.97 1.01
4.100 1.34 10.067 4.02 16.033 1.34 22.00 1.01
4.133 1.34 10.100 4.02 16.067 1.34 22.03 1.01
4.167 1.34 10.133 4.02 16.100 1.34 22.07 1.01
4.200 1.34 10.167 4.02 16.133 1.34 22.10 1.01
4.233 1.34 10.200 4.02 16.167 1.34 22.13 1.01
4.267 1.34 10.233 4.02 16.200 1.34 22.17 1.01
4.300 1.34 10.267 4.53 16.233 1.34 22.20 1.01
4.333 1.34 10.300 5.03 16.267 1.51 22.23 1.01
4.367 1.34 10.333 5.03 16.300 1.68 22.27 1.01
4.400 1.34 10.367 5.03 16.333 1.68 22.30 1.01
4.433 1.34 10.400 5.03 16.367 1.68 22.33 1.01
4.467 1.34 10.433 5.03 16.400 1.68 22.37 1.01
4.500 1.34 10.467 5.03 16.433 1.68 22.40 1.01
4.533 1.34 10.500 5.03 16.467 1.68 22.43 1.01
4.567 1.34 10.533 5.36 16.500 1.68 22.47 1.01
4.600 1.34 10.567 5.36 16.533 1.34 22.50 1.01
4.633 1.34 10.600 5.36 16.567 1.34 22.53 1.01
4.667 1.34 10.633 5.36 16.600 1.34 22.57 1.01
4.700 1.34 10.667 5.36 16.633 1.34 22.60 1.01
4.733 1.34 10.700 5.36 16.667 1.34 22.63 1.01
4.767 1.34 10.733 5.36 16.700 1.34 22.67 1.01
4.800 1.34 10.767 6.71 16.733 1.34 22.70 1.01
4.833 1.34 10.800 8.04 16.767 1.51 22.73 1.01
4.867 1.34 10.833 8.04 16.800 1.68 22.77 1.01
4.900 1.34 10.867 8.04 16.833 1.68 22.80 1.01
4.933 1.34 10.900 8.04 16.867 1.68 22.83 1.01
4.967 1.34 10.933 8.04 16.900 1.68 22.87 1.01
5.000 1.34 10.967 8.04 16.933 1.68 22.90 1.01
5.033 1.34 11.000 8.04 16.967 1.68 22.93 1.01
5.067 1.34 11.033 8.04 17.000 1.68 22.97 1.01
5.100 1.34 11.067 8.04 17.033 1.34 23.00 1.01
5.133 1.34 11.100 8.04 17.067 1.34 23.03 1.01
5.167 1.34 11.133 8.04 17.100 1.34 23.07 1.01
5.200 1.34 11.167 8.04 17.133 1.34 23.10 1.01
5.233 1.34 11.200 8.04 17.167 1.34 23.13 1.01
5.267 1.34 11.233 8.04 17.200 1.34 23.17 1.01
5.300 1.34 11.267 16.44 17.233 1.34 23.20 1.01
5.333 1.34 11.300 24.80 17.267 1.51 23.23 1.01
5.367 1.34 11.333 24.80 17.300 1.68 23.27 1.01
5.400 1.34 11.367 24.80 17.333 1.68 23.30 1.01
5.433 1.34 11.400 24.80 17.367 1.68 23.33 1.01
5.467 1.34 11.433 24.80 17.400 1.68 23.37 1.01
5.500 1.34 11.467 24.80 17.433 1.68 23.40 1.01
5.533 1.34 11.500 24.90 17.467 1.68 23.43 1.01
5.567 1.34 11.533 102.57 17.500 1.68 23.47 1.01
5.600 1.34 11.567 102.57 17.533 1.34 23.50 1.01
5.633 1.34 11.600 102.57 17.567 1.34 23.53 1.01
5.667 1.34 11.633 102.57 17.600 1.34 23.57 1.01
5.700 1.34 11.667 102.57 17.633 1.34 23.60 1.01
5.733 1.34 11.700 102.57 17.667 1.34 23.63 1.01
5.767 1.34 11.733 102.57 17.700 1.34 23.67 1.01
5.800 1.34 11.767 57.20 17.733 1.34 23.70 1.01
5.833 1.34 11.800 12.07 17.767 1.51 23.73 1.01
5.867 1.34 11.833 12.07 17.800 1.68 23.77 0.50
5.900 1.34 11.867 12.07 17.833 1.68 |
5.933 1.34 11.900 12.07 17.867 1.68 |
5.967 1.34 11.933 12.07 17.900 1.68 |

Unit Hyd Qpeak (cms)= 0.613

PEAK FLOW (cms)= 0.099 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 13.487
TOTAL RAINFALL (mm)= 83.548
RUNOFF COEFFICIENT = 0.161

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

| ADD WID (0057) |
1 + 2 = 3
ID1= 1 (0202): 1.63 0.059 11.83 13.82
+ ID2= 2 (0203): 2.80 0.059 11.83 13.40

ID = 3 (0057): 4.52 0.159 11.83 13.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0204) | Area (ha)= 0.64 Curve Number (CN)= 48.1
| ID# 1 DT= 2.0 min | Ia (mm)= 9.20 # of Linear Res. (N)= 3.00
U.H. Tp(hrs)= 0.33

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.033 1.01 6.000 1.34 11.967 12.07 17.93 1.68
0.067 1.01 6.033 1.68 12.000 12.07 17.97 1.68
0.100 1.01 6.067 1.68 12.033 12.07 18.00 1.68
0.133 1.01 6.100 1.68 12.067 12.07 18.03 1.34
0.167 1.01 6.133 1.68 12.100 12.07 18.07 1.34
0.200 1.01 6.167 1.68 12.133 12.07 18.10 1.34
0.233 1.01 6.200 1.68 12.167 12.07 18.13 1.34
0.267 0.84 6.233 1.68 12.200 12.07 18.17 1.34
0.300 0.67 6.267 1.51 12.233 12.07 18.20 1.34
0.333 0.67 6.300 1.34 12.267 9.21 18.23 1.34
0.367 0.67 6.333 1.34 12.300 6.37 18.27 1.51
0.400 0.67 6.367 1.34 12.333 6.37 18.30 1.68
0.433 0.67 6.400 1.34 12.367 6.37 18.33 1.68
0.467 0.67 6.433 1.34 12.400 6.37 18.37 1.68
0.500 0.67 6.467 1.34 12.433 6.37 18.40 1.68
0.533 1.01 6.500 1.34 12.467 6.37 18.43 1.68
0.567 1.01 6.533 1.68 12.500 6.37 18.47 1.68
0.600 1.01 6.567 1.68 12.533 6.03 18.50 1.68
0.633 1.01 6.600 1.68 12.567 6.03 18.53 1.34
0.667 1.01 6.633 1.68 12.600 6.03 18.57 1.34
0.700 1.01 6.667 1.68 12.633 6.03 18.60 1.34
0.733 1.01 6.700 1.68 12.667 6.03 18.63 1.34
0.767 1.01 6.733 1.68 12.700 6.03 18.67 1.34
0.800 1.01 6.767 1.68 12.733 6.03 18.70 1.34
0.833 1.01 6.800 1.68 12.767 5.36 18.73 1.34
0.867 1.01 6.833 1.68 12.800 4.69 18.77 1.51
0.900 1.01 6.867 1.68 12.833 4.69 18.80 1.68
0.933 1.01 6.900 1.68 12.867 4.69 18.83 1.68
0.967 1.01 6.933 1.68 12.900 4.69 18.87 1.68
1.000 1.01 6.967 1.68 12.933 4.69 18.90 1.68
1.033 1.01 7.000 1.68 12.967 4.69 18.93 1.68
1.067 1.01 7.033 2.01 13.000 4.69 18.97 1.68
1.100 1.01 7.067 2.01 13.033 4.36 19.00 1.68
1.133 1.01 7.100 2.01 13.067 4.36 19.03 1.34
1.167 1.01 7.133 2.01 13.100 4.36 19.07 1.34
1.200 1.01 7.167 2.01 13.133 4.36 19.10 1.34
1.233 2.01 7.200 2.01 13.167 4.36 19.13 1.34
1.267 0.84 7.233 2.01 13.200 4.36 19.17 1.34
1.300 0.67 7.267 1.84 13.233 4.36 19.20 1.34
1.333 0.67 7.300 1.68 13.267 4.02 19.23 1.34
1.367 0.67 7.333 1.68 13.300 3.69 19.27 1.51
1.400 0.67 7.367 1.68 13.333 3.69 19.30 1.68
1.433 0.67 7.400 1.68 13.367 3.69 19.33 1.68
1.467 0.67 7.433 1.68 13.400 3.69 19.37 1.68
1.500 0.67 7.467 1.68 13.433 3.69 19.40 1.68
1.533 1.01 7.500 1.68 13.467 3.69 19.43 1.68
1.567 1.01 7.533 2.01 13.500 3.69 19.47 1.68
1.600 1.01 7.567 2.01 13.533 3.35 19.50 1.68
1.633 1.01 7.600 2.01 13.567 3.35 19.53 1.34
1.667 1.01 7.633 2.01 13.600 3.35 19.57 1.34
1.700 1.01 7.667 2.01 13.633 3.35 19.60 1.34
1.733 1.01 7.700 2.01 13.667 3.35 19.63 1.34
1.767 1.01 7.733 2.01 13.700 3.35 19.67 1.34
1.800 1.01 7.767 2.01 13.733 3.35 19.70 1.34
1.833 1.01 7.800 2.01 13.767 3.02 19.73 1.34
1.867 1.01 7.833 2.01 13.800 2.68 19.77 1.17
1.900 1.01 7.867 2.01 13.833 2.68 19.80 1.01
1.933 1.01 7.900 2.01 13.867 2.68 19.83 1.01
1.967 1.01 7.933 2.01 13.900 2.68 19.87 1.01
2.000 1.01 7.967 2.01 13.933 2.68 19.90 1.01
2.033 1.34 8.000 2.01 13.967 2.68 19.93 1.01
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2.100 1.34 8.067 2.35 14.033 2.35 20.00 1.01
2.133 1.34 8.100 2.35 14.067 2.35 20.03 1.01
2.167 1.34 8.133 2.35 14.100 2.35 20.07 1.01
2.200 1.34 8.167 2.35 14.133 2.35 20.10 1.01
2.233 1.34 8.200 2.35 14.167 2.35 20.13 1.01
2.267 1.17 8.233 2.35 14.200 2.35 20.17 1.01
2.300 1.01 8.267 2.35 14.233 2.35 20.20 1.01
2.333 1.01 8.300 2.35 14.267 2.51 20.23 1.01

2.367 1.01 8.333 2.35 14.300 2.68 20.27 1.01
2.400 1.01 8.367 2.35 14.333 2.68 20.30 1.01
2.433 1.01 8.400 2.35 14.367 2.68 20.33 1.01
2.467 1.01 8.433 2.35 14.400 2.68 20.37 1.01
2.500 1.01 8.467 2.35 14.433 2.68 20.40 1.01
2.533 1.01 8.500 2.35 14.467 2.68 20.43 1.01
2.567 1.01 8.533 2.35 14.500 2.68 20.47 1.01
2.600 1.01 8.567 2.35 14.533 2.35 20.50 1.01
2.633 1.01 8.600 2.35 14.567 2.35 20.53 1.01
2.667 1.01 8.633 2.35 14.600 2.35 20.57 1.01
2.700 1.01 8.667 2.35 14.633 2.35 20.60 1.01
2.733 1.01 8.700 2.35 14.667 2.35 20.63 1.01
2.767 1.01 8.733 2.35 14.700 2.35 20.67 1.01
2.800 1.01 8.767 2.51 14.733 2.35 20.70 1.01
2.833 1.01 8.800 2.68 14.767 2.51 20.73 1.01
2.867 1.01 8.833 2.68 14.800 2.68 20.77 1.01
2.900 1.01 8.867 2.68 14.833 2.68 20.80 1.01
2.933 1.01 8.900 2.68 14.867 2.68 20.83 1.01
2.967 1.01 8.933 2.68 14.900 2.68 20.87 1.01
3.000 1.01 8.967 2.68 14.933 2.68 20.90 1.01
3.033 1.34 9.000 2.68 14.967 2.68 20.93 1.01
3.067 1.34 9.033 2.68 15.000 2.68 20.97 1.01
3.100 1.34 9.067 2.68 15.033 2.35 21.00 1.01
3.133 1.34 9.100 2.68 15.067 2.35 21.03 1.01
3.167 1.34 9.133 2.68 15.100 2.35 21.07 1.01
3.200 1.34 9.167 2.68 15.133 2.35 21.10 1.01
3.233 1.34 9.200 2.68 15.167 2.35 21.13 1.01
3.267 1.17 9.233 2.68 15.200 2.35 21.17 1.01
3.300 1.01 9.267 2.85 15.233 2.35 21.20 1.01
3.333 1.01 9.300 3.02 15.267 2.51 21.23 1.01
3.367 1.01 9.333 3.02 15.300 2.68 21.27 1.01
3.400 1.01 9.367 3.02 15.333 2.68 21.30 1.01
3.433 1.01 9.400 3.02 15.367 2.68 21.33 1.01
3.467 1.01 9.433 3.02 15.400 2.68 21.37 1.01
3.500 1.01 9.467 3.02 15.433 2.68 21.40 1.01
3.533 1.01 9.500 3.02 15.467 2.68 21.43 1.01
3.567 1.01 9.533 3.02 15.500 2.68 21.47 1.01
3.600 1.01 9.567 3.02 15.533 2.35 21.50 1.01
3.633 1.01 9.600 3.02 15.567 2.35 21.53 1.01
3.667 1.01 9.633 3.02 15.600 2.35 21.57 1.01
3.700 1.01 9.667 3.02 15.633 2.35 21.60 1.01
3.733 1.01 9.700 3.02 15.667 2.35 21.63 1.01
3.767 1.17 9.733 3.02 15.700 2.35 21.67 1.01
3.800 1.34 9.767 3.35 15.733 2.35 21.70 1.01
3.833 1.34 9.800 3.69 15.767 2.01 21.73 1.01
3.867 1.34 9.833 3.69 15.800 1.68 21.77 1.01
3.900 1.34 9.867 3.69 15.833 1.68 21.80 1.01
3.933 1.34 9.900 3.69 15.867 1.68 21.83 1.01
3.967 1.34 9.933 3.69 15.900 1.68 21.87 1.01
4.000 1.34 9.967 3.69 15.933 1.68 21.90 1.01
4.033 1.34 10.000 3.69 15.967 1.68 21.93 1.01
4.067 1.34 10.033 4.02 16.000 1.68 21.97 1.01
4.100 1.34 10.067 4.02 16.033 1.34 22.00 1.01
4.133 1.34 10.100 4.02 16.067 1.34 22.03 1.01
4.167 1.34 10.133 4.02 16.100 1.34 22.07 1.01
4.200 1.34 10.167 4.02 16.133 1.34 22.10 1.01
4.233 1.34 10.200 4.02 16.167 1.34 22.13 1.01
4.267 1.34 10.233 4.02 16.200 1.34 22.17 1.01
4.300 1.34 10.267 4.53 16.233 1.34 22.20 1.01
4.333 1.34 10.300 5.03 16.267 1.51 22.23 1.01
4.367 1.34 10.333 5.03 16.300 1.68 22.27 1.01
4.400 1.34 10.367 5.03 16.333 1.68 22.30 1.01
4.433 1.34 10.400 5.03 16.367 1.68 22.33 1.01
4.467 1.34 10.433 5.03 16.400 1.68 22.37 1.01
4.500 1.34 10.467 5.03 16.433 1.68 22.40 1.01
4.533 1.34 10.500 5.03 16.467 1.68 22.43 1.01
4.567 1.34 10.533 5.36 16.500 1.68 22.47 1.01
4.600 1.34 10.567 5.36 16.533 1.34 22.50 1.01
4.633 1.34 10.600 5.36 16.567 1.34 22.53 1.01
4.667 1.34 10.633 5.36 16.600 1.34 22.57 1.01
4.700 1.34 10.667 5.36 16.633 1.34 22.60 1.01
4.733 1.34 10.700 5.36 16.667 1.34 22.63 1.01
4.767 1.34 10.733 5.36 16.700 1.34 22.67 1.01
4.800 1.34 10.767 6.71 16.733 1.34 22.70 1.01
4.833 1.34 10.800 8.04 16.767 1.51 22.73 1.01
4.867 1.34 10.833 8.04 16.800 1.68 22.77 1.01
4.900 1.34 10.867 8.04 16.833 1.68 22.80 1.01
4.933 1.34 10.900 8.04 16.867 1.68 22.83 1.01
4.967 1.34 10.933 8.04 16.900 1.68 22.87 1.01
5.000 1.34 10.967 8.04 16.933 1.68 22.90 1.01
5.033 1.34 11.000 8.04 16.967 1.68 22.93 1.01
5.067 1.34 11.033 8.04 17.000 1.68 22.97 1.01
5.100 1.34 11.067 8.04 17.033 1.34 23.00 1.01
5.133 1.34 11.100 8.04 17.067 1.34 23.03 1.01
5.167 1.34 11.133 8.04 17.100 1.34 23.07 1.01
5.200 1.34 11.167 8.04 17.133 1.34 23.10 1.01
5.233 1.34 11.200 8.04 17.167 1.34 23.13 1.01
5.267 1.34 11.233 8.04 17.200 1.34 23.17 1.01
5.300 1.34 11.267 16.44 17.233 1.34 23.20 1.01
5.333 1.34 11.300 24.80 17.267 1.51 23.23 1.01
5.367 1.34 11.333 24.80 17.300 1.68 23.27 1.01
5.400 1.34 11.367 24.80 17.333 1.68 23.30 1.01
5.433 1.34 11.400 24.80 17.367 1.68 23.33 1.01
5.467 1.34 11.433 24.80 17.400 1.68 23.37 1.01
5.500 1.34 11.467 24.80 17.433 1.68 23.40 1.01
5.533 1.34 11.500 24.90 17.467 1.68 23.43 1.01
5.567 1.34 11.533 102.57 17.500 1.68 23.47 1.01
5.600 1.34 11.567 102.57 17.533 1.34 23.50 1.01
5.633 1.34 11.600 102.57 17.567 1.34 23.53 1.01
5.667 1.34 11.633 102.57 17.600 1.34 23.57 1.01
5.700 1.34 11.667 102.57 17.633 1.34 23.60 1.01
5.733 1.34 11.700 102.57 17.667 1.34 23.63 1.01
5.767 1.34 11.733 102.57 17.700 1.34 23.67 1.01
5.800 1.34 11.767 57.20 17.733 1.34 23.70 1.01

5.833 1.34 11.800 12.07 17.767 1.51 23.73 1.01
5.867 1.34 11.833 12.07 17.800 1.68 23.77 0.50
5.900 1.34 11.867 12.07 17.833 1.68 23.80 1.01
5.933 1.34 11.900 12.07 17.867 1.68 23.83 1.01
5.967 1.34 11.933 12.07 17.900 1.68 23.86 1.01

Unit Hyd Qpeak (cms)= 0.074

PEAK FLOW (cms)= 0.017 (1)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 15.854
TOTAL RAINFALL (mm)= 83.548
RUNOFF COEFFICIENT = 0.190

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

| ADD HYD (0058) |
1 + 2 = 3
ID= 1 (0204): AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
+ ID2= 2 (0057): 0.64 0.017 12.00 15.85
0.52 0.159 11.83 13.61
=====

ID = 3 (0058): 5.16 0.173 11.83 13.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0201) |
ID= 1 DT= 5.0 min
Area (ha)= 2.20
Total Imp(%)= 43.00 Dir. Conn.(%)= 21.00

IMPERVIOUS PERVIOUS (1)

Surface Area (ha)= 0.95 1.25
Dep. Storage (mm)= 1.00 1.00
Average Slope (%)= 1.00 1.00
Length (m)= 121.11 40.00
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 1.01 6.083 1.68 12.083 12.07 18.08 1.34
0.167 1.01 6.167 1.68 12.167 12.07 18.17 1.34
0.250 1.01 6.250 1.68 12.250 12.07 18.25 1.34
0.333 0.67 6.333 1.34 12.333 6.37 18.33 1.68
0.417 0.67 6.417 1.34 12.417 6.37 18.42 1.68
0.500 0.67 6.500 1.34 12.500 6.37 18.50 1.68
0.583 1.01 6.583 1.68 12.583 6.03 18.58 1.34
0.667 1.01 6.667 1.68 12.667 6.03 18.67 1.34
0.750 1.01 6.750 1.68 12.750 6.03 18.75 1.34
0.833 1.01 6.833 1.68 12.833 4.69 18.83 1.68
0.917 1.01 6.917 1.68 12.917 4.69 18.92 1.68
1.000 1.01 7.000 1.68 13.000 4.69 19.00 1.68
1.083 1.01 7.083 2.01 13.083 4.36 19.08 1.34
1.167 1.01 7.167 2.01 13.167 4.36 19.17 1.34
1.250 1.01 7.250 2.01 13.250 4.36 19.25 1.34
1.333 0.67 7.333 1.68 13.333 3.69 19.33 1.68
1.417 0.67 7.417 1.68 13.417 3.69 19.42 1.68
1.500 0.67 7.500 1.68 13.500 3.69 19.50 1.68
1.583 1.01 7.583 2.01 13.583 3.35 19.58 1.34
1.667 1.01 7.667 2.01 13.667 3.35 19.67 1.34
1.750 1.01 7.750 2.01 13.750 3.35 19.75 1.34
1.833 1.01 7.833 2.01 13.833 2.68 19.83 1.01
1.917 1.01 7.917 2.01 13.917 2.68 19.92 1.01
2.000 2.01 8.000 2.02 14.000 2.68 20.00 1.01
2.083 1.34 8.083 2.35 14.083 2.35 20.08 1.01
2.167 1.34 8.167 2.35 14.167 2.35 20.17 1.01
2.250 1.34 8.250 2.35 14.250 2.35 20.25 1.01
2.333 1.01 8.333 2.35 14.333 2.68 20.33 1.01
2.417 1.01 8.417 2.35 14.417 2.68 20.42 1.01
2.500 1.01 8.500 2.35 14.500 2.68 20.50 1.01
2.583 1.01 8.583 2.35 14.583 2.35 20.58 1.01
2.667 1.01 8.667 2.35 14.667 2.35 20.67 1.01
2.750 1.01 8.750 2.35 14.750 2.35 20.75 1.01
2.833 1.01 8.833 2.68 14.833 2.68 20.83 1.01
2.917 1.01 8.917 2.68 14.917 2.68 20.92 1.01
3.000 1.01 9.000 2.68 15.000 2.68 21.00 1.01
3.083 1.34 9.083 2.68 15.083 2.35 21.08 1.01
3.167 1.34 9.167 2.68 15.167 2.35 21.17 1.01
3.250 1.34 9.250 2.68 15.250 2.35 21.25 1.01
3.333 1.01 9.333 3.02 15.333 2.68 21.33 1.01
3.417 1.01 9.417 3.02 15.417 2.68 21.42 1.01
3.500 1.01 9.500 3.02 15.500 2.68 21.50 1.01
3.583 1.01 9.583 3.02 15.583 2.35 21.58 1.01
3.667 1.01 9.667 3.02 15.667 2.35 21.67 1.01
3.750 1.01 9.750 3.02 15.750 2.35 21.75 1.01
3.833 1.34 9.833 3.69 15.833 1.68 21.83 1.01
3.917 1.34 9.917 3.69 15.917 1.68 21.92 1.01
4.000 1.34 10.000 3.69 16.000 1.68 22.00 1.01
4.083 1.34 10.083 4.02 16.083 1.34 22.08 1.01
4.167 1.34 10.167 4.02 16.167 1.34 22.17 1.01
4.250 1.34 10.250 4.02 16.250 1.34 22.25 1.01
4.333 1.34 10.333 5.03 16.333 1.68 22.33 1.01
4.417 1.34 10.417 5.03 16.417 1.68 22.42 1.01
4.500 1.34 10.500 5.03 16.500 1.68 22.50 1.01
4.583 1.34 10.583 5.36 16.583 1.34 22.58 1.01
4.667 1.34 10.667 5.36 16.667 1.34 22.67 1.01
4.750 1.34 10.750 5.36 16.750 1.34 22.75 1.01

4.833 1.34 10.833 8.04 16.833 1.68 22.83 1.01
4.917 1.34 10.917 8.04 16.917 1.68 22.92 1.01
5.000 1.34 11.000 8.04 17.000 1.68 23.00 1.01
5.083 1.34 11.083 8.04 17.083 1.34 23.08 1.01
5.167 1.34 11.167 8.04 17.167 1.34 23.17 1.01
5.250 1.34 11.250 8.04 17.250 1.34 23.25 1.01
5.333 1.34 11.333 24.00 17.333 1.68 23.33 1.01
5.417 1.34 11.417 24.00 17.417 1.68 23.42 1.01
5.500 1.34 11.500 24.00 17.500 1.68 23.50 1.01
5.583 1.34 11.583 102.56 17.583 1.34 23.58 1.01
5.667 1.34 11.667 102.57 17.667 1.34 23.67 1.01
5.750 1.34 11.750 102.57 17.750 1.34 23.75 1.01
5.833 1.34 11.833 12.00 17.833 1.68 23.80 1.01
5.917 1.34 11.917 12.07 17.917 1.68 23.83 1.01
6.000 1.34 12.000 12.07 18.000 1.68 23.86 1.01

Max.Eff.Inten.(mm/hr)= 102.57 133.87
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.84 (11) 10.57 (11)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.09

PEAK FLOW (cms)= 0.13 0.31
TIME TO PEAK (hrs)= 11.75 11.83
RUNOFF VOLUME (mm)= 82.55 31.41
TOTAL RAINFALL (mm)= 83.55 83.55
RUNOFF COEFFICIENT = 0.99 0.38

TOTALS
0.414 (111)

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

(1) HORTONS EQUATION SELECTED FOR PVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0301) |
ID= 2 --- DT= 5.0 min
OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.1600	0.1590	0.5570
0.0440	0.2080	0.3520	0.7230
0.0990	0.3020	1.2920	0.9160
0.1320	0.4100	2.8620	1.0230

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0201) 2.200 0.414 11.75 42.15
OUTFLOW: ID= 1 (0301) NaN 0.000 0.00 NaN

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.00
TIME SHIFT OF PEAK FLOW (min)=*****
MAXIMUM STORAGE USED (ha.m.)= 0.0422

| ADD HYD (0059) |
1 + 2 = 3
ID= 1 (0302): AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
+ ID2= 2 (0058): 5.16 0.173 11.83 13.88
=====

ID = 3 (0059): NaN 0.173 11.83 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0205) |
ID= 1 DT= 5.0 min
Area (ha)= 0.03
Total Imp(%)= 56.00 Dir. Conn.(%)= 28.00

IMPERVIOUS PERVIOUS (1)

Surface Area (ha)= 0.02 0.01
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.00 1.00
Length (m)= 14.14 20.00
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 1.01 6.083 1.68 12.083 12.07 18.08 1.34
0.167 1.01 6.167 1.68 12.167 12.07 18.17 1.34
0.250 1.01 6.250 1.68 12.250 12.07 18.25 1.34
0.333 0.67 6.333 1.34 12.333 6.37 18.33 1.68
0.417 0.67 6.417 1.34 12.417 6.37 18.42 1.68
0.500 0.67 6.500 1.34 12.500 6.37 18.50 1.68
0.583 1.01 6.583 1.68 12.583 6.03 18.58 1.34
0.667 1.01 6.667 1.68 12.667 6.03 18.67 1.34
0.750 1.01 6.750 1.68 12.750 6.03 18.75 1.34
0.833 1.01 6.833 1.68 12.833 4.69 18.83 1.68
0.917 1.01 6.917 1.68 12.917 4.69 18.92 1.68
1.000 1.01 7.000 1.68 13.000 4.69 19.00 1.68
1.083 1.01 7.083 2.01 13.083 4.36 19.08 1.34
1.167 1.01 7.167 2.01 13.167 4.36 19.17 1.34
1.250 1.01 7.250 2.01 13.250 4.36 19.25 1.34
1.333 0.67 7.333 1.68 13.333 3.69 19.33 1.68

1.417 0.67 7.417 1.68 13.417 3.69 19.42 1.68
1.500 0.67 7.500 1.68 13.500 3.69 19.50 1.68
1.583 1.01 7.583 2.01 13.583 3.35 19.58 1.34
1.667 1.01 7.667 2.01 13.667 3.35 19.67 1.34
1.750 1.01 7.750 2.01 13.750 3.35 19.75 1.34
1.833 1.01 7.833 2.01 13.833 2.68 19.83 1.01
1.917 1.01 7.917 2.01 13.917 2.68 19.92 1.01
2.000 1.01 8.000 2.01 14.000 2.68 20.00 1.01
2.083 1.34 8.083 2.35 14.083 2.35 20.08 1.01
2.167 1.34 8.167 2.35 14.167 2.35 20.17 1.01
2.250 1.34 8.250 2.35 14.250 2.35 20.25 1.01
2.333 1.01 8.333 2.35 14.333 2.68 20.33 1.01
2.417 1.01 8.417 2.35 14.417 2.68 20.42 1.01
2.500 1.01 8.500 2.35 14.500 2.68 20.50 1.01
2.583 1.01 8.583 2.35 14.583 2.35 20.58 1.01
2.667 1.01 8.667 2.35 14.667 2.35 20.67 1.01
2.750 1.01 8.750 2.35 14.750 2.35 20.75 1.01
2.833 1.01 8.833 2.68 14.833 2.68 20.83 1.01
2.917 1.01 8.917 2.68 14.917 2.68 20.92 1.01
3.000 1.01 9.000 2.68 15.000 2.68 21.00 1.01
3.083 1.34 9.083 2.68 15.083 2.35 21.08 1.01
3.167 1.34 9.167 2.68 15.167 2.35 21.17 1.01
3.250 1.34 9.250 2.68 15.250 2.35 21.25 1.01
3.333 1.01 9.333 3.02 15.333 2.68 21.33 1.01
3.417 1.01 9.417 3.02 15.417 2.68 21.42 1.01
3.500 1.01 9.500 3.02 15.500 2.68 21.50 1.01
3.583 1.01 9.583 3.02 15.583 2.35 21.58 1.01
3.667 1.01 9.667 3.02 15.667 2.35 21.67 1.01
3.750 1.01 9.750 3.02 15.750 2.35 21.75 1.01
3.833 1.34 9.833 3.69 15.833 1.68 21.83 1.01
3.917 1.34 9.917 3.69 15.917 1.68 21.92 1.01
4.000 1.34 10.000 3.69 16.000 1.68 22.00 1.01
4.083 1.34 10.083 4.02 16.083 1.34 22.08 1.01
4.167 1.34 10.167 4.02 16.167 1.34 22.17 1.01
4.250 1.34 10.250 4.02 16.250 1.34 22.25 1.01
4.333 1.34 10.333 5.03 16.333 1.68 22.33 1.01
4.417 1.34 10.417 5.03 16.417 1.68 22.42 1.01
4.500 1.34 10.500 5.03 16.500 1.68 22.50 1.01
4.583 1.34 10.583 5.36 16.583 1.34 22.58 1.01
4.667 1.34 10.667 5.36 16.667 1.34 22.67 1.01
4.750 1.34 10.750 5.36 16.750 1.34 22.75 1.01
4.833 1.34 10.833 8.04 16.833 1.68 22.83 1.01
4.917 1.34 10.917 8.04 16.917 1.68 22.92 1.01
5.000 1.34 11.000 8.04 17.000 1.68 23.00 1.01
5.083 1.34 11.083 8.04 17.083 1.34 23.08 1.01
5.167 1.34 11.167 8.04 17.167 1.34 23.17 1.01
5.250 1.34 11.250 8.04 17.250 1.34 23.25 1.01
5.333 1.34 11.333 24.80 17.333 1.68 23.33 1.01
5.417 1.34 11.417 24.80 17.417 1.68 23.42 1.01
5.500 1.34 11.500 24.80 17.500 1.68 23.50 1.01
5.583 1.34 11.583 102.56 17.583 1.34 23.58 1.01
5.667 1.34 11.667 102.57 17.667 1.34 23.67 1.01
5.750 1.34 11.750 102.57 17.750 1.34 23.75 1.01
5.833 1.34 11.833 12.08 17.833 1.68 23.83 1.01
5.917 1.34 11.917 12.07 17.917 1.68 23.92 1.01
6.000 1.34 12.000 12.07 18.000 1.68 24.00 1.01

Max.Eff.Inten.(mm/hr)= 102.57 160.03
over (min) 5.00 10.00
Storage Coeff. (min)= 0.78 (11) 5.53 (11)
Unit Hyd. peak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.34 0.16

PEAK FLOW (cms)= 0.00 0.01 *TOTALS*
TIME TO PEAK (hrs)= 11.75 11.75 11.75
RUNOFF VOLUME (mm)= 82.55 34.35 43.13
TOTAL RAINFALL (mm)= 83.55 83.55 83.55
RUNOFF COEFFICIENT = 0.99 0.41 0.52

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

(I) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(II) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(III) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0060) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
| (ha) (cms) (hrs) (mm)
+ ID1= 1 (0285): 0.83 0.008 11.75 43.13
+ ID2= 2 (0059): NaN 0.173 11.83 NaN
===== ID = 3 (0060): NaN 0.177 11.83 NaN
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (2071) | Area (ha)= 0.52 Curve Number (CN)= 66.3
| ID= 1 DT= 5.0 min | Ia (mm)= 4.87 # of Linear Res.(N)= 3.00
| U.H. Tp(hrs)= 0.19 |
NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN |
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 1.01 6.083 1.68 12.083 12.07 | 18.08 1.34

0.167 1.01 6.167 1.68 12.167 12.07 | 18.17 1.34
0.250 1.01 6.250 1.68 12.250 12.07 | 18.25 1.34
0.333 1.01 6.333 1.68 12.333 6.37 | 18.33 1.68
0.417 0.67 6.417 1.34 12.417 6.37 | 18.42 1.68
0.500 0.67 6.500 1.34 12.500 6.37 | 18.50 1.68
0.583 1.01 6.583 1.68 12.583 6.03 | 18.58 1.34
0.667 1.01 6.667 1.68 12.667 6.03 | 18.67 1.34
0.750 1.01 6.750 1.68 12.750 6.03 | 18.75 1.34
0.833 1.01 6.833 1.68 12.833 4.69 | 18.83 1.68
0.917 1.01 6.917 1.68 12.917 4.69 | 18.92 1.68
1.000 1.01 7.000 1.68 13.000 4.69 | 19.00 1.68
1.083 1.01 7.083 2.01 13.083 4.36 | 19.08 1.34
1.167 1.01 7.167 2.01 13.167 4.36 | 19.17 1.34
1.250 1.01 7.250 2.01 13.250 4.36 | 19.25 1.34
1.333 0.67 7.333 1.68 13.333 3.69 | 19.33 1.68
1.417 0.67 7.417 1.68 13.417 3.69 | 19.42 1.68
1.500 0.67 7.500 1.68 13.500 3.69 | 19.50 1.68
1.583 1.01 7.583 2.01 13.583 3.35 | 19.58 1.34
1.667 1.01 7.667 2.01 13.667 3.35 | 19.67 1.34
1.750 1.01 7.750 2.01 13.750 3.35 | 19.75 1.34
1.833 1.01 7.833 2.01 13.833 2.68 | 19.83 1.01
1.917 1.01 7.917 2.01 13.917 2.68 | 19.92 1.01
2.000 1.01 8.000 2.01 14.000 2.68 | 20.00 1.01
2.083 1.34 8.083 2.35 14.083 2.35 | 20.08 1.01
2.167 1.34 8.167 2.35 14.167 2.35 | 20.17 1.01
2.250 1.34 8.250 2.35 14.250 2.35 | 20.25 1.01
2.333 1.01 8.333 2.35 14.333 2.68 | 20.33 1.01
2.417 1.01 8.417 2.35 14.417 2.68 | 20.42 1.01
2.500 1.01 8.500 2.35 14.500 2.68 | 20.50 1.01
2.583 1.01 8.583 2.35 14.583 2.35 | 20.58 1.01
2.667 1.01 8.667 2.35 14.667 2.35 | 20.67 1.01
2.750 1.01 8.750 2.35 14.750 2.35 | 20.75 1.01
2.833 1.01 8.833 2.68 14.833 2.68 | 20.83 1.01
2.917 1.01 8.917 2.68 14.917 2.68 | 20.92 1.01
3.000 1.01 9.000 2.68 15.000 2.68 | 21.00 1.01
3.083 1.34 9.083 2.68 15.083 2.35 | 21.08 1.01
3.167 1.34 9.167 2.68 15.167 2.35 | 21.17 1.01
3.250 1.34 9.250 2.68 15.250 2.35 | 21.25 1.01
3.333 1.01 9.333 3.02 15.333 2.68 | 21.33 1.01
3.417 1.01 9.417 3.02 15.417 2.68 | 21.42 1.01
3.500 1.01 9.500 3.02 15.500 2.68 | 21.50 1.01
3.583 1.01 9.583 3.02 15.583 2.35 | 21.58 1.01
3.667 1.01 9.667 3.02 15.667 2.35 | 21.67 1.01
3.750 1.01 9.750 3.02 15.750 2.35 | 21.75 1.01
3.833 1.34 9.833 3.69 15.833 1.68 | 21.83 1.01
3.917 1.34 9.917 3.69 15.917 1.68 | 21.92 1.01
4.000 1.34 10.000 3.69 16.000 1.68 | 22.00 1.01
4.083 1.34 10.083 4.02 16.083 1.34 | 22.08 1.01
4.167 1.34 10.167 4.02 16.167 1.34 | 22.17 1.01
4.250 1.34 10.250 4.02 16.250 1.34 | 22.25 1.01
4.333 1.34 10.333 5.03 16.333 1.68 | 22.33 1.01
4.417 1.34 10.417 5.03 16.417 1.68 | 22.42 1.01
4.500 1.34 10.500 5.03 16.500 1.68 | 22.50 1.01
4.583 1.34 10.583 5.36 16.583 1.34 | 22.58 1.01
4.667 1.34 10.667 5.36 16.667 1.34 | 22.67 1.01
4.750 1.34 10.750 5.36 16.750 1.34 | 22.75 1.01
4.833 1.34 10.833 8.04 16.833 1.68 | 22.83 1.01
4.917 1.34 10.917 8.04 16.917 1.68 | 22.92 1.01
5.000 1.34 11.000 8.04 17.000 1.68 | 23.00 1.01
5.083 1.34 11.083 8.04 17.083 1.34 | 23.08 1.01
5.167 1.34 11.167 8.04 17.167 1.34 | 23.17 1.01
5.250 1.34 11.250 8.04 17.250 1.34 | 23.25 1.01
5.333 1.34 11.333 24.80 17.333 1.68 | 23.33 1.01
5.417 1.34 11.417 24.80 17.417 1.68 | 23.42 1.01
5.500 1.34 11.500 24.80 17.500 1.68 | 23.50 1.01
5.583 1.34 11.583 102.56 17.583 1.34 | 23.58 1.01
5.667 1.34 11.667 102.57 17.667 1.34 | 23.67 1.01
5.750 1.34 11.750 102.57 17.750 1.34 | 23.75 1.01
5.833 1.34 11.833 12.08 17.833 1.68 |
5.917 1.34 11.917 12.07 17.917 1.68 |
6.000 1.34 12.000 12.07 18.000 1.68 |

Unit Hyd Qpeak (cms)= 0.105

PEAK FLOW (cms)= 0.040 (I)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 29.722
TOTAL RAINFALL (mm)= 83.549
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 (2071): 0.52 0.040 11.83 29.72
+ ID2= 2 (0060): NaN 0.177 11.83 NaN
===== ID = 3 (0061): NaN 0.217 11.83 NaN
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (2072) | Area (ha)= 0.34 Curve Number (CN)= 66.3
| ID= 1 DT= 5.0 min | Ia (mm)= 4.87 # of Linear Res.(N)= 3.00
| U.H. Tp(hrs)= 0.19 |
NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

3.433	1.19	9.400	3.56	15.367	3.16	21.33	1.19
3.467	1.19	9.433	3.56	15.400	3.16	21.37	1.19
3.500	1.19	9.467	3.56	15.433	3.16	21.40	1.19
3.533	1.19	9.500	3.56	15.467	3.16	21.43	1.19
3.567	1.19	9.533	3.56	15.500	3.16	21.47	1.19
3.600	1.19	9.567	3.56	15.533	2.77	21.50	1.19
3.633	1.19	9.600	3.56	15.567	2.77	21.53	1.19
3.667	1.19	9.633	3.56	15.600	2.77	21.57	1.19
3.700	1.19	9.667	3.56	15.633	2.77	21.60	1.19
3.733	1.19	9.700	3.56	15.667	2.77	21.63	1.19
3.767	1.38	9.733	3.56	15.700	2.77	21.67	1.19
3.800	1.58	9.767	3.96	15.733	2.77	21.70	1.19
3.833	1.58	9.800	4.35	15.767	2.37	21.73	1.19
3.867	1.58	9.833	4.35	15.800	1.98	21.77	1.19
3.900	1.58	9.867	4.35	15.833	1.98	21.80	1.19
3.933	1.58	9.900	4.35	15.867	1.98	21.83	1.19
3.967	1.58	9.933	4.35	15.900	1.98	21.87	1.19
4.000	1.58	9.967	4.35	15.933	1.98	21.90	1.19
4.033	1.58	10.000	4.35	15.967	1.98	21.93	1.19
4.067	1.58	10.033	4.75	16.000	1.98	21.97	1.19
4.100	1.58	10.067	4.75	16.033	1.58	22.00	1.19
4.133	1.58	10.100	4.75	16.067	1.58	22.03	1.19
4.167	1.58	10.133	4.75	16.100	1.58	22.07	1.19
4.200	1.58	10.167	4.75	16.133	1.58	22.10	1.19
4.233	1.58	10.200	4.75	16.167	1.58	22.13	1.19
4.267	1.58	10.233	4.75	16.200	1.58	22.17	1.19
4.300	1.58	10.267	5.34	16.233	1.58	22.20	1.19
4.333	1.58	10.300	5.93	16.267	1.78	22.23	1.19
4.367	1.58	10.333	5.93	16.300	1.98	22.27	1.19
4.400	1.58	10.367	5.93	16.333	1.98	22.30	1.19
4.433	1.58	10.400	5.93	16.367	1.98	22.33	1.19
4.467	1.58	10.433	5.93	16.400	1.98	22.37	1.19
4.500	1.58	10.467	5.93	16.433	1.98	22.40	1.19
4.533	1.58	10.500	5.93	16.467	1.98	22.43	1.19
4.567	1.58	10.533	6.33	16.500	1.98	22.47	1.19
4.600	1.58	10.567	6.33	16.533	1.58	22.50	1.19
4.633	1.58	10.600	6.33	16.567	1.58	22.53	1.19
4.667	1.58	10.633	6.33	16.600	1.58	22.57	1.19
4.700	1.58	10.667	6.33	16.633	1.58	22.60	1.19
4.733	1.58	10.700	6.33	16.667	1.58	22.63	1.19
4.767	1.58	10.733	6.33	16.700	1.58	22.67	1.19
4.800	1.58	10.767	7.91	16.733	1.58	22.70	1.19
4.833	1.58	10.800	9.49	16.767	1.78	22.73	1.19
4.867	1.58	10.833	9.49	16.800	1.98	22.77	1.19
4.900	1.58	10.867	9.49	16.833	1.98	22.80	1.19
4.933	1.58	10.900	9.49	16.867	1.98	22.83	1.19
4.967	1.58	10.933	9.49	16.900	1.98	22.87	1.19
5.000	1.58	10.967	9.49	16.933	1.98	22.90	1.19
5.033	1.58	11.000	9.49	16.967	1.98	22.93	1.19
5.067	1.58	11.033	9.49	17.000	1.98	22.97	1.19
5.100	1.58	11.067	9.49	17.033	1.58	23.00	1.19
5.133	1.58	11.100	9.49	17.067	1.58	23.03	1.19
5.167	1.58	11.133	9.49	17.100	1.58	23.07	1.19
5.200	1.58	11.167	9.49	17.133	1.58	23.10	1.19
5.233	1.58	11.200	9.49	17.167	1.58	23.13	1.19
5.267	1.58	11.233	9.49	17.200	1.58	23.17	1.19
5.300	1.58	11.267	19.41	17.233	1.58	23.20	1.19
5.333	1.58	11.300	29.27	17.267	1.78	23.23	1.19
5.367	1.58	11.333	29.27	17.300	1.98	23.27	1.19
5.400	1.58	11.367	29.27	17.333	1.98	23.30	1.19
5.433	1.58	11.400	29.27	17.367	1.98	23.33	1.19
5.467	1.58	11.433	29.27	17.400	1.98	23.37	1.19
5.500	1.58	11.467	29.27	17.433	1.98	23.40	1.19
5.533	1.58	11.500	29.39	17.467	1.98	23.43	1.19
5.567	1.58	11.533	121.05	17.500	1.98	23.47	1.19
5.600	1.58	11.567	121.05	17.533	1.58	23.50	1.19
5.633	1.58	11.600	121.05	17.567	1.58	23.53	1.19
5.667	1.58	11.633	121.05	17.600	1.58	23.57	1.19
5.700	1.58	11.667	121.05	17.633	1.58	23.60	1.19
5.733	1.58	11.700	121.05	17.667	1.58	23.63	1.19
5.767	1.58	11.733	121.05	17.700	1.58	23.67	1.19
5.800	1.58	11.767	67.51	17.733	1.58	23.70	1.19
5.833	1.58	11.800	14.24	17.767	1.78	23.73	1.19
5.867	1.58	11.833	14.24	17.800	1.98	23.77	0.59
5.900	1.58	11.867	14.24	17.833	1.98		
5.933	1.58	11.900	14.24	17.867	1.98		
5.967	1.58	11.933	14.24	17.900	1.98		

Unit Hyd Qpeak (cms)= 0.366

PEAK FLOW (cms)= 0.004 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 19.282
TOTAL RAINFALL (mm)= 98.083
RUNOFF COEFFICIENT = 0.196

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

----- CALIB NASHFD (0203)	Area	(ha)= 2.89	Curve Number (CN)= 42.9
ID= 1 DT= 2.0 min	Ia	(mm)= 8.98	# of Linear Res.(N)= 3.00
-----	U.H. Tp(hrs)=	0.18	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.19	6.000	1.58	11.067	14.24	17.93	1.98
0.067	1.19	6.033	1.98	12.000	14.24	17.97	1.98
0.100	1.19	6.067	1.98	12.033	14.24	18.00	1.98

0.133	1.19	6.100	1.98	12.067	14.24	18.03	1.58
0.167	1.19	6.133	1.98	12.100	14.24	18.07	1.58
0.200	1.19	6.167	1.98	12.133	14.24	18.10	1.58
0.233	1.19	6.200	1.98	12.167	14.24	18.13	1.58
0.267	0.99	6.233	1.98	12.200	14.24	18.17	1.58
0.300	0.79	6.267	1.78	12.233	14.24	18.20	1.58
0.333	0.79	6.300	1.58	12.267	10.87	18.23	1.58
0.367	0.79	6.333	1.58	12.300	7.52	18.27	1.78
0.400	0.79	6.367	1.58	12.333	7.52	18.30	1.98
0.433	0.79	6.400	1.58	12.367	7.52	18.33	1.98
0.467	0.79	6.433	1.58	12.400	7.52	18.37	1.98
0.500	0.79	6.467	1.58	12.433	7.52	18.40	1.98
0.533	1.19	6.500	1.58	12.467	7.52	18.43	1.98
0.567	1.19	6.533	1.98	12.500	7.52	18.47	1.98
0.600	1.19	6.567	1.98	12.533	7.12	18.50	1.98
0.633	1.19	6.600	1.98	12.567	7.12	18.53	1.58
0.667	1.19	6.633	1.98	12.600	7.12	18.57	1.58
0.700	1.19	6.667	1.98	12.633	7.12	18.60	1.58
0.733	1.19	6.700	1.98	12.667	7.12	18.63	1.58
0.767	1.19	6.733	1.98	12.700	7.12	18.67	1.58
0.800	1.19	6.767	1.98	12.733	7.12	18.70	1.58
0.833	1.19	6.800	1.98	12.767	6.33	18.73	1.58
0.867	1.19	6.833	1.98	12.800	5.54	18.77	1.78
0.900	1.19	6.867	1.98	12.833	5.54	18.80	1.98
0.933	1.19	6.900	1.98	12.867	5.54	18.83	1.98
0.967	1.19	6.933	1.98	12.900	5.54	18.87	1.98
1.000	1.19	6.967	1.98	12.933	5.54	18.90	1.98
1.033	1.19	7.000	1.98	12.967	5.54	18.93	1.98
1.067	1.19	7.033	2.37	13.000	5.54	18.97	1.98
1.100	1.19	7.067	2.37	13.033	5.14	19.00	1.58
1.133	1.19	7.100	2.37	13.067	5.14	19.03	1.58
1.167	1.19	7.133	2.37	13.100	5.14	19.07	1.58
1.200	1.19	7.167	2.37	13.133	5.14	19.10	1.58
1.233	1.19	7.200	2.37	13.167	5.14	19.13	1.58
1.267	0.99	7.233	2.37	13.200	5.14	19.17	1.58
1.300	0.79	7.267	2.18	13.233	5.14	19.20	1.58
1.333	0.79	7.300	1.98	13.267	4.75	19.23	1.58
1.367	0.79	7.333	1.98	13.300	4.35	19.27	1.78
1.400	0.79	7.367	1.98	13.333	4.35	19.30	1.98
1.433	0.79	7.400	1.98	13.367	4.35	19.33	1.98
1.467	0.79	7.433	1.98	13.400	4.35	19.37	1.98
1.500	0.79	7.467	1.98	13.433	4.35	19.40	1.98
1.533	1.19	7.500	1.98	13.467	4.35	19.43	1.98
1.567	1.19	7.533	2.37	13.500	4.35	19.47	1.98
1.600	1.19	7.567	2.37	13.533	3.96	19.50	1.98
1.633	1.19	7.600	2.37	13.567	3.96	19.53	1.58
1.667	1.19	7.633	2.37	13.600	3.96	19.57	1.58
1.700	1.19	7.667	2.37	13.633	3.96	19.60	1.58
1.733	1.19	7.700	2.37	13.667	3.96	19.63	1.58
1.767	1.19	7.733	2.37	13.700	3.96	19.67	1.58
1.800	1.19	7.767	2.37	13.733	3.96	19.70	1.58
1.833	1.19	7.800	2.37	13.767	3.56	19.73	1.58
1.867	1.19	7.833	2.37	13.800	3.16	19.77	1.38
1.900	1.19	7.867	2.37	13.833	3.16	19.80	1.19
1.933	1.19	7.900	2.37	13.867	3.16	19.83	1.19
1.967	1.19	7.933	2.37	13.900	3.16	19.87	1.19
2.000	1.19	7.967	2.37	13.933	3.16	19.90	1.19
2.033	1.19	8.000	2.37	13.967	3.16	19.93	1.19
2.067	1.58	8.033	2.77	14.000	3.16	19.97	1.19
2.100	1.58	8.067	2.77	14.033	2.77	20.00	1.19
2.133	1.58	8.100	2.77	14.067	2.77	20.03	1.19
2.167	1.58	8.133	2.77	14.100	2.77	20.07	1.19
2.200	1.58	8.167	2.77	14.133	2.77	20.10	1.19
2.233	1.58	8.200	2.77	14.167	2.77	20.13	1.19
2.267	1.58	8.233	2.77	14.200	2.77	20.17	1.19
2.300	1.19	8.267	2.77	14.233	2.77	20.20	1.19
2.333	1.19	8.300	2.77	14.267	2.97	20.23	1.19
2.367	1.19	8.333	2.77	14.300	3.16	20.27	1.19
2.400	1.19	8.367	2.77	14.333	3.16	20.30	1.19
2.433	1.19	8.400	2.77	14.367	3.16	20.33	1.19
2.467	1.19	8.433	2.77	14.400	3.16	20.37	1.19
2.500	1.19	8.467	2.77	14.433	3.16	20.40	1.19
2.533	1.19	8.500	2.77	14.467	3.16	20.43	1.19
2.567	1.19	8.533	2.77	14.500	3.16	20.47	1.19
2.600	1.19	8.567	2.77	14.533	3.16	20.50	1.19
2.633	1.19	8.600	2.77	14.567	2.77	20.53	1.19
2.667	1.19	8.633	2.77	14.600	2.77	20.57	1.19
2.700	1.19	8.667	2.77	14.633	2.77	20.60	1.19
2.733	1.19	8.700	2.77	14.667	2.77	20.63	1.19
2.767	1.19	8.733	2.77	14.700	2.77	20.67	1.19
2.800	1.19	8.767	2.97	14.733	2.77	20.70	1.19
2.833	1.19	8.800	2.97	14.767	2.77	20.73	1.19
2.867	1.19	8.833	3.16	14.800	3.16	20.77	1.19
2.900	1.19	8.867	3.16	14.833	3.16	20.80	1.19
2.933	1.19	8.900	3.16	14.867	3.16	20.83	1.19
2.967	1.19	8.933	3.16	14.900	3.16	20.87	1.19
3.000	1.19	8.967	3.16	14.933	3.16	20.90	1.19
3.033	1.58	9.000	3.16	14.967	3.16	20.93	1.19
3.067	1.58	9.033	3.16	14.999	3.16	20.97	1.19
3.100	1.58	9.067	3.16	15.033	2.77	21.00	1.19
3.133	1.58	9.100	3.16	15.067	2.77	21.03	1.19
3.167	1.58	9.133	3.16	15.100	2.77	21.07	1.19
3.200	1.58	9.167	3.16	15.133	3.16	21.10	1.19
3.233	1.58	9.200	3.16	15.167	2.77	21.13	1.19
3.267	1.58	9.233	3.16	15.200	2.77	21.17	1.19
3.300	1.58	9.267	3.16	15.233	3.16	21.20	1.19
3.333	1.19	9.300	3.56	15.267	2.97	21.23	1.19
3.367	1.19	9.333	3.56	15.300	3.16	21.27	1.19
3.400	1.19	9.367	3.56	15.333	3.16	21.30	1.19
3.433	1.19	9.400	3.56	15.367	3.16	21.33	1.19
3.467	1.19	9.433	3.56	15.400	3.16	21.37	1.19
3.500	1.19	9.467	3.56	15.433	3.16	21.40	1.19
3.533	1.19	9.500	3.56	15.467	3.16	21.43	1.19
3.567	1.19	9.533	3.56	15.500	3.16	21.47	1.19

3.600	1.19	9.567	3.56	15.533	2.77	21.50	1.19
3.633	1.19	9.600	3.56	15.567	2.77	21.53	1.19
3.667	1.19	9.633	3.56	15.600	2.77	21.57	1.19
3.700	1.19	9.667	3.56	15.633	2.77	21.60	1.19
3.733	1.19	9.700	3.56	15.667	2.77	21.63	1.19
3.767	1.38	9.733	3.56	15.700	2.77	21.67	1.19
3.800	1.58	9.767	3.56	15.733	2.77	21.70	1.19
3.833	1.58	9.800	4.35	15.767	2.37	21.73	1.19
3.867	1.58	9.833	4.35	15.800	1.98	21.77	1.19
3.900	1.58	9.867	4.35	15.833	1.98	21.80	1.19
3.933	1.58	9.900	4.35	15.867	1.98	21.83	1.19
3.967	1.58	9.933	4.35	15.900	1.98	21.87	1.19
4.000	1.58	9.967	4.35	15.933	1.98	21.90	1.19
4.033	1.58	10.000	4.35	15.967	1.98	21.93	1.19
4.067	1.58	10.033	4.75	16.000	1.98	21.97	1.19
4.100	1.58	10.067	4.75	16.033	1.58	22.00	1.19
4.133	1.58	10.100	4.75	16.067	1.58	22.03	1.19
4.167	1.58	10.133	4.75	16.100	1.58	22.07	1.19
4.200	1.58	10.167	4.75	16.133	1.58	22.10	1.19
4.233	1.58	10.200	4.75	16.167	1.58	22.13	1.19
4.267	1.58	10.233	4.75	16.200	1.58	22.17	1.19
4.300	1.58	10.267	5.34	16.233	1.58	22.20	1.19
4.333	1.58	10.300	5.93	16.267	1.78	22.23	1.19
4.367	1.58	10.333	5.93	16.300	1.98	22.27	1.19
4.400	1.58	10.367	5.93	16.333	1.98	22.30	1.19
4.433	1.58	10.400	5.93	16.367	1.98	22.33	1.19
4.467	1.58	10.433	5.93	16.400	1.98	22.37	1.19
4.500	1.58	10.467	5.93	16.433	1.98	22.40	1.19
4.533	1.58	10.500	5.93	16.467	1.98	22.43	1.19
4.567	1.58	10.533	6.33	16.500	1.98	22.47	1.19
4.600	1.58	10.567	6.33	16.533	1.58	22.50	1.19
4.633	1.58	10.600	6.33	16.567	1.58	22.53	1.19
4.667	1.58	10.633	6.33	16.600	1.58	22.57	1.19
4.700	1.58	10.667	6.33	16.633	1.58	22.60	1.19
4.733	1.58	10.700	6.33	16.667	1.58	22.63	1.19
4.767	1.58	10.733	6.33	16.700	1.58	22.67	1.19
4.800	1.58	10.767	7.91	16.733	1.58	22.70	1.19
4.833	1.58	10.800	9.49	16.767	1.78	22.73	1.19
4.867	1.58	10.833	9.49	16.800	1.98	22.77	1.19
4.900	1.58	10.867	9.49	16.833	1.98	22.80	1.19
4.933	1.58	10.900	9.49	16.867	1.98	22.83	1.19
4.967	1.58	10.933	9.49	16.900	1.98	22.87	1.19
5.000	1.58	10.967	9.49	16.933	1.98	22.90	1.19
5.033	1.58	11.000	9.49	16.967	1.98	22.93	1.19
5.067	1.58	11.033	9.49	17.000	1.98	22.97	1.19
5.100	1.58	11.067	9.49	17.033	1.58	23.00	1.19
5.133	1.58	11.100	9.49	17.067	1.58	23.03	1.19
5.167	1.58	11.133	9.49	17.100	1.58	23.07	1.19
5.200	1.58	11.167	9.49	17.133	1.58	23.10	1.19
5.233	1.58	11.200	9.49	17.167	1.58	23.13	1.19
5.267	1.58	11.233	9.49	17.200	1.58	23.17	1.19
5.300	1.58	11.267	19.41	17.233	1.58	23.20	1.19
5.333	1.58	11.300	29.27	17.267	1.78	23.23	1.19
5.367	1.58	11.333	29.27	17.300	1.98	23.27	1.19
5.400	1.58	11.367	29.27	17.333	1.98	23.30	1.19
5.433	1.58	11.400	29.27	17.367	1.98	23.33	1.19
5.467	1.58	11.433	29.27	17.400	1.98	23.37	1.19
5.500	1.58	11.467	29.27	17.433	1.98	23.40	1.19
5.533	1.58	11.500	29.39	17.467	1.98	23.43	1.19
5.567	1.58	11.533	121.05	17.500	1.98	23.47	1.19
5.600	1.58	11.567	121.05	17.533	1.58	23.50	1.19
5.633	1.58	11.600	121.05	17.567	1.58	23.53	1.19
5.667	1.58	11.633	121.05	17.600	1.58	23.57	1.19
5.700	1.58	11.667	121.05	17.633	1.58	23.60	1.19
5.733	1.58	11.700	121.05	17.667	1.58	23.63	1.19
5.767	1.58	11.733	121.05	17.700	1.58	23.67	1.19
5.800	1.58	11.767	67.51	17.733	1.58	23.70	1.19
5.833	1.58	11.800	14.24	17.767	1.78	23.73	1.19
5.867	1.58	11.833	14.24	17.800	1.98	23.77	0.59
5.900	1.58	11.867	14.24	17.833	1.98		
5.933	1.58	11.900	14.24	17.867	1.98		
5.967	1.58	11.933	14.24	17.900	1.98		

Unit Hyd Qpeak (cms)= 0.613

PEAK FLOW (cms)= 0.140 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 18.797
TOTAL RAINFALL (mm)= 98.603
RUNOFF COEFFICIENT = 0.191

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

ADD HYD (0057)	AREA	QPEAK	TPEAK	R.V.
I 1 2 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0202):	1.63	0.084	11.83	19.28
+ ID2= 2 (0203):	2.89	0.140	11.83	18.80
=====				
ID = 3 (0057):	4.52	0.223	11.83	18.97
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				
CALIB (0204)	Area	(ha)=	0.64	Curve Number (CN)= 48.1
ID= 1 DT= 2.0 min	Ia	(mm)=	9.20	# of Linear Res.(N)= 3.00
U.H. Tp(hrs)=	0.33			
NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.				

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.19	6.000	1.58	11.967	14.24	17.93	1.98		
0.067	1.19	6.033	1.98	12.000	14.24	17.97	1.98		
0.100	1.19	6.067	1.98	12.033	14.24	18.00	1.98		
0.133	1.19	6.100	1.98	12.067	14.24	18.03	1.58		
0.167	1.19	6.133	1.98	12.100	14.24	18.07	1.58		
0.200	1.19	6.167	1.98	12.133	14.24	18.10	1.58		
0.233	1.19	6.200	1.98	12.167	14.24	18.13	1.58		
0.267	0.99	6.233	1.98	12.200	14.24	18.17	1.58		
0.300	0.79	6.267	1.78	12.233	14.24	18.20	1.58		
0.333	0.79	6.300	1.58	12.267	10.87	18.23	1.58		
0.367	0.79	6.333	1.58	12.300	7.52	18.27	1.78		
0.400	0.79	6.367	1.58	12.333	7.52	18.30	1.98		
0.433	0.79	6.400	1.58	12.367	7.52	18.33	1.98		
0.467	0.79	6.433	1.58	12.400	7.52	18.37	1.98		
0.500	0.79	6.467	1.58	12.433	7.52	18.40	1.98		
0.533	1.19	6.500	1.58	12.467	7.52	18.43	1.98		
0.567	1.19	6.533	1.98	12.500	7.52	18.47	1.98		
0.600	1.19	6.567	1.98	12.533	7.12	18.50	1.98		
0.633	1.19	6.600	1.98	12.567	7.12	18.53	1.58		
0.667	1.19	6.633	1.98	12.600	7.12	18.57	1.58		
0.700	1.19	6.667	1.98	12.633	7.12	18.60	1.58		
0.733	1.19	6.700	1.98	12.667	7.12	18.63	1.58		
0.767	1.19	6.733	1.98	12.700	7.12	18.67	1.58		
0.800	1.19	6.767	1.98	12.733	7.12	18.70	1.58		
0.833	1.19	6.800	1.98	12.767	6.33	18.73	1.58		
0.867	1.19	6.833	1.98	12.800	5.54	18.77	1.78		
0.900	1.19	6.867	1.98	12.833	5.54	18.80	1.98		
0.933	1.19	6.900	1.98	12.867	5.54	18.83	1.98		
0.967	1.19	6.933	1.98	12.900	5.54	18.87	1.98		
1.000	1.19	6.967	1.98	12.933	5.54	18.90	1.98		
1.033	1.19	7.000	1.98	12.967	5.54	18.93	1.98		
1.067	1.19	7.033	2.37	13.000	5.54	18.97	1.98		
1.100	1.19	7.067	2.37	13.033	5.14	19.00	1.98		
1.133	1.19	7.100	2.37	13.067	5.14	19.03	1.58		
1.167	1.19	7.133	2.37	13.100	5.14	19.07	1.58		
1.200	1.19	7.167	2.37	13.133	5.14	19.10	1.58		
1.233	1.19	7.200	2.37	13.167	5.14	19.13	1.58		
1.267	0.99	7.233	2.37	13.200	5.14	19.17	1.58		
1.300	0.79	7.267	2.18	13.233	5.14	19.20	1.58		
1.333	0.79	7.300	1.98	13.267	4.75	19.23	1.58		
1.367	0.79	7.333	1.98	13.300	4.35	19.27	1.78		
1.400	0.79	7.367	1.98	13.333	4.35	19.30	1.98		
1.433	0.79	7.400	1.98	13.367	4.35	19.33	1.98		
1.467	0.79	7.433	1.98	13.400	4.35	19.37	1.98		
1.500	0.79	7.467	1.98	13.433	4.35	19.40	1.98		
1.533	1.19	7.500	1.98	13.467	4.35	19.43	1.98		
1.567	1.19	7.533	2.37	13.500	4.35	19.47	1.98		
1.600	1.19	7.567	2.37	13.533	3.96	19.50	1.98		
1.633	1.19	7.600	2.37	13.567	3.96	19.53	1.58		
1.667	1.19	7.633	2.37	13.600	3.96	19.57	1.58		
1.700	1.19	7.667	2.37	13.633	3.96	19.60	1.58		
1.733	1.19	7.700	2.37	13.667	3.96	19.63	1.58		
1.767	1.19	7.733	2.37	13.700	3.96	19.67	1.58		
1.800	1.19	7.767	2.37	13.733	3.96	19.70	1.58		
1.833	1.19	7.800	2.37	13.767	3.56	19.73	1.58		
1.867	1.19	7.833	2.37	13.800	3.16	19.77	1.38		
1.900	1.19	7.867	2.37	13.833	3.16	19.80	1.19		
1.933	1.19	7.900	2.37	13.867	3.16	19.83	1.19		
1.967	1.19	7.933	2.37	13.900	3.16	19.87	1.19		
2.000	1.19	7.967	2.37	13.933	3.16	19.90	1.19		
2.033	1.58	8.000	2.37	13.967	3.16	19.93	1.19		
2.067	1.58	8.033	2.77	14.000	3.16	19.97	1.19		
2.100	1.58	8.067	2.77	14.033	2.77	20.00	1.19		
2.133	1.58	8.100	2.77	14.067	2.77	20.03	1.19		
2.167	1.58	8.133	2.77	14.100	2.77	20.07	1.19		
2.200	1.58	8.167	2.77	14.133	2.77	20.10	1.19		
2.233	1.58	8.200	2.77	14.167	2.77	20.13	1.19		
2.267	1.58	8.233	2.77	14.200	2.77	20.17	1.19		
2.300	1.19	8.267	2.77	14.233	2.77	20.20	1.19		
2.333	1.19	8.300	2.77	14.267	2.97	20.23	1.19		
2.367	1.19	8.333	2.77	14.300	2.97	20.27	1.19		
2.400	1.19	8.367	2.77	14.333	3.16	20.30	1.19		
2.433	1.19	8.400	2.77	14.367	3.16	20.33	1.19		
2.467	1.19	8.433	2.77	14.400	3.16	20.37	1.19		
2.500	1.19	8.467	2.77	14.433	3.16	20.40	1.19		
2.533	1.19	8.500	2.77	14.467	3.16	20.43	1.19		
2.567	1.19	8.533	2.77	14.500	3.16	20.47	1.19		
2.600	1.19	8.567	2.77	14.533	3.16	20.50	1.19		
2.633	1.19	8.600	2.77	14.567	2.77	20.53	1.19		
2.667	1.19	8.633	2.77	14.600	2.77	20.57	1.19		
2.700	1.19	8.667	2.77	14.633	2.77	20.60	1.19		
2.733	1.19	8.700	2.77	14.667	2.77	20.63	1.19		
2.767	1.19	8.733	2.77	14.700	2.77	20.67	1.19		
2.800	1.19	8.767	2.97	14.733	2.77	20.70	1.19		
2.833	1.19	8.800	2.97	14.767	2.97	20.73	1.19		
2.867	1.19	8.833	3.16	14.800	3.16	20.77	1.19		
2.900	1.19	8.867	3.16	14.833	3.16	20.80	1.19		
2.933	1.19	8.900	3.16	14.867	3.16	20.83	1.19		
2.967	1.19	8.933	3.16	14.900	3.16	20.87	1.19		
3.000	1.19	8.967	3.16	14.933	3.16	20.90	1.19		
3.033	1.58	9.000	3.16	14.967	3.16	20.93	1.19		
3.067	1.58	9.033	3.16	14.999	3.16	20.97	1.19		
3.100	1.58	9.067	3.16	15.033	2.77	21.00	1.19		
3.133	1.58	9.100	3.16	15.067	2.77	21.03	1.19		
3.167	1.58	9.133	3.16	15.100	2.77	21.07	1.19		
3.200	1.58	9.167	3.16	15.133	2.77	21.10	1.19		
3.233	1.58	9.200	3.16	15.167	2.77	21.13	1.19		
3.267	1.58	9.233	3.16	15.200	2.77	21.17	1.19		
3.300	1.58	9.267	3.16	15.233	2.77	21.20	1.19		
3.333	1.98	9.300	3.56	15.267	2.97	21.23	1.19		

3.367	1.19	9.333	3.56	15.300	3.16	21.27	1.19
3.400	1.19	9.367	3.56	15.333	3.16	21.30	1.19
3.433	1.19	9.400	3.56	15.367	3.16	21.33	1.19
3.467	1.19	9.433	3.56	15.400	3.16	21.37	1.19
3.500	1.19	9.467	3.56	15.433	3.16	21.40	1.19
3.533	1.19	9.500	3.56	15.467	3.16	21.43	1.19
3.567	1.19	9.533	3.56	15.500	3.16	21.47	1.19
3.600	1.19	9.567	3.56	15.533	2.77	21.50	1.19
3.633	1.19	9.600	3.56	15.567	2.77	21.53	1.19
3.667	1.19	9.633	3.56	15.600	2.77	21.57	1.19
3.700	1.19	9.667	3.56	15.633	2.77	21.60	1.19
3.733	1.19	9.700	3.56	15.667	2.77	21.63	1.19
3.767	1.19	9.733	3.56	15.700	2.77	21.67	1.19
3.800	1.58	9.767	3.96	15.733	2.77	21.70	1.19
3.833	1.58	9.800	4.35	15.767	2.37	21.73	1.19
3.867	1.58	9.833	4.35	15.800	1.98	21.77	1.19
3.900	1.58	9.867	4.35	15.833	1.98	21.80	1.19
3.933	1.58	9.900	4.35	15.867	1.98	21.83	1.19
3.967	1.58	9.933	4.35	15.900	1.98	21.87	1.19
4.000	1.58	9.967	4.35	15.933	1.98	21.90	1.19
4.033	1.58	10.000	4.35	15.967	1.98	21.93	1.19
4.067	1.58	10.033	4.75	16.000	1.98	21.97	1.19
4.100	1.58	10.067	4.75	16.033	1.58	22.00	1.19
4.133	1.58	10.100	4.75	16.067	1.58	22.03	1.19
4.167	1.58	10.133	4.75	16.100	1.58	22.07	1.19
4.200	1.58	10.167	4.75	16.133	1.58	22.10	1.19
4.233	1.58	10.200	4.75	16.167	1.58	22.13	1.19
4.267	1.58	10.233	4.75	16.200	1.58	22.17	1.19
4.300	1.58	10.267	5.34	16.233	1.58	22.20	1.19
4.333	1.58	10.300	5.93	16.267	1.78	22.23	1.19
4.367	1.58	10.333	5.93	16.300	1.08	22.27	1.19
4.400	1.58	10.367	5.93	16.333	1.98	22.30	1.19
4.433	1.58	10.400	5.93	16.367	1.98	22.33	1.19
4.467	1.58	10.433	5.93	16.400	1.98	22.37	1.19
4.500	1.58	10.467	5.93	16.433	1.98	22.40	1.19
4.533	1.58	10.500	5.93	16.467	1.98	22.43	1.19
4.567	1.58	10.533	6.33	16.500	1.98	22.47	1.19
4.600	1.58	10.567	6.33	16.533	1.58	22.50	1.19
4.633	1.58	10.600	6.33	16.567	1.58	22.53	1.19
4.667	1.58	10.633	6.33	16.600	1.58	22.57	1.19
4.700	1.58	10.667	6.33	16.633	1.58	22.60	1.19
4.733	1.58	10.700	6.33	16.667	1.58	22.63	1.19
4.767	1.58	10.733	6.33	16.700	1.58	22.67	1.19
4.800	1.58	10.767	7.91	16.733	1.58	22.70	1.19
4.833	1.58	10.800	9.49	16.767	1.78	22.73	1.19
4.867	1.58	10.833	9.49	16.800	1.98	22.77	1.19
4.900	1.58	10.867	9.49	16.833	1.98	22.80	1.19
4.933	1.58	10.900	9.49	16.867	1.98	22.83	1.19
4.967	1.58	10.933	9.49	16.900	1.98	22.87	1.19
5.000	1.58	10.967	9.49	16.933	1.98	22.90	1.19
5.033	1.58	11.000	9.49	16.967	1.98	22.93	1.19
5.067	1.58	11.033	9.49	17.000	1.98	22.97	1.19
5.100	1.58	11.067	9.49	17.033	1.58	23.00	1.19
5.133	1.58	11.100	9.49	17.067	1.58	23.03	1.19
5.167	1.58	11.133	9.49	17.100	1.58	23.07	1.19
5.200	1.58	11.167	9.49	17.133	1.58	23.10	1.19
5.233	1.58	11.200	9.49	17.167	1.58	23.13	1.19
5.267	1.58	11.233	9.49	17.200	1.58	23.17	1.19
5.300	1.58	11.267	19.41	17.233	1.58	23.20	1.19
5.333	1.58	11.300	29.27	17.267	1.78	23.23	1.19
5.367	1.58	11.333	29.27	17.300	1.98	23.27	1.19
5.400	1.58	11.367	29.27	17.333	1.98	23.30	1.19
5.433	1.58	11.400	29.27	17.367	1.98	23.33	1.19
5.467	1.58	11.433	29.27	17.400	1.98	23.37	1.19
5.500	1.58	11.467	29.27	17.433	1.98	23.40	1.19
5.533	1.58	11.500	29.39	17.467	1.98	23.43	1.19
5.567	1.58	11.533	121.05	17.500	1.98	23.47	1.19
5.600	1.58	11.567	121.05	17.533	1.58	23.50	1.19
5.633	1.58	11.600	121.05	17.567	1.58	23.53	1.19
5.667	1.58	11.633	121.05	17.600	1.58	23.57	1.19
5.700	1.58	11.667	121.05	17.633	1.58	23.60	1.19
5.733	1.58	11.700	121.05	17.667	1.58	23.63	1.19
5.767	1.58	11.733	121.05	17.700	1.58	23.67	1.19
5.800	1.58	11.767	67.51	17.733	1.58	23.70	1.19
5.833	1.58	11.800	14.24	17.767	1.78	23.73	1.19
5.867	1.58	11.833	14.24	17.800	1.98	23.77	0.59
5.900	1.58	11.867	14.24	17.833	1.98		
5.933	1.58	11.900	14.24	17.867	1.98		
5.967	1.58	11.933	14.24	17.900	1.98		

Unit Hyd Qpeak (cms)= 0.074

PEAK FLOW (cms)= 0.024 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 21.976
TOTAL RAINFALL (mm)= 98.603
RUNOFF COEFFICIENT = 0.223

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

ADD HYD (0058)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0204):	0.64	0.024	12.00	21.98
+ ID2= 2 (0057):	4.52	0.223	11.83	19.34

ID = 3 (0058):	5.16	0.243	11.83	19.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (0201)	Area	(ha)= 2.20			
ID= 1 DT= 5.0 min	Total Imp(%)=	43.00	Dir. Conn.(%)=	21.00	
	IMPERVIOUS		PERVIOUS (i)		
Surface Area (ha)=	0.95	1.25			
Dep. Storage (mm)=	1.00	1.50			
Average Slope (%)=	1.00	1.00			
Length (m)=	121.11	40.00			
Hannings 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	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.19	6.083	1.98	12.083	14.24	18.08	1.58				
0.167	1.19	6.167	1.98	12.167	14.24	18.17	1.58				
0.250	1.19	6.250	1.98	12.250	14.24	18.25	1.58				
0.333	0.79	6.333	1.58	12.333	7.52	18.33	1.98				
0.417	0.79	6.417	1.58	12.417	7.52	18.42	1.98				
0.500	0.79	6.500	1.58	12.500	7.52	18.50	1.98				
0.583	1.19	6.583	1.98	12.583	7.12	18.58	1.58				
0.667	1.19	6.667	1.98	12.667	7.12	18.67	1.58				
0.750	1.19	6.750	1.98	12.750	7.12	18.75	1.58				
0.833	1.19	6.833	1.98	12.833	5.54	18.83	1.98				
0.917	1.19	6.917	1.98	12.917	5.54	18.92	1.98				
1.000	1.19	7.000	1.98	13.000	5.54	19.00	1.98				
1.083	1.19	7.083	2.37	13.083	5.14	19.08	1.58				
1.167	1.19	7.167	2.37	13.167	5.14	19.17	1.58				
1.250	1.19	7.250	2.37	13.250	5.14	19.25	1.58				
1.333	0.79	7.333	1.98	13.333	4.35	19.33	1.98				
1.417	0.79	7.417	1.98	13.417	4.35	19.42	1.98				
1.500	0.79	7.500	1.98	13.500	4.35	19.50	1.98				
1.583	1.19	7.583	2.37	13.583	3.96	19.58	1.58				
1.667	1.19	7.667	2.37	13.667	3.96	19.67	1.58				
1.750	1.19	7.750	2.37	13.750	3.96	19.75	1.58				
1.833	1.19	7.833	2.37	13.833	3.16	19.83	1.19				
1.917	1.19	7.917	2.37	13.917	3.16	19.92	1.19				
2.000	1.19	8.000	2.37	14.000	3.16	20.00	1.19				
2.083	1.58	8.083	2.77	14.083	2.77	20.08	1.19				
2.167	1.58	8.167	2.77	14.167	2.77	20.17	1.19				
2.250	1.58	8.250	2.77	14.250	2.77	20.25	1.19				
2.333	1.19	8.333	2.77	14.333	3.16	20.33	1.19				
2.417	1.19	8.417	2.77	14.417	3.16	20.42	1.19				
2.500	1.19	8.500	2.77	14.500	3.16	20.50	1.19				
2.583	1.19	8.583	2.77	14.583	2.77	20.58	1.19				
2.667	1.19	8.667	2.77	14.667	2.77	20.67	1.19				
2.750	1.19	8.750	2.77	14.750	2.77	20.75	1.19				
2.833	1.19	8.833	3.16	14.833	3.16	20.83	1.19				
2.917	1.19	8.917	3.16	14.917	3.16	20.92	1.19				
3.000	1.19	9.000	3.16	15.000	3.16	21.00	1.19				
3.083	1.58	9.083	3.16	15.083	2.77	21.08	1.19				
3.167	1.58	9.167	3.16	15.167	2.77	21.17	1.19				
3.250	1.58	9.250	3.16	15.250	2.77	21.25	1.19				
3.333	1.19	9.333	3.56	15.333	3.16	21.33	1.19				
3.417	1.19	9.417	3.56	15.417	3.16	21.42	1.19				
3.500	1.19	9.500	3.56	15.500	3.16	21.50	1.19				
3.583	1.19	9.583	3.56	15.583	2.77	21.58	1.19				
3.667	1.19	9.667	3.56	15.667	2.77	21.67	1.19				
3.750	1.19	9.750	3.56	15.750	2.77	21.75	1.19				
3.833	1.58	9.833	4.35	15.833	1.98	21.83	1.19				
3.917	1.58	9.917	4.35	15.917	1.98	21.92	1.19				
4.000	1.58	10.000	4.35	16.000	1.98	22.00	1.19				
4.083	1.98	10.083	4.75	16.083	1.58	22.08	1.19				
4.167	1.98	10.167	4.75	16.167	1.58	22.17	1.19				
4.250	1.98	10.250	4.75	16.250	1.58	22.25	1.19				
4.333	1.98	10.333	4.93	16.333	1.58	22.33	1.19				
4.417	1.98	10.417	5.93	16.417	1.98	22.42	1.19				
4.500	1.98	10.500	5.93	16.500	1.98	22.50	1.19				
4.583	1.98	10.583	6.33	16.583	1.58	22.58	1.19				
4.667	1.98	10.667	6.33	16.667	1.58	22.67	1.19				
4.750	1.98	10.750	6.33	16.750	1.58	22.75	1.19				
4.833	1.98	10.833	6.33	16.833	1.58	22.83	1.19				
4.917	1.98	10.917	9.49	16.917	1.98	22.92	1.19				
5.000	1.98	11.000	9.49	17.000	1.98	23.00	1.19				
5.083	1.98	11.083	9.49	17.083	1.98	23.08	1.19				
5.167	1.98	11.167	9.49	17.167	1.58	23.17	1.19				
5.250	1.98	11.250	9.49	17.250	1.58	23.25	1.19				
5.333	1.98	11.333	29.27	17.333	1.98	23.33	1.19				
5.417	1.98	11.417	29.27	17.417	1.98	23.42	1.19				
5.500	1.98	11.500	29.27	17.500	1.98	23.50	1.19				
5.583	1.98	11.583	124.04	17.583	1.58	23.58	1.19				
5.667	1.98	11.667	124.04	17.667	1.58	23.67	1.19				
5.750	1.98	11.750	124.05	17.750	1.58	23.75	1.19				
5.833	1.98	11.833	14.25	17.833	1.98						
5.917	1.98	11.917	14.25	17.917	1.98						
6.000	1.98	12.000	14.24	18.000	1.98						

(1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0301)		OVERFLOW IS OFF	
IN= 2---> OUT= 1			
DT= 5.0 min			
OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.1680	0.1500	0.5570
0.0440	0.2080	0.3520	0.7230
0.0990	0.3020	1.2920	0.9160
0.1320	0.4180	2.0620	1.0230
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
2.200	0.571	11.75	52.52
INFLOW : ID= 2 (0201)	NaN	0.00	NaN
OUTFLOW: ID= 1 (0301)	NaN	0.00	NaN
PEAK FLOW REDUCTION [Qout/Qin](%)= 0.00			
TIME SHIFT OF PEAK FLOW (min)=*****			
MAXIMUM STORAGE USED (ha.m.)= 0.0614			

ADD HYD (0059)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3					
ID1= 1 (0301):	NaN	0.000	0.00	NaN	
+ ID2= 2 (0058):	5.16	0.243	11.83	19.34	
=====					
ID = 3 (0059):	NaN	0.243	11.83	NaN	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		Area (ha)=	0.03	
STANDHYD (0205)		Total Imp(%)=	56.00	Dir. Conn.(%)= 28.00
ID= 1 DT= 5.0 min				
Surface Area (ha)=	IMPERVIOUS	PERVIOUS (1)		
Dep. Storage (mm)=	1.00	1.50		
Average Slope (%)=	1.00	1.00		
Length (m)=	14.14	20.00		
Hannings 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	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.083	1.19	6.083	1.98	12.083	14.24	18.08	1.58		
0.167	1.19	6.167	1.98	12.167	14.24	18.17	1.58		
0.250	1.19	6.250	1.98	12.250	14.24	18.25	1.58		
0.333	0.79	6.333	1.58	12.333	7.52	18.33	1.98		
0.417	0.79	6.417	1.58	12.417	7.52	18.42	1.98		
0.500	0.79	6.500	1.58	12.500	7.52	18.50	1.98		
0.583	1.19	6.583	1.98	12.583	7.12	18.58	1.58		
0.667	1.19	6.667	1.98	12.667	7.12	18.67	1.58		
0.750	1.19	6.750	1.98	12.750	7.12	18.75	1.58		
0.833	1.19	6.833	1.98	12.833	5.54	18.83	1.98		
0.917	1.19	6.917	1.98	12.917	5.54	18.92	1.98		
1.000	1.19	7.000	1.98	13.000	5.54	19.00	1.98		
1.083	1.19	7.083	2.37	13.083	5.14	19.08	1.58		
1.167	1.19	7.167	2.37	13.167	5.14	19.17	1.58		
1.250	1.19	7.250	2.37	13.250	5.14	19.25	1.58		
1.333	0.79	7.333	1.98	13.333	4.35	19.33	1.98		
1.417	0.79	7.417	1.98	13.417	4.35	19.42	1.98		
1.500	0.79	7.500	1.98	13.500	4.35	19.50	1.98		
1.583	1.19	7.583	2.37	13.583	3.96	19.58	1.58		
1.667	1.19	7.667	2.37	13.667	3.96	19.67	1.58		
1.750	1.19	7.750	2.37	13.750	3.96	19.75	1.58		
1.833	1.19	7.833	2.37	13.833	3.16	19.83	1.19		
1.917	1.19	7.917	2.37	13.917	3.16	19.92	1.19		
2.000	1.19	8.000	2.37	14.000	3.16	20.00	1.19		
2.083	1.58	8.083	2.77	14.083	2.77	20.08	1.19		
2.167	1.58	8.167	2.77	14.167	2.77	20.17	1.19		
2.250	1.58	8.250	2.77	14.250	2.77	20.25	1.19		
2.333	1.19	8.333	2.77	14.333	3.16	20.33	1.19		
2.417	1.19	8.417	2.77	14.417	3.16	20.42	1.19		
2.500	1.19	8.500	2.77	14.500	3.16	20.50	1.19		
2.583	1.19	8.583	2.77	14.583	2.77	20.58	1.19		
2.667	1.19	8.667	2.77	14.667	2.77	20.67	1.19		
2.750	1.19	8.750	2.77	14.750	2.77	20.75	1.19		
2.833	1.19	8.833	3.16	14.833	3.16	20.83	1.19		
2.917	1.19	8.917	3.16	14.917	3.16	20.92	1.19		
3.000	1.19	9.000	3.16	15.000	3.16	21.00	1.19		
3.083	1.58	9.083	3.16	15.083	2.77	21.08	1.19		
3.167	1.58	9.167	3.16	15.167	2.77	21.17	1.19		
3.250	1.58	9.250	3.16	15.250	2.77	21.25	1.19		
3.333	1.19	9.333	3.16	15.333	3.16	21.33	1.19		
3.417	1.19	9.417	3.16	15.417	3.16	21.42	1.19		
3.500	1.19	9.500	3.16	15.500	3.16	21.50	1.19		
3.583	1.19	9.583	3.16	15.583	2.77	21.58	1.19		
3.667	1.19	9.667	3.16	15.667	2.77	21.67	1.19		
3.750	1.19	9.750	3.16	15.750	2.77	21.75	1.19		
3.833	1.58	9.833	4.35	15.833	1.98	21.83	1.19		

3.917	1.58	9.917	4.35	15.917	1.98	21.92	1.19
4.000	1.58	10.000	4.35	16.000	1.98	22.00	1.19
4.083	1.58	10.083	4.75	16.083	1.58	22.08	1.19
4.167	1.58	10.167	4.75	16.167	1.58	22.17	1.19
4.250	1.58	10.250	4.75	16.250	1.58	22.25	1.19
4.333	1.58	10.333	5.93	16.333	1.98	22.33	1.19
4.417	1.58	10.417	5.93	16.417	1.98	22.42	1.19
4.500	1.58	10.500	5.93	16.500	1.98	22.50	1.19
4.583	1.58	10.583	6.33	16.583	1.58	22.58	1.19
4.667	1.58	10.667	6.33	16.667	1.58	22.67	1.19
4.750	1.58	10.750	6.33	16.750	1.58	22.75	1.19
4.833	1.58	10.833	9.49	16.833	1.98	22.83	1.19
4.917	1.58	10.917	9.49	16.917	1.98	22.92	1.19
5.000	1.58	11.000	9.49	17.000	1.98	23.00	1.19
5.083	1.58	11.083	9.49	17.083	1.58	23.08	1.19
5.167	1.58	11.167	9.49	17.167	1.58	23.17	1.19
5.250	1.58	11.250	9.49	17.250	1.58	23.25	1.19
5.333	1.58	11.333	29.27	17.333	1.98	23.33	1.19
5.417	1.58	11.417	29.27	17.417	1.98	23.42	1.19
5.500	1.58	11.500	29.27	17.500	1.98	23.50	1.19
5.583	1.58	11.583	121.04	17.583	1.58	23.58	1.19
5.667	1.58	11.667	121.05	17.667	1.58	23.67	1.19
5.750	1.58	11.750	121.05	17.750	1.58	23.75	1.19
5.833	1.58	11.833	14.25	17.833	1.98		
5.917	1.58	11.917	14.24	17.917	1.98		
6.000	1.58	12.000	14.24	18.000	1.98		

Max.Eff.Inten.(mm/hr)=	121.05	190.49
over (min)	5.00	10.00
Storage Coeff. (min)=	0.73 (11)	5.16 (11)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.34	0.16
TOTALS		
PEAK FLOW (cms)=	0.00	0.01
TIME TO PEAK (hrs)=	11.75	11.75
RUNOFF VOLUME (mm)=	97.60	43.67
TOTAL RAINFALL (mm)=	98.60	98.60
RUNOFF COEFFICIENT =	0.99	0.44

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

(1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0060)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3					
ID1= 1 (0205):	0.03	0.009	11.75	53.51	
+ ID2= 2 (0059):	NaN	0.243	11.83	NaN	
=====					
ID = 3 (0060):	NaN	0.249	11.83	NaN	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		Area (ha)=	0.52	Curve Number (CN)=	66.3
NASHVD (2071)		Ia (mm)=	4.87	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min		U.H. Tp(hrs)=	0.19		

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

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	hrs
0.083	1.19	6.083	1.98	12.083	14.24	18.08	1.58		
0.167	1.19	6.167	1.98	12.167	14.24	18.17	1.58		
0.250	1.19	6.250	1.98	12.250	14.24	18.25	1.58		
0.333	0.79	6.333	1.58	12.333	7.52	18.33	1.98		
0.417	0.79	6.417	1.58	12.417	7.52	18.42	1.98		
0.500	0.79	6.500	1.58	12.500	7.52	18.50	1.98		
0.583	1.19	6.583	1.98	12.583	7.12	18.58	1.58		
0.667	1.19	6.667	1.98	12.667	7.12	18.67	1.58		
0.750	1.19	6.750	1.98	12.750	7.12	18.75	1.58		
0.833	1.19	6.833	1.98	12.833	5.54	18.83	1.98		
0.917	1.19	6.917	1.98	12.917	5.54	18.92	1.98		
1.000	1.19	7.000	1.98	13.000	5.54	19.00	1.98		
1.083	1.19	7.083	2.37	13.083	5.14	19.08	1.58		
1.167	1.19	7.167	2.37	13.167	5.14	19.17	1.58		
1.250	1.19	7.250	2.37	13.250	5.14	19.25	1.58		
1.333	0.79	7.333	1.98	13.333	4.35	19.33	1.98		
1.417	0.79	7.417	1.98	13.417	4.35	19.42	1.98		
1.500	0.79	7.500	1.98	13.500	4.35	19.50	1.98		
1.583	1.19	7.583	2.37	13.583	3.96	19.58	1.58		
1.667	1.19	7.667	2.37	13.667	3.96	19.67	1.58		
1.750	1.19	7.750	2.37	13.750	3.96	19.75	1.58		
1.833	1.19	7.833	2.37	13.833	3.16	19.83	1.19		
1.917	1.19	7.917	2.37	13.917	3.16	19.92	1.19		
2.000	1.19	8.000	2.37	14.000	3.16	20.00	1.19		
2.083	1.58	8.083	2.77	14.083	2.77	20.08	1.19		
2.167	1.58	8.167	2.77	14.167	2.77	20.17	1.19		
2.250	1.58	8.250	2.77	14.250	2.77	20.25	1.19		
2.333	1.19	8.333	2.77	14.333	3.16	20.33	1.19		
2.417	1.19	8.417	2.77	14.417	3.16	20.42	1.19		
2.500	1.19	8.500	2.77	14.500	3.16	20.50	1.19		
2.583	1.19	8.583	2.77	14.583	2.77	20.58	1.19		

2.667	1.19	8.667	2.77	14.667	2.77	20.67	1.19
2.750	1.19	8.750	2.77	14.750	2.77	20.75	1.19
2.833	1.19	8.833	3.16	14.833	3.16	20.83	1.19
2.917	1.19	8.917	3.16	14.917	3.16	20.92	1.19
3.000	1.19	9.000	3.16	15.000	3.16	21.00	1.19
3.083	1.58	9.083	3.16	15.083	2.77	21.08	1.19
3.167	1.58	9.167	3.16	15.167	2.77	21.17	1.19
3.250	1.58	9.250	3.16	15.250	2.77	21.25	1.19
3.333	1.19	9.333	3.56	15.333	3.16	21.33	1.19
3.417	1.19	9.417	3.56	15.417	3.16	21.42	1.19
3.500	1.19	9.500	3.56	15.500	3.16	21.50	1.19
3.583	1.19	9.583	3.56	15.583	2.77	21.58	1.19
3.667	1.19	9.667	3.56	15.667	2.77	21.67	1.19
3.750	1.19	9.750	3.56	15.750	2.77	21.75	1.19
3.833	1.58	9.833	4.35	15.833	1.98	21.83	1.19
3.917	1.58	9.917	4.35	15.917	1.98	21.92	1.19
4.000	1.58	10.000	4.35	16.000	1.98	22.00	1.19
4.083	1.58	10.083	4.75	16.083	1.58	22.08	1.19
4.167	1.58	10.167	4.75	16.167	1.58	22.17	1.19
4.250	1.58	10.250	4.75	16.250	1.58	22.25	1.19
4.333	1.58	10.333	5.93	16.333	1.98	22.33	1.19
4.417	1.58	10.417	5.93	16.417	1.98	22.42	1.19
4.500	1.58	10.500	5.93	16.500	1.98	22.50	1.19
4.583	1.58	10.583	6.33	16.583	1.58	22.58	1.19
4.667	1.58	10.667	6.33	16.667	1.58	22.67	1.19
4.750	1.58	10.750	6.33	16.750	1.58	22.75	1.19
4.833	1.58	10.833	9.49	16.833	1.98	22.83	1.19
4.917	1.58	10.917	9.49	16.917	1.98	22.92	1.19
5.000	1.58	11.000	9.49	17.000	1.98	23.00	1.19
5.083	1.58	11.083	9.49	17.083	1.58	23.08	1.19
5.167	1.58	11.167	9.49	17.167	1.58	23.17	1.19
5.250	1.58	11.250	9.49	17.250	1.58	23.25	1.19
5.333	1.58	11.333	29.27	17.333	1.98	23.33	1.19
5.417	1.58	11.417	29.27	17.417	1.98	23.42	1.19
5.500	1.58	11.500	29.27	17.500	1.98	23.50	1.19
5.583	1.58	11.583	121.04	17.583	1.58	23.58	1.19
5.667	1.58	11.667	121.05	17.667	1.58	23.67	1.19
5.750	1.58	11.750	121.05	17.750	1.58	23.75	1.19
5.833	1.58	11.833	14.25	17.833	1.98		
5.917	1.58	11.917	14.24	17.917	1.98		
6.000	1.58	12.000	14.24	18.000	1.98		

Unit Hyd Qpeak (cms)= 0.105

PEAK FLOW (cms)= 0.053 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 39.335
TOTAL RAINFALL (mm)= 98.603
RUNOFF COEFFICIENT = 0.399

(1) 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 (2071):	0.52	0.053	11.83	39.33
+ ID2= 2 (0060):	NaN	0.249	11.83	NaN
ID = 3 (0061):	NaN	0.302	11.83	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.34	Curve Number (CN)=	66.3
NASHVD (2072)	Ia	(mm)=	4.87	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=		0.19		

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	1.19	6.083	1.98	12.083	14.24	18.08	1.58
0.167	1.19	6.167	1.98	12.167	14.24	18.17	1.58
0.250	1.19	6.250	1.98	12.250	14.24	18.25	1.58
0.333	0.79	6.333	1.58	12.333	7.52	18.33	1.98
0.417	0.79	6.417	1.58	12.417	7.52	18.42	1.98
0.500	0.79	6.500	1.58	12.500	7.52	18.50	1.98
0.583	1.19	6.583	1.98	12.583	7.12	18.58	1.58
0.667	1.19	6.667	1.98	12.667	7.12	18.67	1.58
0.750	1.19	6.750	1.98	12.750	7.12	18.75	1.58
0.833	1.19	6.833	1.98	12.833	5.54	18.83	1.98
0.917	1.19	6.917	1.98	12.917	5.54	18.92	1.98
1.000	1.19	7.000	1.98	13.000	5.54	19.00	1.98
1.083	1.19	7.083	2.37	13.083	5.14	19.08	1.58
1.167	1.19	7.167	2.37	13.167	5.14	19.17	1.58
1.250	1.19	7.250	2.37	13.250	5.14	19.25	1.58
1.333	0.79	7.333	1.98	13.333	4.35	19.33	1.98
1.417	0.79	7.417	1.98	13.417	4.35	19.42	1.98
1.500	0.79	7.500	1.98	13.500	4.35	19.50	1.98
1.583	1.19	7.583	2.37	13.583	3.96	19.58	1.58
1.667	1.19	7.667	2.37	13.667	3.96	19.67	1.58
1.750	1.19	7.750	2.37	13.750	3.96	19.75	1.58
1.833	1.19	7.833	2.37	13.833	3.16	19.83	1.19
1.917	1.19	7.917	2.37	13.917	3.16	19.92	1.19
2.000	1.19	8.000	2.77	14.000	3.16	20.00	1.19
2.083	1.58	8.083	2.77	14.083	2.77	20.08	1.19
2.167	1.58	8.167	2.77	14.167	2.77	20.17	1.19
2.250	1.58	8.250	2.77	14.250	2.77	20.25	1.19
2.333	1.58	8.333	2.77	14.333	3.16	20.33	1.19
2.417	1.19	8.417	2.77	14.417	3.16	20.42	1.19

2.333	1.19	8.333	2.77	14.333	3.16	20.33	1.19
2.417	1.19	8.417	2.77	14.417	3.16	20.42	1.19
2.500	1.19	8.500	2.77	14.500	3.16	20.50	1.19
2.583	1.19	8.583	2.77	14.583	2.77	20.58	1.19
2.667	1.19	8.667	2.77	14.667	2.77	20.67	1.19
2.750	1.19	8.750	2.77	14.750	2.77	20.75	1.19
2.833	1.19	8.833	3.16	14.833	3.16	20.83	1.19
2.917	1.19	8.917	3.16	14.917	3.16	20.92	1.19
3.000	1.19	9.000	3.16	15.000	3.16	21.00	1.19
3.083	1.58	9.083	3.16	15.083	2.77	21.08	1.19
3.167	1.58	9.167	3.16	15.167	2.77	21.17	1.19
3.250	1.58	9.250	3.16	15.250	2.77	21.25	1.19
3.333	1.19	9.333	3.56	15.333	3.16	21.33	1.19
3.417	1.19	9.417	3.56	15.417	3.16	21.42	1.19
3.500	1.19	9.500	3.56	15.500	3.16	21.50	1.19
3.583	1.19	9.583	3.56	15.583	2.77	21.58	1.19
3.667	1.19	9.667	3.56	15.667	2.77	21.67	1.19
3.750	1.19	9.750	3.56	15.750	2.77	21.75	1.19
3.833	1.58	9.833	4.35	15.833	1.98	21.83	1.19
3.917	1.58	9.917	4.35	15.917	1.98	21.92	1.19
4.000	1.58	10.000	4.35	16.000	1.98	22.00	1.19
4.083	1.58	10.083	4.75	16.083	1.58	22.08	1.19
4.167	1.58	10.167	4.75	16.167	1.58	22.17	1.19
4.250	1.58	10.250	4.75	16.250	1.58	22.25	1.19
4.333	1.58	10.333	5.93	16.333	1.98	22.33	1.19
4.417	1.58	10.417	5.93	16.417	1.98	22.42	1.19
4.500	1.58	10.500	5.93	16.500	1.98	22.50	1.19
4.583	1.58	10.583	6.33	16.583	1.58	22.58	1.19
4.667	1.58	10.667	6.33	16.667	1.58	22.67	1.19
4.750	1.58	10.750	6.33	16.750	1.58	22.75	1.19
4.833	1.58	10.833	9.49	16.833	1.98	22.83	1.19
4.917	1.58	10.917	9.49	16.917	1.98	22.92	1.19
5.000	1.58	11.000	9.49	17.000	1.98	23.00	1.19
5.083	1.58	11.083	9.49	17.083	1.58	23.08	1.19
5.167	1.58	11.167	9.49	17.167	1.58	23.17	1.19
5.250	1.58	11.250	9.49	17.250	1.58	23.25	1.19
5.333	1.58	11.333	29.27	17.333	1.98	23.33	1.19
5.417	1.58	11.417	29.27	17.417	1.98	23.42	1.19
5.500	1.58	11.500	29.27	17.500	1.98	23.50	1.19
5.583	1.58	11.583	121.04	17.583	1.58	23.58	1.19
5.667	1.58	11.667	121.05	17.667	1.58	23.67	1.19
5.750	1.58	11.750	121.05	17.750	1.58	23.75	1.19
5.833	1.58	11.833	14.25	17.833	1.98		
5.917	1.58	11.917	14.24	17.917	1.98		
6.000	1.58	12.000	14.24	18.000	1.98		

Unit Hyd Qpeak (cms)= 0.068

PEAK FLOW (cms)= 0.035 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 39.334
TOTAL RAINFALL (mm)= 98.603
RUNOFF COEFFICIENT = 0.399

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

CALIB	Area	(ha)=	0.73	Dir. Conn.(%)=	13.00
STANDHYD (0206)	Total Imp(%)=	32.00			
ID= 1 DT= 5.0 min					
Surface Area	(ha)=	0.23	IMPERVIOUS	PERVIOUS (1)	
Dep. Storage	(mm)=	1.00			
Average Slope	(%)=	1.00			
Length	(n)=	69.76			
Hannings n	=	0.013			

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

----- TRANSFORMED HYDROGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.19	6.083	1.98	12.083	14.24	18.08	1.58
0.167	1.19	6.167	1.98	12.167	14.24	18.17	1.58
0.250	1.19	6.250	1.98	12.250	14.24	18.25	1.58
0.333	0.79	6.333	1.58	12.333	7.52	18.33	1.98
0.417	0.79	6.417	1.58	12.417	7.52	18.42	1.98
0.500	0.79	6.500	1.58	12.500	7.52	18.50	1.98
0.583	1.19	6.583	1.98	12.583	7.12	18.58	1.58
0.667	1.19	6.667	1.98	12.667	7.12	18.67	1.58
0.750	1.19	6.750	1.98	12.750	7.12	18.75	1.58
0.833	1.19	6.833	1.98	12.833	5.54	18.83	1.98
0.917	1.19	6.917	1.98	12.917	5.54	18.92	1.98
1.000	1.19	7.000	1.98	13.000	5.54	19.00	1.98
1.083	1.19	7.083	2.37	13.083	5.14	19.08	1.58
1.167	1.19	7.167	2.37	13.167	5.14	19.17	1.58
1.250	1.19	7.250	2.37	13.250	5.14	19.25	1.58
1.333	0.79	7.333	1.98	13.333	4.35	19.33	1.98
1.417	0.79	7.417	1.98	13.417	4.35	19.42	1.98
1.500	0.79	7.500	1.98	13.500	4.35	19.50	1.98
1.583	1.19	7.583	2.37	13.583	3.96	19.58	1.58
1.667	1.19	7.667	2.37	13.667	3.96	19.67	1.58
1.750	1.19	7.750	2.37	13.750	3.96	19.75	1.58
1.833	1.19	7.833	2.37	13.833	3.96	19.83	1.58
1.917	1.19	7.917	2.37	13.917	3.16	19.92	1.19
2.000	1.19	8.000	2.37	14.000	3.16	20.00	1.19
2.083	0.51	8.083	2.77	14.083	2.77	20.08	0.51
2.167	1.58	8.167	2.77	14.167	2.77	20.17	1.19
2.250	1.58	8.250	2.77	14.250	2.77	20.25	1.19
2.333	1.19	8.333	2.77	14.333	2.77	20.33	1.19
2.417	1.19	8.417	2.77	14.417	3.16	20.42	1.19

2.500	1.19	8.500	2.77	14.500	3.16	20.50	1.19
2.583	1.19	8.583	2.77	14.583	2.77	20.58	1.19
2.667	1.19	8.667	2.77	14.667	2.77	20.67	1.19
2.750	1.19	8.750	2.77	14.750	2.77	20.75	1.19
2.833	1.19	8.833	3.16	14.833	3.16	20.83	1.19
2.917	1.19	8.917	3.16	14.917	3.16	20.92	1.19
3.000	1.19	9.000	3.16	15.000	3.16	21.00	1.19
3.083	1.58	9.083	3.16	15.083	2.77	21.08	1.19
3.167	1.58	9.167	3.16	15.167	2.77	21.17	1.19
3.250	1.58	9.250	3.16	15.250	2.77	21.25	1.19
3.333	1.19	9.333	3.56	15.333	3.16	21.33	1.19
3.417	1.19	9.417	3.56	15.417	3.16	21.42	1.19
3.500	1.19	9.500	3.56	15.500	3.16	21.50	1.19
3.583	1.19	9.583	3.56	15.583	2.77	21.58	1.19
3.667	1.19	9.667	3.56	15.667	2.77	21.67	1.19
3.750	1.19	9.750	3.56	15.750	2.77	21.75	1.19
3.833	1.58	9.833	4.35	15.833	1.98	21.83	1.19
3.917	1.58	9.917	4.35	15.917	1.98	21.92	1.19
4.000	1.58	10.000	4.35	16.000	1.98	22.00	1.19
4.083	1.58	10.083	4.75	16.083	1.58	22.08	1.19
4.167	1.58	10.167	4.75	16.167	1.58	22.17	1.19
4.250	1.58	10.250	4.75	16.250	1.58	22.25	1.19
4.333	1.58	10.333	5.93	16.333	1.98	22.33	1.19
4.417	1.58	10.417	5.93	16.417	1.98	22.42	1.19
4.500	1.58	10.500	5.93	16.500	1.98	22.50	1.19
4.583	1.58	10.583	6.33	16.583	1.58	22.58	1.19
4.667	1.58	10.667	6.33	16.667	1.58	22.67	1.19
4.750	1.58	10.750	6.33	16.750	1.58	22.75	1.19
4.833	1.58	10.833	9.49	16.833	1.98	22.83	1.19
4.917	1.58	10.917	9.49	16.917	1.98	22.92	1.19
5.000	1.58	11.000	9.49	17.000	1.98	23.00	1.19
5.083	1.58	11.083	9.49	17.083	1.58	23.08	1.19
5.167	1.58	11.167	9.49	17.167	1.58	23.17	1.19
5.250	1.58	11.250	9.49	17.250	1.58	23.25	1.19
5.333	1.58	11.333	29.27	17.333	1.98	23.33	1.19
5.417	1.58	11.417	29.27	17.417	1.98	23.42	1.19
5.500	1.58	11.500	29.27	17.500	1.98	23.50	1.19
5.583	1.58	11.583	121.04	17.583	1.58	23.58	1.19
5.667	1.58	11.667	121.05	17.667	1.58	23.67	1.19
5.750	1.58	11.750	121.05	17.750	1.58	23.75	1.19
5.833	1.58	11.833	14.25	17.833	1.98		
5.917	1.58	11.917	14.24	17.917	1.98		
6.000	1.58	12.000	14.24	18.000	1.98		

Max.Eff.Inten.(mm/hr)=	121.05	146.86	
over (min)	5.00	10.00	
Storage Coeff. (min)	1.91 (ii)	7.96 (ii)	
Unit Hyd. Tpeak (min)	5.00	10.00	
Unit Hyd. Tpeak (cms)	0.32	0.13	
PEAK FLOW (cms)	0.83	0.16	*TOTALS*
TIME TO PEAK (hrs)	11.75	11.75	0.195 (iii)
RUNOFF VOLUME (mm)	97.60	38.99	46.61
TOTAL RAINFALL (mm)	98.60	98.60	
RUNOFF COEFFICIENT	0.99	0.40	0.47

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.
(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0206):	0.73	0.195	11.75	46.61
+ ID2= 2 (2072):	0.34	0.035	11.83	20.33
ID = 3 (0062):	1.07	0.228	11.75	44.30
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

ADD HYD (0401)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0061):	NaN	0.302	11.83	NaN
+ ID2= 2 (0062):	1.07	0.228	11.75	44.30
ID = 3 (0401):	NaN	0.499	11.80	NaN
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

V	V	I	SSSSS	U	U	A	L	(v 6.0,2006)
V	V	I	SS	U	U	AAAA	L	
V	V	I	SS	U	U	AAAAA	L	
V	V	I	SS	U	U	A	L	
VV	I	SSSSS	UUUUU	A	A	LLLLL		
OOO	TTTTT	TTTTT	H	H	Y	Y	M	M
O	O	T	T	H	H	Y	Y	M
O	O	T	T	H	H	Y	M	M
O	O	T	T	H	H	Y	M	M

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***** DETAILED OUTPUT *****
Input filename: C:\Program Files (x86)\Visual OTHYMO 6.0\VO2\voindat
Output filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eafb4675c3\12e49579-07eb-4a55-9dbf-bdb0bd998505\scen
Summary filename: C:\Users\ASchoof\AppData\Local\Civica\VHS\8194ef53-adad-4f15-90f7-c4eafb4675c3\12e49579-07eb-4a55-9dbf-bdb0bd998505\scen
DATE: 02-08-2021 TIME: 10:21:44
USER:
COMMENTS: SCS 50 year (POST)

```
***** SIMULATION : Run 05 *****
```

MASS STORM

Ptotal=109.80 mm

Filename: C:\Users\ASchoof\AppData\Local\Civica\Temp\Fa271cf7-23d8-4eb5-af5b-54bb5056c8de\00a83143

Comments: SCS Type II 24 HR MASS CURVE

Duration of storm = 23.75 hrs
Mass curve time step = 15.00 min

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.32	6.25	2.20	12.25	15.81	18.25	1.76
0.50	0.88	6.50	1.76	12.50	8.34	18.50	2.20
0.75	1.32	6.75	2.20	12.75	7.91	18.75	1.76
1.00	1.32	7.00	2.20	13.00	6.15	19.00	2.20
1.25	1.32	7.25	2.64	13.25	5.71	19.25	1.76
1.50	0.88	7.50	2.20	13.50	4.83	19.50	2.20
1.75	1.32	7.75	2.64	13.75	4.39	19.75	1.76
2.00	1.32	8.00	2.64	14.00	3.51	20.00	1.32
2.25	1.76	8.25	3.07	14.25	3.07	20.25	1.32
2.50	1.32	8.50	3.07	14.50	3.51	20.50	1.32
2.75	1.32	8.75	3.07	14.75	3.07	20.75	1.32
3.00	1.32	9.00	3.51	15.00	3.51	21.00	1.32
3.25	1.76	9.25	3.51	15.25	3.07	21.25	1.32
3.50	1.32	9.50	3.95	15.50	3.51	21.50	1.32
3.75	1.32	9.75	3.95	15.75	3.07	21.75	1.32
4.00	1.76	10.00	4.39	16.00	2.20	22.00	1.32
4.25	1.76	10.25	5.27	16.25	1.76	22.25	1.32
4.50	1.76	10.50	6.59	16.50	2.20	22.50	1.32
4.75	1.76	10.75	7.03	16.75	1.76	22.75	1.32
5.00	1.76	11.00	10.54	17.00	2.20	23.00	1.32
5.25	1.76	11.25	10.54	17.25	1.76	23.25	1.32
5.50	1.76	11.50	32.50	17.50	2.20	23.50	1.32
5.75	1.76	11.75	134.40	17.75	1.76	23.75	1.32
6.00	1.76	12.00	15.81	18.00	2.20		

CALIB	Area	(ha)=	1.63	Curve Number (CN)=	44.1
NASHVD	Ia	(mm)=	9.62	# of Linear Res.(N)=	3.00
ID= 1 DT= 2.0 min	U.H. Tp(hrs)=	0.17			
NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.					

--- TRANSFORMED HYETOGRAPH ---											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.32	6.000	1.76	11.967	15.81	17.93	2.20				
0.067	1.32	6.033	2.20	12.000	15.81	17.97	2.20				
0.100	1.32	6.067	2.20	12.033	15.81	18.00	2.20				
0.133	1.32	6.100	2.20	12.067	15.81	18.03	1.76				
0.167	1.32	6.133	2.20	12.100	15.81	18.07	1.76				
0.200	1.32	6.167	2.20	12.133	15.81	18.10	1.76				
0.233	1.32	6.200	2.20	12.167	15.81	18.13	1.76				
0.267	1.10	6.233	2.20	12.200	15.81	18.17	1.76				
0.300	0.88	6.267	1.98	12.233	15.81	18.20	1.76				
0.333	0.88	6.300	1.76	12.267	12.07	18.23	1.76				
0.367	0.88	6.333	1.76	12.300	8.34	18.27	1.98				
0.400	0.88	6.367	1.76	12.333	8.34	18.30	2.20				
0.433	0.88	6.400	1.76	12.367	8.34	18.33	2.20				
0.467	0.88	6.433	1.76	12.400	8.34	18.37	2.20				
0.500	0.88	6.467	1.76	12.433	8.34	18.40	2.20				
0.533	1.32	6.500	1.76	12.467	8.34	18.43	2.20				
0.567	1.32	6.533	2.20	12.500	8.34	18.47	2.20				
0.600	1.32	6.567	2.20	12.533	7.91	18.50	2.20				
0.633	1.32	6.600	2.20	12.567	7.91	18.53	1.76				
0.667	1.32	6.633	2.20	12.600	7.91	18.57	1.76				
0.700	1.32	6.667	2.20	12.633	7.91	18.60	1.76				
0.733	1.32	6.700	2.20	12.667	7.91	18.63	1.76				
0.767	1.32	6.733	2.20	12.700	7.91	18.67	1.76				
0.800	1.32	6.767	2.20	12.733	7.91	18.70	1.76				
0.833	1.32	6.800	2.20	12.767	7.02	18.73	1.76				
0.867	1.32	6.833	2.20	12.800	6.15	18.77	1.98				
0.900	1.32	6.867	2.20	12.833	6.15	18.80	2.20				
0.933	1.32	6.900	2.20	12.867	6.15	18.83	2.20				

0.967	1.32	6.933	2.20	12.900	6.15	18.87	2.20
1.000	1.32	6.967	2.20	12.933	6.15	18.90	2.20
1.033	1.32	7.000	2.20	12.967	6.15	18.93	2.20
1.067	1.32	7.033	2.64	13.000	6.15	18.97	2.20
1.100	1.32	7.067	2.64	13.033	5.71	19.00	2.20
1.133	1.32	7.100	2.64	13.067	5.71	19.03	1.76
1.167	1.32	7.133	2.64	13.100	5.71	19.07	1.76
1.200	1.32	7.167	2.64	13.133	5.71	19.10	1.76
1.233	1.32	7.200	2.64	13.167	5.71	19.13	1.76
1.267	1.10	7.233	2.64	13.200	5.71	19.17	1.76
1.300	0.88	7.267	2.42	13.233	5.71	19.20	1.76
1.333	0.88	7.300	2.20	13.267	5.27	19.23	1.76
1.367	0.88	7.333	2.20	13.300	4.83	19.27	1.98
1.400	0.88	7.367	2.20	13.333	4.83	19.30	2.20
1.433	0.88	7.400	2.20	13.367	4.83	19.33	2.20
1.467	0.88	7.433	2.20	13.400	4.83	19.37	2.20
1.500	0.88	7.467	2.20	13.433	4.83	19.40	2.20
1.533	1.32	7.500	2.20	13.467	4.83	19.43	2.20
1.567	1.32	7.533	2.64	13.500	4.83	19.47	2.20
1.600	1.32	7.567	2.64	13.533	4.39	19.50	2.20
1.633	1.32	7.600	2.64	13.567	4.39	19.53	1.76
1.667	1.32	7.633	2.64	13.600	4.39	19.57	1.76
1.700	1.32	7.667	2.64	13.633	4.39	19.60	1.76
1.733	1.32	7.700	2.64	13.667	4.39	19.63	1.76
1.767	1.32	7.733	2.64	13.700	4.39	19.67	1.76
1.800	1.32	7.767	2.64	13.733	4.39	19.70	1.76
1.833	1.32	7.800	2.64	13.767	3.95	19.73	1.76
1.867	1.32	7.833	2.64	13.800	3.51	19.77	1.54
1.900	1.32	7.867	2.64	13.833	3.51	19.80	1.32
1.933	1.32	7.900	2.64	13.867	3.51	19.83	1.32
1.967	1.32	7.933	2.64	13.900	3.51	19.87	1.32
2.000	1.32	7.967	2.64	13.933	3.51	19.90	1.32
2.033	1.76	8.000	2.64	13.967	3.51	19.93	1.32
2.067	1.76	8.033	3.07	14.000	3.51	19.97	1.32
2.100	1.76	8.067	3.07	14.033	3.07	20.00	1.32
2.133	1.76	8.100	3.07	14.067	3.07	20.03	1.32
2.167	1.76	8.133	3.07	14.100	3.07	20.07	1.32
2.200	1.76	8.167	3.07	14.133	3.07	20.10	1.32
2.233	1.76	8.200	3.07	14.167	3.07	20.13	1.32
2.267	1.54	8.233	3.07	14.200	3.07	20.17	1.32
2.300	1.32	8.267	3.07	14.233	3.07	20.20	1.32
2.333	1.32	8.300	3.07	14.267	3.30	20.23	1.32
2.367	1.32	8.333	3.07	14.300	3.51	20.27	1.32
2.400	1.32	8.367	3.07	14.333	3.51	20.30	1.32
2.433	1.32	8.400	3.07	14.367	3.51	20.33	1.32
2.467	1.32	8.433	3.07	14.400	3.51	20.37	1.32
2.500	1.32	8.467	3.07	14.433	3.51	20.40	1.32
2.533	1.32	8.500	3.07	14.467	3.51	20.43	1.32
2.567	1.32	8.533	3.07	14.500	3.51	20.47	1.32
2.600	1.32	8.567	3.07	14.533	3.07	20.50	1.32
2.633	1.32	8.600	3.07	14.567	3.07	20.53	1.32
2.667	1.32	8.633	3.07	14.600	3.07	20.57	1.32
2.700	1.32	8.667	3.07	14.633	3.07	20.60	1.32
2.733	1.32	8.700	3.07	14.667	3.07	20.63	1.32
2.767	1.32	8.733	3.07	14.700	3.07	20.67	1.32
2.800	1.32	8.767	3.29	14.733	3.07	20.70	1.32
2.833	1.32	8.800	3.51	14.767	3.30	20.73	1.32
2.867	1.32	8.833	3.51	14.800	3.51	20.77	1.32
2.900	1.32	8.867	3.51	14.833	3.51	20.80	1.32
2.933	1.32	8.900	3.51	14.867	3.51	20.83	1.32
2.967	1.32	8.933	3.51	14.900	3.51	20.87	1.32
3.000	1.32	8.967	3.51	14.933	3.51	20.90	1.32
3.033	1.76	9.000	3.51	14.967	3.51	20.93	1.32
3.067	1.76	9.033	3.51	15.000	3.51	20.97	1.32
3.100	1.76	9.067	3.51	15.033	3.07	21.00	1.32
3.133	1.76	9.100	3.51	15.067	3.07	21.03	1.32
3.167	1.76	9.133	3.51	15.100	3.07	21.07	1.32
3.200	1.76	9.167	3.51	15.133	3.07	21.10	1.32
3.233	1.76	9.200	3.51	15.167	3.07	21.13	1.32
3.267	1.54	9.233	3.51	15.200	3.07	21.17	1.32
3.300	1.32	9.267	3.73	15.233	3.07	21.20	1.32
3.333	1.32	9.300	3.95	15.267	3.30	21.23	1.32
3.367	1.32	9.333	3.95	15.300	3.51	21.27	1.32
3.400	1.32	9.367	3.95	15.333	3.51	21.30	1.32
3.433	1.32	9.400	3.95	15.367	3.51	21.33	1.32
3.467	1.32	9.433	3.95	15.400	3.51	21.37	1.32
3.500	1.32	9.467	3.95	15.433	3.51	21.40	1.32
3.533	1.32	9.500	3.95	15.467	3.51	21.43	1.32
3.567	1.32	9.533	3.95	15.500	3.51	21.47	1.32
3.600	1.32	9.567	3.95	15.533	3.07	21.50	1.32
3.633	1.32	9.600	3.95	15.567	3.07	21.53	1.32
3.667	1.32	9.633	3.95	15.600	3.07	21.57	1.32
3.700	1.32	9.667	3.95	15.633	3.07	21.60	1.32
3.733	1.32	9.700	3.95	15.667	3.07	21.63	1.32
3.767	1.54	9.733	3.95	15.700	3.07	21.67	1.32
3.800	1.76	9.767	4.39	15.733	3.07	21.70	1.32
3.833	1.76	9.800	4.83	15.767	2.63	21.73	1.32
3.867	1.76	9.833	4.83	15.800	2.20	21.77	1.32
3.900	1.76	9.867	4.83	15.833	2.20	21.80	1.32
3.933	1.76	9.900	4.83	15.867	2.20	21.83	1.32
3.967	1.76	9.933	4.83	15.900	2.20	21.87	1.32
4.000	1.76	9.967	4.83	15.933	2.20	21.90	1.32
4.033	1.76	10.000	4.83	15.967	2.20	21.93	1.32
4.067	1.76	10.033	5.27	16.000	2.19	21.97	1.32
4.100	1.76	10.067	5.27	16.033	1.76	22.00	1.32
4.133	1.76	10.100	5.27	16.067	1.76	22.03	1.32
4.167	1.76	10.133	5.27	16.100	1.76	22.07	1.32
4.200	1.76	10.167	5.27	16.133	1.76	22.10	1.32
4.233	1.76	10.200	5.27	16.167	1.76	22.13	1.32
4.267	1.76	10.233	5.27	16.200	1.76	22.17	1.32
4.300	1.76	10.267	5.93	16.233	1.76	22.20	1.32
4.333	1.76	10.300	6.59	16.267	1.98	22.23	1.32
4.367	1.76	10.333	6.59	16.300	2.20	22.27	1.32
4.400	1.76	10.367	6.59	16.333	2.20	22.30	1.32

4.433	1.76	10.400	6.59	16.367	2.20	22.33	1.32
4.467	1.76	10.433	6.59	16.400	2.20	22.37	1.32
4.500	1.76	10.467	6.59	16.433	2.20	22.40	1.32
4.533	1.76	10.500	6.59	16.467	2.20	22.43	1.32
4.567	1.76	10.533	7.03	16.500	2.19	22.47	1.32
4.600	1.76	10.567	7.03	16.533	1.76	22.50	1.32
4.633	1.76	10.600	7.03	16.567	1.76	22.53	1.32
4.667	1.76	10.633	7.03	16.600	1.76	22.57	1.32
4.700	1.76	10.667	7.03	16.633	1.76	22.60	1.32
4.733	1.76	10.700	7.03	16.667	1.76	22.63	1.32
4.767	1.76	10.733	7.03	16.700	1.76	22.67	1.32
4.800	1.76	10.767	8.79	16.733	1.76	22.70	1.32
4.833	1.76	10.800	10.54	16.767	1.98	22.73	1.32
4.867	1.76	10.833	10.54	16.800	2.20	22.77	1.32
4.900	1.76	10.867	10.54	16.833	2.20	22.80	1.32
4.933	1.76	10.900	10.54	16.867	2.20	22.83	1.32
4.967	1.76	10.933	10.54	16.900	2.20	22.87	1.32
5.000	1.76	10.967	10.54	16.933	2.20	22.90	1.32
5.033	1.76	11.000	10.54	16.967	2.20	22.93	1.32
5.067	1.76	11.033	10.54	17.000	2.19	22.97	1.32
5.100	1.76	11.067	10.54	17.033	1.76	23.00	1.32
5.133	1.76	11.100	10.54	17.067	1.76	23.03	1.32
5.167	1.76	11.133	10.54	17.100	1.76	23.07	1.32
5.200	1.76	11.167	10.54	17.133	1.76	23.10	1.32
5.233	1.76	11.200	10.54	17.167	1.76	23.13	1.32
5.267	1.76	11.233	10.54	17.200	1.76	23.17	1.32
5.300	1.76	11.267	11.55	17.233	1.76	23.20	1.32
5.333	1.76	11.300	32.50	17.267	1.98	23.23	1.32
5.367	1.76	11.333	32.50	17.300	2.20	23.27	1.32
5.400	1.76	11.367	32.50	17.333	2.20	23.30	1.32
5.433	1.76	11.400	32.50	17.367	2.20	23.33	1.32
5.467	1.76	11.433	32.50	17.400	2.20	23.37	1.32
5.500	1.76	11.467	32.50	17.433	2.20	23.40	1.32
5.533	1.76	11.500	32.62	17.467	2.20	23.43	1.32
5.567	1.76	11.533	134.40	17.500	2.19	23.47	1.32
5.600	1.76	11.567	134.40	17.533	1.76	23.50	1.32
5.633	1.76	11.600	134.40	17.567	1.76	23.53	1.32
5.667	1.76	11.633	134.40	17.600	1.76	23.57	1.32
5.700	1.76	11.667	134.40	17.633	1.76	23.60	1.32
5.733	1.76	11.700	134.40	17.667	1.76	23.63	1.32
5.767	1.76	11.733	134.40	17.700	1.76	23.67	1.32
5.800	1.76	11.767	74.95	17.733	1.76	23.70	1.32
5.833	1.76	11.800	15.81	17.767	1.98	23.73	1.32
5.867	1.76	11.833	15.81	17.800	2.20	23.77	0.66
5.900	1.76	11.867	15.81	17.833	2.20		
5.933	1.76	11.900	15.81	17.867	2.20		
5.967	1.76	11.933	15.81	17.900	2.20		

1.133 1.32 | 7.100 2.64 |13.067 5.71 | 19.03 1.76
1.167 1.32 7.133 2.64 |13.100 5.71 | 19.07 1.76
1.232 1.32 7.167 2.64 |13.133 5.71 | 19.10 1.76
1.233 1.32 7.200 2.64 |13.167 5.71 | 19.13 1.76
1.267 1.10 7.233 2.64 |13.200 5.71 | 19.17 1.76
1.300 0.88 7.267 2.42 |13.233 5.71 | 19.20 1.76
1.333 0.88 7.300 2.20 |13.267 5.27 | 19.23 1.76
1.367 0.88 7.333 2.20 |13.300 4.83 | 19.27 1.98
1.400 0.88 7.367 2.20 |13.333 4.83 | 19.30 2.20
1.433 0.88 7.400 2.20 |13.367 4.83 | 19.33 2.20
1.467 0.88 7.433 2.20 |13.400 4.83 | 19.37 2.20
1.500 0.88 7.467 2.20 |13.433 4.83 | 19.40 2.20
1.533 1.32 7.500 2.20 |13.467 4.83 | 19.43 2.20
1.567 1.32 7.533 2.64 |13.500 4.83 | 19.47 2.20
1.600 1.32 7.567 2.64 |13.533 4.39 | 19.50 2.20
1.633 1.32 7.600 2.64 |13.567 4.39 | 19.53 1.76
1.667 1.32 7.633 2.64 |13.600 4.39 | 19.57 1.76
1.700 1.32 7.667 2.64 |13.633 4.39 | 19.60 1.76
1.733 1.32 7.700 2.64 |13.667 4.39 | 19.63 1.76
1.767 1.32 7.733 2.64 |13.700 4.39 | 19.67 1.76
1.800 1.32 7.767 2.64 |13.733 4.39 | 19.70 1.76
1.833 1.32 7.800 2.64 |13.767 3.95 | 19.73 1.76
1.867 1.32 7.833 2.64 |13.800 3.51 | 19.77 1.54
1.900 1.32 7.867 2.64 |13.833 3.51 | 19.80 1.32
1.933 1.32 7.900 2.64 |13.867 3.51 | 19.83 1.32
1.967 1.32 7.933 2.64 |13.900 3.51 | 19.87 1.32
2.000 1.32 7.967 2.64 |13.933 3.51 | 19.90 1.32
2.033 1.76 8.000 2.64 |13.967 3.51 | 19.93 1.32
2.067 1.76 8.033 3.07 |14.000 3.51 | 19.97 1.32
2.100 1.76 8.067 3.07 |14.033 3.07 | 20.00 1.32
2.133 1.76 8.100 3.07 |14.067 3.07 | 20.03 1.32
2.167 1.76 8.133 3.07 |14.100 3.07 | 20.07 1.32
2.200 1.76 8.167 3.07 |14.133 3.07 | 20.10 1.32
2.233 1.76 8.200 3.07 |14.167 3.07 | 20.13 1.32
2.267 1.54 8.233 3.07 |14.200 3.07 | 20.17 1.32
2.300 1.32 8.267 3.07 |14.233 3.07 | 20.20 1.32
2.333 1.32 8.300 3.07 |14.267 3.07 | 20.23 1.32
2.367 1.32 8.333 3.07 |14.300 3.51 | 20.27 1.32
2.400 1.32 8.367 3.07 |14.333 3.51 | 20.30 1.32
2.433 1.32 8.400 3.07 |14.367 3.51 | 20.33 1.32
2.467 1.32 8.433 3.07 |14.400 3.51 | 20.37 1.32
2.500 1.32 8.467 3.07 |14.433 3.51 | 20.40 1.32
2.533 1.32 8.500 3.07 |14.467 3.51 | 20.43 1.32
2.567 1.32 8.533 3.07 |14.500 3.51 | 20.47 1.32
2.600 1.32 8.567 3.07 |14.533 3.07 | 20.50 1.32
2.633 1.32 8.600 3.07 |14.567 3.07 | 20.53 1.32
2.667 1.32 8.633 3.07 |14.600 3.07 | 20.57 1.32
2.700 1.32 8.667 3.07 |14.633 3.07 | 20.60 1.32
2.733 1.32 8.700 3.07 |14.667 3.07 | 20.63 1.32
2.767 1.32 8.733 3.07 |14.700 3.07 | 20.67 1.32
2.800 1.32 8.767 3.07 |14.733 3.07 | 20.70 1.32
2.833 1.32 8.800 3.51 |14.767 3.30 | 20.73 1.32
2.867 1.32 8.833 3.51 |14.800 3.51 | 20.77 1.32
2.900 1.32 8.867 3.51 |14.833 3.51 | 20.80 1.32
2.933 1.32 8.900 3.51 |14.867 3.51 | 20.83 1.32
2.967 1.32 8.933 3.51 |14.900 3.51 | 20.87 1.32
3.000 1.32 8.967 3.51 |14.933 3.51 | 20.90 1.32
3.033 1.76 9.000 3.51 |14.967 3.51 | 20.93 1.32
3.067 1.76 9.033 3.51 |15.000 3.51 | 20.97 1.32
3.100 1.76 9.067 3.51 |15.033 3.07 | 21.00 1.32
3.133 1.76 9.100 3.51 |15.067 3.07 | 21.03 1.32
3.167 1.76 9.133 3.51 |15.100 3.07 | 21.07 1.32
3.200 1.76 9.167 3.51 |15.133 3.07 | 21.10 1.32
3.233 1.76 9.200 3.51 |15.167 3.07 | 21.13 1.32
3.267 1.54 9.233 3.51 |15.200 3.07 | 21.17 1.32
3.300 1.32 9.267 3.73 |15.233 3.07 | 21.20 1.32
3.333 1.32 9.300 3.95 |15.267 3.30 | 21.23 1.32
3.367 1.32 9.333 3.95 |15.300 3.51 | 21.27 1.32
3.400 1.32 9.367 3.95 |15.333 3.51 | 21.30 1.32
3.433 1.32 9.400 3.95 |15.367 3.51 | 21.33 1.32
3.467 1.32 9.433 3.95 |15.400 3.51 | 21.37 1.32
3.500 1.32 9.467 3.95 |15.433 3.51 | 21.40 1.32
3.533 1.32 9.500 3.95 |15.467 3.51 | 21.43 1.32
3.567 1.32 9.533 3.95 |15.500 3.51 | 21.47 1.32
3.600 1.32 9.567 3.95 |15.533 3.07 | 21.50 1.32
3.633 1.32 9.600 3.95 |15.567 3.07 | 21.53 1.32
3.667 1.32 9.633 3.95 |15.600 3.07 | 21.57 1.32
3.700 1.32 9.667 3.95 |15.633 3.07 | 21.60 1.32
3.733 1.32 9.700 3.95 |15.667 3.07 | 21.63 1.32
3.767 1.54 9.733 3.95 |15.700 3.07 | 21.67 1.32
3.800 1.76 9.767 4.39 |15.733 3.07 | 21.70 1.32
3.833 1.76 9.800 4.83 |15.767 2.63 | 21.73 1.32
3.867 1.76 9.833 4.83 |15.800 2.20 | 21.77 1.32
3.900 1.76 9.867 4.83 |15.833 2.20 | 21.80 1.32
3.933 1.76 9.900 4.83 |15.867 2.20 | 21.83 1.32
3.967 1.76 9.933 4.83 |15.900 2.20 | 21.87 1.32
4.000 1.76 9.967 4.83 |15.933 2.20 | 21.90 1.32
4.033 1.76 10.000 4.83 |15.967 2.20 | 21.93 1.32
4.067 1.76 10.033 5.27 |16.000 2.19 | 21.97 1.32
4.100 1.76 10.067 5.27 |16.033 1.76 | 22.00 1.32
4.133 1.76 10.100 5.27 |16.067 1.76 | 22.03 1.32
4.167 1.76 10.133 5.27 |16.100 1.76 | 22.07 1.32
4.200 1.76 10.167 5.27 |16.133 1.76 | 22.10 1.32
4.233 1.76 10.200 5.27 |16.167 1.76 | 22.13 1.32
4.267 1.76 10.233 5.27 |16.200 1.76 | 22.17 1.32
4.300 1.76 10.267 5.93 |16.233 1.76 | 22.20 1.32
4.333 1.76 10.300 6.59 |16.267 1.98 | 22.23 1.32
4.367 1.76 10.333 6.59 |16.300 2.20 | 22.27 1.32
4.400 1.76 10.367 6.59 |16.333 2.20 | 22.30 1.32
4.433 1.76 10.400 6.59 |16.367 2.20 | 22.33 1.32
4.467 1.76 10.433 6.59 |16.400 2.20 | 22.37 1.32
4.500 1.76 10.467 6.59 |16.433 2.20 | 22.40 1.32
4.533 1.76 10.500 6.59 |16.467 2.20 | 22.43 1.32
4.567 1.76 10.533 7.03 |16.500 2.19 | 22.47 1.32

4.600 1.76 |10.567 7.03 |16.533 1.76 | 22.50 1.32
4.633 1.76 |10.600 7.03 |16.567 1.76 | 22.53 1.32
4.667 1.76 |10.633 7.03 |16.600 1.76 | 22.57 1.32
4.700 1.76 |10.667 7.03 |16.633 1.76 | 22.60 1.32
4.733 1.76 |10.700 7.03 |16.667 1.76 | 22.63 1.32
4.767 1.76 |10.733 7.03 |16.700 1.76 | 22.67 1.32
4.800 1.76 |10.767 8.79 |16.733 1.76 | 22.70 1.32
4.833 1.76 |10.800 10.54 |16.767 1.98 | 22.73 1.32
4.867 1.76 |10.833 10.54 |16.800 2.20 | 22.77 1.32
4.900 1.76 |10.867 10.54 |16.833 2.20 | 22.80 1.32
4.933 1.76 |10.900 10.54 |16.867 2.20 | 22.83 1.32
4.967 1.76 |10.933 10.54 |16.900 2.20 | 22.87 1.32
5.000 1.76 |10.967 10.54 |16.933 2.20 | 22.90 1.32
5.033 1.76 |11.000 10.54 |16.967 2.20 | 22.93 1.32
5.067 1.76 |11.033 10.54 |17.000 2.19 | 22.97 1.32
5.100 1.76 |11.067 10.54 |17.033 1.76 | 23.00 1.32
5.133 1.76 |11.100 10.54 |17.067 1.76 | 23.03 1.32
5.167 1.76 |11.133 10.54 |17.100 1.76 | 23.07 1.32
5.200 1.76 |11.167 10.54 |17.133 1.76 | 23.10 1.32
5.233 1.76 |11.200 10.54 |17.167 1.76 | 23.13 1.32
5.267 1.76 |11.233 10.54 |17.200 1.76 | 23.17 1.32
5.300 1.76 |11.267 21.55 |17.233 1.76 | 23.20 1.32
5.333 1.76 |11.300 32.50 |17.267 1.98 | 23.23 1.32
5.367 1.76 |11.333 32.50 |17.300 2.20 | 23.27 1.32
5.400 1.76 |11.367 32.50 |17.333 2.20 | 23.30 1.32
5.433 1.76 |11.400 32.50 |17.367 2.20 | 23.33 1.32
5.467 1.76 |11.433 32.50 |17.400 2.20 | 23.37 1.32
5.500 1.76 |11.467 32.50 |17.433 2.20 | 23.40 1.32
5.533 1.76 |11.500 32.62 |17.467 2.20 | 23.43 1.32
5.567 1.76 |11.533 134.40 |17.500 2.19 | 23.47 1.32
5.600 1.76 |11.567 134.40 |17.533 1.76 | 23.50 1.32
5.633 1.76 |11.600 134.40 |17.567 1.76 | 23.53 1.32
5.667 1.76 |11.633 134.40 |17.600 1.76 | 23.57 1.32
5.700 1.76 |11.667 134.40 |17.633 1.76 | 23.60 1.32
5.733 1.76 |11.700 134.40 |17.667 1.76 | 23.63 1.32
5.767 1.76 |11.733 134.40 |17.700 1.76 | 23.67 1.32
5.800 1.76 |11.767 74.95 |17.733 1.76 | 23.70 1.32
5.833 1.76 |11.800 15.81 |17.767 1.98 | 23.73 1.32
5.867 1.76 |11.833 15.81 |17.800 2.20 | 23.77 0.66
5.900 1.76 |11.867 15.81 |17.833 2.20 |
5.933 1.76 |11.900 15.81 |17.867 2.20 |
5.967 1.76 |11.933 15.81 |17.900 2.20 |

Unit Hyd Qpeak (cms)= 0.613

PEAK FLOW (cms)= 0.172 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 23.045
TOTAL RAINFALL (mm)= 109.470
RUNOFF COEFFICIENT = 0.211

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

| ADD HYD (0057) |
| I + 2 = | AREA QPEAK TPEAK R.V.
 (ha) (cms) (hrs) (mm)

ID1= 1 (0202): 1.63 0.103 11.83 23.65
+ ID2= 2 (0203): 2.89 0.172 11.83 23.05
===== ID = 3 (0057): 4.52 0.275 11.83 23.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0204) | Area (ha)= 0.64 Curve Number (CN)= 48.1
ID= 1 DT= 2.0 min Ia (mm)= 9.20 # of Linear Res. (N)= 3.00
----- U.H. Tp(hrs)= 0.33

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr
0.033 1.32 | 6.000 1.76 |11.967 15.81 | 17.93 2.20
0.067 1.32 | 6.033 2.20 |12.000 15.81 | 17.97 2.20
0.100 1.32 | 6.067 2.20 |12.033 15.81 | 18.00 2.20
0.133 1.32 | 6.100 2.20 |12.067 15.81 | 18.03 1.76
0.167 1.32 | 6.133 2.20 |12.100 15.81 | 18.07 1.76
0.200 1.32 | 6.167 2.20 |12.133 15.81 | 18.10 1.76
0.233 1.32 | 6.200 2.20 |12.167 15.81 | 18.13 1.76
0.267 1.10 | 6.233 2.20 |12.200 15.81 | 18.17 1.76
0.300 0.88 | 6.267 1.98 |12.233 15.81 | 18.20 1.76
0.333 0.88 | 6.300 1.76 |12.267 12.07 | 18.23 1.76
0.367 0.88 | 6.333 1.76 |12.300 8.34 | 18.27 1.98
0.400 0.88 | 6.367 1.76 |12.333 8.34 | 18.30 2.20
0.433 0.88 | 6.400 1.76 |12.367 8.34 | 18.33 2.20
0.467 0.88 | 6.433 1.76 |12.400 8.34 | 18.37 2.20
0.500 0.88 | 6.467 1.76 |12.433 8.34 | 18.40 2.20
0.533 1.32 | 6.500 1.76 |12.467 8.34 | 18.43 2.20
0.567 1.32 | 6.533 2.20 |12.500 8.34 | 18.47 2.20
0.600 1.32 | 6.567 2.20 |12.533 7.91 | 18.50 2.20
0.633 1.32 | 6.600 2.20 |12.567 7.91 | 18.53 1.76
0.667 1.32 | 6.633 2.20 |12.600 7.91 | 18.57 1.76
0.700 1.32 | 6.667 2.20 |12.633 7.91 | 18.60 1.76
0.733 1.32 | 6.700 2.20 |12.667 7.91 | 18.63 1.76
0.767 1.32 | 6.733 2.20 |12.700 7.91 | 18.67 1.76
0.800 1.32 | 6.767 2.20 |12.733 7.91 | 18.70 1.76
0.833 1.32 | 6.800 2.20 |12.767 7.02 | 18.73 1.76
0.867 1.32 | 6.833 2.20 |12.800 6.15 | 18.77 1.98

0.900	1.32	6.867	2.20	12.833	6.15	18.80	2.20
0.933	1.32	6.900	2.20	12.867	6.15	18.83	2.20
1.000	1.32	6.933	2.20	12.900	6.15	18.87	2.20
1.033	1.32	6.967	2.20	12.933	6.15	18.90	2.20
1.033	1.32	7.000	2.20	12.967	6.15	18.93	2.20
1.067	1.32	7.033	2.20	13.000	6.15	18.97	2.20
1.100	1.32	7.067	2.20	13.033	6.15	19.00	2.20
1.133	1.32	7.100	2.20	13.067	6.15	19.03	1.76
1.167	1.32	7.133	2.20	13.100	6.15	19.07	1.76
1.200	1.32	7.167	2.20	13.133	6.15	19.10	1.76
1.233	1.32	7.200	2.20	13.167	6.15	19.13	1.76
1.267	1.10	7.233	2.20	13.200	6.15	19.17	1.76
1.300	0.88	7.267	2.20	13.233	6.15	19.20	1.76
1.333	0.88	7.300	2.20	13.267	6.15	19.23	1.76
1.367	0.88	7.333	2.20	13.300	6.15	19.27	1.98
1.400	0.88	7.367	2.20	13.333	6.15	19.30	2.20
1.433	0.88	7.400	2.20	13.367	6.15	19.33	2.20
1.467	0.88	7.433	2.20	13.400	6.15	19.37	2.20
1.500	0.88	7.467	2.20	13.433	6.15	19.40	2.20
1.533	1.32	7.500	2.20	13.467	6.15	19.43	2.20
1.567	1.32	7.533	2.20	13.500	6.15	19.47	2.20
1.600	1.32	7.567	2.20	13.533	6.15	19.50	2.20
1.633	1.32	7.600	2.20	13.567	6.15	19.53	1.76
1.667	1.32	7.633	2.20	13.600	6.15	19.57	1.76
1.700	1.32	7.667	2.20	13.633	6.15	19.60	1.76
1.733	1.32	7.700	2.20	13.667	6.15	19.63	1.76
1.767	1.32	7.733	2.20	13.700	6.15	19.67	1.76
1.800	1.32	7.767	2.20	13.733	6.15	19.70	1.76
1.833	1.32	7.800	2.20	13.767	6.15	19.73	1.76
1.867	1.32	7.833	2.20	13.800	6.15	19.77	1.54
1.900	1.32	7.867	2.20	13.833	6.15	19.80	1.32
1.933	1.32	7.900	2.20	13.867	6.15	19.83	1.32
1.967	1.32	7.933	2.20	13.900	6.15	19.87	1.32
2.000	1.32	7.967	2.20	13.933	6.15	19.90	1.32
2.033	1.76	8.000	2.20	13.967	6.15	19.93	1.32
2.067	1.76	8.033	3.07	14.000	6.15	19.97	1.32
2.100	1.76	8.067	3.07	14.033	6.15	20.00	1.32
2.133	1.76	8.100	3.07	14.067	6.15	20.03	1.32
2.167	1.76	8.133	3.07	14.100	6.15	20.07	1.32
2.200	1.76	8.167	3.07	14.133	6.15	20.10	1.32
2.233	1.76	8.200	3.07	14.167	6.15	20.13	1.32
2.267	1.54	8.233	3.07	14.200	6.15	20.17	1.32
2.300	1.32	8.267	3.07	14.233	6.15	20.20	1.32
2.333	1.32	8.300	3.07	14.267	6.15	20.23	1.32
2.367	1.32	8.333	3.07	14.300	6.15	20.27	1.32
2.400	1.32	8.367	3.07	14.333	6.15	20.30	1.32
2.433	1.32	8.400	3.07	14.367	6.15	20.33	1.32
2.467	1.32	8.433	3.07	14.400	6.15	20.37	1.32
2.500	1.32	8.467	3.07	14.433	6.15	20.40	1.32
2.533	1.32	8.500	3.07	14.467	6.15	20.43	1.32
2.567	1.32	8.533	3.07	14.500	6.15	20.47	1.32
2.600	1.32	8.567	3.07	14.533	6.15	20.50	1.32
2.633	1.32	8.600	3.07	14.567	6.15	20.53	1.32
2.667	1.32	8.633	3.07	14.600	6.15	20.57	1.32
2.700	1.32	8.667	3.07	14.633	6.15	20.60	1.32
2.733	1.32	8.700	3.07	14.667	6.15	20.63	1.32
2.767	1.32	8.733	3.07	14.700	6.15	20.67	1.32
2.800	1.32	8.767	3.07	14.733	6.15	20.70	1.32
2.833	1.32	8.800	3.51	14.767	6.15	20.73	1.32
2.867	1.32	8.833	3.51	14.800	6.15	20.77	1.32
2.900	1.32	8.867	3.51	14.833	6.15	20.80	1.32
2.933	1.32	8.900	3.51	14.867	6.15	20.83	1.32
2.967	1.32	8.933	3.51	14.900	6.15	20.87	1.32
3.000	1.32	8.967	3.51	14.933	6.15	20.90	1.32
3.033	1.76	9.000	3.51	14.967	6.15	20.93	1.32
3.067	1.76	9.033	3.51	15.000	6.15	20.97	1.32
3.100	1.76	9.067	3.51	15.033	6.15	21.00	1.32
3.133	1.76	9.100	3.51	15.067	6.15	21.03	1.32
3.167	1.76	9.133	3.51	15.100	6.15	21.07	1.32
3.200	1.76	9.167	3.51	15.133	6.15	21.10	1.32
3.233	1.76	9.200	3.51	15.167	6.15	21.13	1.32
3.267	1.54	9.233	3.51	15.200	6.15	21.17	1.32
3.300	1.32	9.267	3.73	15.233	6.15	21.20	1.32
3.333	1.32	9.300	3.95	15.267	6.15	21.23	1.32
3.367	1.32	9.333	3.95	15.300	6.15	21.27	1.32
3.400	1.32	9.367	3.95	15.333	6.15	21.30	1.32
3.433	1.32	9.400	3.95	15.367	6.15	21.33	1.32
3.467	1.32	9.433	3.95	15.400	6.15	21.37	1.32
3.500	1.32	9.467	3.95	15.433	6.15	21.40	1.32
3.533	1.32	9.500	3.95	15.467	6.15	21.43	1.32
3.567	1.32	9.533	3.95	15.500	6.15	21.47	1.32
3.600	1.32	9.567	3.95	15.533	6.15	21.50	1.32
3.633	1.32	9.600	3.95	15.567	6.15	21.53	1.32
3.667	1.32	9.633	3.95	15.600	6.15	21.57	1.32
3.700	1.32	9.667	3.95	15.633	6.15	21.60	1.32
3.733	1.32	9.700	3.95	15.667	6.15	21.63	1.32
3.767	1.54	9.733	3.95	15.700	6.15	21.67	1.32
3.800	1.76	9.767	3.95	15.733	6.15	21.70	1.32
3.833	1.76	9.800	4.83	15.767	6.15	21.73	1.32
3.867	1.76	9.833	4.83	15.800	6.15	21.77	1.32
3.900	1.76	9.867	4.83	15.833	6.15	21.80	1.32
3.933	1.76	9.900	4.83	15.867	6.15	21.83	1.32
3.967	1.76	9.933	4.83	15.900	6.15	21.87	1.32
4.000	1.76	9.967	4.83	15.933	6.15	21.90	1.32
4.033	1.76	10.000	4.83	15.967	6.15	21.93	1.32
4.067	1.76	10.033	5.27	16.000	6.15	21.97	1.32
4.100	1.76	10.067	5.27	16.033	6.15	22.00	1.32
4.133	1.76	10.100	5.27	16.067	6.15	22.03	1.32
4.167	1.76	10.133	5.27	16.100	6.15	22.07	1.32
4.200	1.76	10.167	5.27	16.133	6.15	22.10	1.32
4.233	1.76	10.200	5.27	16.167	6.15	22.13	1.32
4.267	1.76	10.233	5.27	16.200	6.15	22.17	1.32
4.300	1.76	10.267	5.93	16.233	6.15	22.20	1.32
4.333	1.76	10.300	6.59	16.267	6.15	22.23	1.32

4.367	1.76	10.333	6.59	16.300	2.20	22.27	1.32
4.400	1.76	10.367	6.59	16.333	2.20	22.30	1.32
4.433	1.76	10.400	6.59	16.367	2.20	22.33	1.32
4.467	1.76	10.433	6.59	16.400	2.20	22.37	1.32
4.500	1.76	10.467	6.59	16.433	2.20	22.40	1.32
4.533	1.76	10.500	6.59	16.467	2.20	22.43	1.32
4.567	1.76	10.533	7.03	16.500	2.20	22.47	1.32
4.600	1.76	10.567	7.03	16.533	1.76	22.50	1.32
4.633	1.76	10.600	7.03	16.567	1.76	22.53	1.32
4.667	1.76	10.633	7.03	16.600	1.76	22.57	1.32
4.700	1.76	10.667	7.03	16.633	1.76	22.60	1.32
4.733	1.76	10.700	7.03	16.667	1.76	22.63	1.32
4.767	1.76	10.733	7.03	16.700	1.76	22.67	1.32
4.800	1.76	10.767	8.79	16.733	1.76	22.70	1.32
4.833	1.76	10.800	10.54	16.767	1.98	22.73	1.32
4.867	1.76	10.833	10.54	16.800	2.20	22.77	1.32
4.900	1.76	10.867	10.54	16.833	2.20	22.80	1.32
4.933	1.76	10.900	10.54	16.867	2.20	22.83	1.32
4.967	1.76	10.933	10.54	16.900	2.20	22.87	1.32
5.000	1.76	10.967	10.54	16.933	2.20	22.90	1.32
5.033	1.76	11.000	10.54	16.967	2.20	22.93	1.32
5.067	1.76	11.033	10.54	17.000	2.20	22.97	1.32
5.100	1.76	11.067	10.54	17.033	1.76	23.00	1.32
5.133	1.76	11.100	10.54	17.067	1.76	23.03	1.32
5.167	1.76	11.133	10.54	17.100	1.76	23.07	1.32
5.200	1.76	11.167	10.54	17.133	1.76	23.10	1.32
5.233	1.76	11.200	10.54	17.167	1.76	23.13	1.32
5.267	1.76	11.233	10.54	17.200	1.76	23.17	1.32
5.300	1.76	11.267	21.55	17.233	1.76	23.20	1.32
5.333	1.76	11.300	32.50	17.267	1.98	23.23	1.32
5.367	1.76	11.333	32.50	17.300	2.20	23.27	1.32
5.400	1.76	11.367	32.50	17.333	2.20	23.30	1.32
5.433	1.76	11.400	32.50	17.367	2.20	23.33	1.32
5.467	1.76	11.433	32.50	17.400	2.20	23.37	1.32
5.500	1.76	11.467	32.50	17.433	2.20	23.40	1.32
5.533	1.76	11.500	32.62	17.467	2.20	23.43	1.32
5.567	1.76	11.533	32.62	17.500	2.20	23.47	1.32
5.600	1.76	11.567	32.62	17.533	1.76	23.50	1.32
5.633	1.76	11.600	32.62	17.567	1.76	23.53	1.32
5.667	1.76	11.633	32.62	17.600	1.76	23.57	1.32
5.700	1.76	11.667	32.62	17.633	1.76	23.60	1.32
5.733	1.76	11.700	32.62	17.667	1.76	23.63	1.32
5.767	1.76	11.733	32.62	17.700	1.76	23.67	1.32
5.800	1.76	11.767	32.62	17.733	1.76	23.70	1.32
5.833	1.76	11.800	32.62	17.767	1.98	23.73	1.32
5.867	1.76	11.833	32.62	17.800	2.20	23.77	0.66
5.900	1.76	11.867	32.62	17.833	2.20	23.80	1.32
5.933	1.76	11.900	32.62	17.867	2.20	23.83	1.32
5.967	1.76	11.933	32.62	17.900	2.20	23.87	1.32

1.167	1.32	7.167	2.64	13.167	5.71	19.17	1.76
1.250	1.32	7.250	2.64	13.250	5.71	19.25	1.76
1.333	0.88	7.333	2.20	13.333	4.83	19.33	2.20
1.417	0.88	7.417	2.20	13.417	4.83	19.42	2.20
1.500	0.88	7.500	2.20	13.500	4.83	19.50	2.20
1.583	1.32	7.583	2.64	13.583	4.39	19.58	1.76
1.667	1.32	7.667	2.64	13.667	4.39	19.67	1.76
1.750	1.32	7.750	2.64	13.750	4.39	19.75	1.76
1.833	1.32	7.833	2.64	13.833	3.51	19.83	1.32
1.917	1.32	7.917	2.64	13.917	3.51	19.92	1.32
2.000	1.32	8.000	2.64	14.000	3.51	20.00	1.32
2.083	1.76	8.083	3.07	14.083	3.07	20.08	1.32
2.167	1.76	8.167	3.07	14.167	3.07	20.17	1.32
2.250	1.76	8.250	3.07	14.250	3.07	20.25	1.32
2.333	1.32	8.333	3.07	14.333	3.51	20.33	1.32
2.417	1.32	8.417	3.07	14.417	3.51	20.42	1.32
2.500	1.32	8.500	3.07	14.500	3.51	20.50	1.32
2.583	1.32	8.583	3.07	14.583	3.07	20.58	1.32
2.667	1.32	8.667	3.07	14.667	3.07	20.67	1.32
2.750	1.32	8.750	3.07	14.750	3.07	20.75	1.32
2.833	1.32	8.833	3.51	14.833	3.51	20.83	1.32
2.917	1.32	8.917	3.51	14.917	3.51	20.92	1.32
3.000	1.32	9.000	3.51	15.000	3.51	21.00	1.32
3.083	1.76	9.083	3.51	15.083	3.07	21.08	1.32
3.167	1.76	9.167	3.51	15.167	3.07	21.17	1.32
3.250	1.76	9.250	3.51	15.250	3.07	21.25	1.32
3.333	1.32	9.333	3.95	15.333	3.51	21.33	1.32
3.417	1.32	9.417	3.95	15.417	3.51	21.42	1.32
3.500	1.32	9.500	3.95	15.500	3.51	21.50	1.32
3.583	1.32	9.583	3.95	15.583	3.07	21.58	1.32
3.667	1.32	9.667	3.95	15.667	3.07	21.67	1.32
3.750	1.32	9.750	3.95	15.750	3.07	21.75	1.32
3.833	1.76	9.833	4.83	15.833	2.20	21.83	1.32
3.917	1.76	9.917	4.83	15.917	2.20	21.92	1.32
4.000	1.76	10.000	4.83	16.000	2.20	22.00	1.32
4.083	1.76	10.083	5.27	16.083	1.76	22.08	1.32
4.167	1.76	10.167	5.27	16.167	1.76	22.17	1.32
4.250	1.76	10.250	5.27	16.250	1.76	22.25	1.32
4.333	1.76	10.333	6.59	16.333	2.20	22.33	1.32
4.417	1.76	10.417	6.59	16.417	2.20	22.42	1.32
4.500	1.76	10.500	6.59	16.500	2.20	22.50	1.32
4.583	1.76	10.583	7.03	16.583	1.76	22.58	1.32
4.667	1.76	10.667	7.03	16.667	1.76	22.67	1.32
4.750	1.76	10.750	7.03	16.750	1.76	22.75	1.32
4.833	1.76	10.833	10.54	16.833	2.20	22.83	1.32
4.917	1.76	10.917	10.54	16.917	2.20	22.92	1.32
5.000	1.76	11.000	10.54	17.000	2.20	23.00	1.32
5.083	1.76	11.083	10.54	17.083	1.76	23.08	1.32
5.167	1.76	11.167	10.54	17.167	1.76	23.17	1.32
5.250	1.76	11.250	10.54	17.250	1.76	23.25	1.32
5.333	1.76	11.333	32.50	17.333	2.20	23.33	1.32
5.417	1.76	11.417	32.50	17.417	2.20	23.42	1.32
5.500	1.76	11.500	32.50	17.500	2.20	23.50	1.32
5.583	1.76	11.583	134.39	17.583	1.76	23.58	1.32
5.667	1.76	11.667	134.40	17.667	1.76	23.67	1.32
5.750	1.76	11.750	134.40	17.750	1.76	23.75	1.32
5.833	1.76	11.833	15.82	17.833	2.20		
5.917	1.76	11.917	15.81	17.917	2.20		
6.000	1.76	12.000	15.81	18.000	2.20		
Max.Eff.Inten.(mm/hr)=	134.40		178.62				
over (min)	5.00		10.00				
Storage Coeff. (min)=	2.55 (ii)		9.44 (ii)				
Unit Hyd. Tpeak (min)=	5.00		10.00				
Unit Hyd. peak (cms)=	0.29		0.12				
PEAK FLOW (cms)=	0.17		0.47				
TIME TO PEAK (hrs)=	11.75		11.75				
RUNOFF VOLUME (mm)=	108.47		47.16				
TOTAL RAINFALL (mm)=	109.47		109.47				
RUNOFF COEFFICIENT =	0.99		0.43				

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

- (i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0301)	OVERFLOW IS OFF
IN= 2--> OUT= 1	
DT= 5.0 min	
OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.1600
0.0440	0.2080
0.0990	0.3020
0.1320	0.4180
OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.5500
0.0440	0.7230
0.0990	0.9160
0.1320	1.0230
AREA (ha)	QPEAK (cms)
2.200	0.646
OUTFLOW: ID= 1 (0301)	NaN
PEAK FLOW REDUCTION [Qout/Qin](%)=	0.00
TIME SHIFT OF PEAK FLOW (min)=	*****
MAXIMUM STORAGE USED (ha.m.)=	0.0711

ADD HYD (0059)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(cms)	(cms)	(hrs)	(mm)
ID1= 1 (0301):	NaN	0.000	0.00	NaN
+ ID2= 2 (0058):	5.16	0.300	11.83	23.71
ID = 3 (0059):	NaN	0.300	11.83	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	0.03
STANDBYD (0205)	Total Imp(%)=	56.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	28.00

SurFace Area (ha)=	IMPERVIOUS	PERVIOUS (i)
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	1.00
Length (m)=	14.14	20.00
Mannings n =	0.013	0.250

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

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.32	6.083	2.20	12.083	15.81
0.167	1.32	6.167	2.20	12.167	15.81
0.250	1.32	6.250	2.20	12.250	15.81
0.333	0.88	6.333	1.76	12.333	8.35
0.417	0.88	6.417	1.76	12.417	8.34
0.500	0.88	6.500	1.76	12.500	8.34
0.583	1.32	6.583	2.20	12.583	7.91
0.667	1.32	6.667	2.20	12.667	7.91
0.750	1.32	6.750	2.20	12.750	7.91
0.833	1.32	6.833	2.20	12.833	6.15
0.917	1.32	6.917	2.20	12.917	6.15
1.000	1.32	7.000	2.20	13.000	6.15
1.083	1.32	7.083	2.64	13.083	5.71
1.167	1.32	7.167	2.64	13.167	5.71
1.250	1.32	7.250	2.64	13.250	5.71
1.333	0.88	7.333	2.20	13.333	4.83
1.417	0.88	7.417	2.20	13.417	4.83
1.500	0.88	7.500	2.20	13.500	4.83
1.583	1.32	7.583	2.64	13.583	4.39
1.667	1.32	7.667	2.64	13.667	4.39
1.750	1.32	7.750	2.64	13.750	4.39
1.833	1.32	7.833	2.64	13.833	3.51
1.917	1.32	7.917	2.64	13.917	3.51
2.000	1.32	8.000	2.64	14.000	3.51
2.083	1.76	8.083	3.07	14.083	3.07
2.167	1.76	8.167	3.07	14.167	3.07
2.250	1.76	8.250	3.07	14.250	3.07
2.333	1.32	8.333	3.07	14.333	3.51
2.417	1.32	8.417	3.07	14.417	3.51
2.500	1.32	8.500	3.07	14.500	3.51
2.583	1.32	8.583	3.07	14.583	3.07
2.667	1.32	8.667	3.07	14.667	3.07
2.750	1.32	8.750	3.07	14.750	3.07
2.833	1.32	8.833	3.51	14.833	3.51
2.917	1.32	8.917	3.51	14.917	3.51
3.000	1.32	9.000	3.51	15.000	3.51
3.083	1.76	9.083	3.51	15.083	3.07
3.167	1.76	9.167	3.51	15.167	3.07
3.250	1.76	9.250	3.51	15.250	3.07
3.333	1.32	9.333	3.95	15.333	3.51
3.417	1.32	9.417	3.95	15.417	3.51
3.500	1.32	9.500	3.95	15.500	3.51
3.583	1.32	9.583	3.95	15.583	3.07
3.667	1.32	9.667	3.95	15.667	3.07
3.750	1.32	9.750	3.95	15.750	3.07
3.833	1.76	9.833	4.83	15.833	2.20
3.917	1.76	9.917	4.83	15.917	2.20
4.000	1.76	10.000	4.83	16.000	2.20
4.083	1.76	10.083	5.27	16.083	1.76
4.167	1.76	10.167	5.27	16.167	1.76
4.250	1.76	10.250	5.27	16.250	1.76
4.333	1.76	10.333	6.59	16.333	2.20
4.417	1.76	10.417	6.59	16.417	2.20
4.500	1.76	10.500	6.59	16.500	2.20
4.583	1.76	10.583	7.03	16.583	1.76
4.667	1.76	10.667	7.03	16.667	1.76
4.750	1.76	10.750	7.03	16.750	1.76
4.833	1.76	10.833	10.54	16.833	2.20
4.917	1.76	10.917	10.54	16.917	2.20
5.000	1.76	11.000	10.54	17.000	2.20
5.083	1.76	11.083	10.54	17.083	1.76
5.167	1.76	11.167	10.54	17.167	1.76
5.250	1.76	11.250	10.54	17.250	1.76
5.333	1.76	11.333	32.50	17.333	2.20
5.417	1.76	11.417	32.50	17.417	2.20
5.500	1.76	11.500	32.50	17.500	2.20
5.583	1.76	11.583	134.39	17.583	1.76
5.667	1.76	11.667	134.40	17.667	1.76
5.750	1.76	11.750	134.40	17.750	1.76
5.833	1.76	11.833	15.82	17.833	2.20
5.917	1.76	11.917	15.81	17.917	2.20
6.000	1.76	12.000	15.81	18.000	2.20

Max.Eff.Inten.(mm/hr)=	134.40	212.38
over (min)	5.00	5.00
Storage Coeff. (min)=	0.70 (ii)	4.94 (ii)

Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.34 0.22
PEAK FLOW (cms)= 0.00 0.01
TIME TO PEAK (hrs)= 11.75 11.75
RUNOFF VOLUME (mm)= 108.47 50.53
TOTAL RAINFALL (mm)= 109.47 109.47
RUNOFF COEFFICIENT = 0.99 0.46

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

(i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0060)
1 + 2 = 3
ID1= 1 (0205): 0.03 0.011 11.75 61.22
+ ID2= 2 (0059): NaN 0.300 11.83 NaN
ID = 3 (0060): NaN 0.303 11.83 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHVD (2071) Area (ha)= 0.52 Curve Number (CN)= 66.3
ID= 1 DT= 5.0 min Ia (mm)= 4.87 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.19

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

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.32 6.083 2.20 12.083 15.81 18.08 1.76
0.167 1.32 6.167 2.20 12.167 15.81 18.17 1.76
0.250 1.32 6.250 2.20 12.250 15.81 18.25 1.76
0.333 0.88 6.333 1.76 12.333 8.35 18.33 2.20
0.417 0.88 6.417 1.76 12.417 8.34 18.42 2.20
0.500 0.88 6.500 1.76 12.500 8.34 18.50 2.20
0.583 1.32 6.583 2.20 12.583 7.91 18.58 1.76
0.667 1.32 6.667 2.20 12.667 7.91 18.67 1.76
0.750 1.32 6.750 2.20 12.750 7.91 18.75 1.76
0.833 1.32 6.833 2.20 12.833 6.15 18.83 2.20
0.917 1.32 6.917 2.20 12.917 6.15 18.92 2.20
1.000 1.32 7.000 2.20 13.000 6.15 19.00 2.20
1.083 1.32 7.083 2.64 13.083 5.71 19.08 1.76
1.167 1.32 7.167 2.64 13.167 5.71 19.17 1.76
1.250 1.32 7.250 2.64 13.250 5.71 19.25 1.76
1.333 0.88 7.333 2.20 13.333 4.83 19.33 2.20
1.417 0.88 7.417 2.20 13.417 4.83 19.42 2.20
1.500 0.88 7.500 2.20 13.500 4.83 19.50 2.20
1.583 1.32 7.583 2.64 13.583 4.39 19.58 1.76
1.667 1.32 7.667 2.64 13.667 4.39 19.67 1.76
1.750 1.32 7.750 2.64 13.750 4.39 19.75 1.76
1.833 1.32 7.833 2.64 13.833 3.51 19.83 1.32
1.917 1.32 7.917 2.64 13.917 3.51 19.92 1.32
2.000 1.32 8.000 2.64 14.000 3.51 20.00 1.32
2.083 1.76 8.083 3.07 14.083 3.07 20.08 1.32
2.167 1.76 8.167 3.07 14.167 3.07 20.17 1.32
2.250 1.76 8.250 3.07 14.250 3.07 20.25 1.32
2.333 1.32 8.333 3.07 14.333 3.51 20.33 1.32
2.417 1.32 8.417 3.07 14.417 3.51 20.42 1.32
2.500 1.32 8.500 3.07 14.500 3.51 20.50 1.32
2.583 1.32 8.583 3.07 14.583 3.07 20.58 1.32
2.667 1.32 8.667 3.07 14.667 3.07 20.67 1.32
2.750 1.32 8.750 3.07 14.750 3.07 20.75 1.32
2.833 1.32 8.833 3.51 14.833 3.51 20.83 1.32
2.917 1.32 8.917 3.51 14.917 3.51 20.92 1.32
3.000 1.32 9.000 3.51 15.000 3.51 21.00 1.32
3.083 1.76 9.083 3.51 15.083 3.07 21.08 1.32
3.167 1.76 9.167 3.51 15.167 3.07 21.17 1.32
3.250 1.76 9.250 3.51 15.250 3.07 21.25 1.32
3.333 1.32 9.333 3.95 15.333 3.51 21.33 1.32
3.417 1.32 9.417 3.95 15.417 3.51 21.42 1.32
3.500 1.32 9.500 3.95 15.500 3.51 21.50 1.32
3.583 1.32 9.583 3.95 15.583 3.07 21.58 1.32
3.667 1.32 9.667 3.95 15.667 3.07 21.67 1.32
3.750 1.32 9.750 3.95 15.750 3.07 21.75 1.32
3.833 1.76 9.833 4.83 15.833 2.20 21.83 1.32
3.917 1.76 9.917 4.83 15.917 2.20 21.92 1.32
4.000 1.76 10.000 4.83 16.000 2.20 22.00 1.32
4.083 1.76 10.083 5.27 16.083 1.76 22.08 1.32
4.167 1.76 10.167 5.27 16.167 1.76 22.17 1.32
4.250 1.76 10.250 5.27 16.250 1.76 22.25 1.32
4.333 1.76 10.333 6.59 16.333 2.20 22.33 1.32
4.417 1.76 10.417 6.59 16.417 2.20 22.42 1.32
4.500 1.76 10.500 6.59 16.500 2.20 22.50 1.32
4.583 1.76 10.583 7.03 16.583 1.76 22.58 1.32
4.667 1.76 10.667 7.03 16.667 1.76 22.67 1.32
4.750 1.76 10.750 7.03 16.750 1.76 22.75 1.32
4.833 1.76 10.833 10.54 16.833 2.20 22.83 1.32
4.917 1.76 10.917 10.54 16.917 2.20 22.92 1.32
5.000 1.76 11.000 10.54 17.000 2.20 23.00 1.32
5.083 1.76 11.083 10.54 17.083 1.76 23.08 1.32

5.167 1.76 11.167 10.54 17.167 1.76 23.17 1.32
5.250 1.76 11.250 10.54 17.250 1.76 23.25 1.32
5.333 1.76 11.333 12.50 17.333 2.20 23.33 1.32
5.417 1.76 11.417 32.50 17.417 2.20 23.42 1.32
5.500 1.76 11.500 32.50 17.500 2.20 23.50 1.32
5.583 1.76 11.583 134.39 17.583 1.76 23.58 1.32
5.667 1.76 11.667 134.40 17.667 1.76 23.67 1.32
5.750 1.76 11.750 134.40 17.750 1.76 23.75 1.32
5.833 1.76 11.833 15.82 17.833 2.20 23.82 1.32
5.917 1.76 11.917 15.81 17.917 2.20 23.91 1.32
6.000 1.76 12.000 15.81 18.000 2.20 24.00 1.32

Unit Hyd Qpeak (cms)= 0.105

PEAK FLOW (cms)= 0.064 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 46.707
TOTAL RAINFALL (mm)= 109.471
RUNOFF COEFFICIENT = 0.427

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

ADD HYD (0061)
1 + 2 = 3
ID1= 1 (2071): 0.52 0.064 11.83 46.71
+ ID2= 2 (0060): NaN 0.303 11.83 NaN
ID = 3 (0061): NaN 0.367 11.83 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHVD (2072) Area (ha)= 0.34 Curve Number (CN)= 66.3
ID= 1 DT= 5.0 min Ia (mm)= 4.87 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.19

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

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.32 6.083 2.20 12.083 15.81 18.08 1.76
0.167 1.32 6.167 2.20 12.167 15.81 18.17 1.76
0.250 1.32 6.250 2.20 12.250 15.81 18.25 1.76
0.333 0.88 6.333 1.76 12.333 8.35 18.33 2.20
0.417 0.88 6.417 1.76 12.417 8.34 18.42 2.20
0.500 0.88 6.500 1.76 12.500 8.34 18.50 2.20
0.583 1.32 6.583 2.20 12.583 7.91 18.58 1.76
0.667 1.32 6.667 2.20 12.667 7.91 18.67 1.76
0.750 1.32 6.750 2.20 12.750 7.91 18.75 1.76
0.833 1.32 6.833 2.20 12.833 6.15 18.83 2.20
0.917 1.32 6.917 2.20 12.917 6.15 18.92 2.20
1.000 1.32 7.000 2.20 13.000 6.15 19.00 2.20
1.083 1.32 7.083 2.64 13.083 5.71 19.08 1.76
1.167 1.32 7.167 2.64 13.167 5.71 19.17 1.76
1.250 1.32 7.250 2.64 13.250 5.71 19.25 1.76
1.333 0.88 7.333 2.20 13.333 4.83 19.33 2.20
1.417 0.88 7.417 2.20 13.417 4.83 19.42 2.20
1.500 0.88 7.500 2.20 13.500 4.83 19.50 2.20
1.583 1.32 7.583 2.64 13.583 4.39 19.58 1.76
1.667 1.32 7.667 2.64 13.667 4.39 19.67 1.76
1.750 1.32 7.750 2.64 13.750 4.39 19.75 1.76
1.833 1.32 7.833 2.64 13.833 3.51 19.83 1.32
1.917 1.32 7.917 2.64 13.917 3.51 19.92 1.32
2.000 1.32 8.000 2.64 14.000 3.51 20.00 1.32
2.083 1.76 8.083 3.07 14.083 3.07 20.08 1.32
2.167 1.76 8.167 3.07 14.167 3.07 20.17 1.32
2.250 1.76 8.250 3.07 14.250 3.07 20.25 1.32
2.333 1.32 8.333 3.07 14.333 3.51 20.33 1.32
2.417 1.32 8.417 3.07 14.417 3.51 20.42 1.32
2.500 1.32 8.500 3.07 14.500 3.51 20.50 1.32
2.583 1.32 8.583 3.07 14.583 3.07 20.58 1.32
2.667 1.32 8.667 3.07 14.667 3.07 20.67 1.32
2.750 1.32 8.750 3.07 14.750 3.07 20.75 1.32
2.833 1.32 8.833 3.51 14.833 3.51 20.83 1.32
2.917 1.32 8.917 3.51 14.917 3.51 20.92 1.32
3.000 1.32 9.000 3.51 15.000 3.51 21.00 1.32
3.083 1.76 9.083 3.51 15.083 3.07 21.08 1.32
3.167 1.76 9.167 3.51 15.167 3.07 21.17 1.32
3.250 1.76 9.250 3.51 15.250 3.07 21.25 1.32
3.333 1.32 9.333 3.95 15.333 3.51 21.33 1.32
3.417 1.32 9.417 3.95 15.417 3.51 21.42 1.32
3.500 1.32 9.500 3.95 15.500 3.51 21.50 1.32
3.583 1.32 9.583 3.95 15.583 3.07 21.58 1.32
3.667 1.32 9.667 3.95 15.667 3.07 21.67 1.32
3.750 1.32 9.750 3.95 15.750 3.07 21.75 1.32
3.833 1.76 9.833 4.83 15.833 2.20 21.83 1.32
3.917 1.76 9.917 4.83 15.917 2.20 21.92 1.32
4.000 1.76 10.000 4.83 16.000 2.20 22.00 1.32
4.083 1.76 10.083 5.27 16.083 1.76 22.08 1.32
4.167 1.76 10.167 5.27 16.167 1.76 22.17 1.32
4.250 1.76 10.250 5.27 16.250 1.76 22.25 1.32
4.333 1.76 10.333 6.59 16.333 2.20 22.33 1.32
4.417 1.76 10.417 6.59 16.417 2.20 22.42 1.32
4.500 1.76 10.500 6.59 16.500 2.20 22.50 1.32
4.583 1.76 10.583 7.03 16.583 1.76 22.58 1.32
4.667 1.76 10.667 7.03 16.667 1.76 22.67 1.32
4.750 1.76 10.750 7.03 16.750 1.76 22.75 1.32

4.833	1.76	10.833	10.54	16.833	2.20	22.83	1.32
4.917	1.76	10.917	10.54	16.917	2.20	22.92	1.32
5.167	1.76	11.000	10.54	17.000	2.20	23.00	1.32
5.083	1.76	11.083	10.54	17.083	1.76	23.08	1.32
5.167	1.76	11.167	10.54	17.167	1.76	23.17	1.32
5.250	1.76	11.250	10.54	17.250	1.76	23.25	1.32
5.333	1.76	11.333	32.50	17.333	2.20	23.33	1.32
5.417	1.76	11.417	32.50	17.417	2.20	23.42	1.32
5.500	1.76	11.500	32.50	17.500	2.20	23.50	1.32
5.583	1.76	11.583	134.39	17.583	1.76	23.58	1.32
5.667	1.76	11.667	134.40	17.667	1.76	23.67	1.32
5.750	1.76	11.750	134.40	17.750	1.76	23.75	1.32
5.833	1.76	11.833	15.82	17.833	2.20		
5.917	1.76	11.917	15.81	17.917	2.20		
6.000	1.76	12.000	15.81	18.000	2.20		

Unit Hyd Qpeak (cms)= 0.068

PEAK FLOW (cms)= 0.042 (i)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 46.706
TOTAL RAINFALL (mm)= 189.471
RUNOFF COEFFICIENT = 0.427

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

CALIB	
STANDHYD (0286)	Area (ha)= 0.73
ID= 1 DT= 5.0 min	Total Imp(%)= 32.00 Dir. Conn.(%)= 13.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.23	0.50
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	2.00
Length (m)=	69.76	40.00
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	1.32	6.083	2.20	12.083	15.81	18.08	1.76
0.167	1.32	6.167	2.20	12.167	15.81	18.17	1.76
0.250	1.32	6.250	2.20	12.250	15.81	18.25	1.76
0.333	0.88	6.333	1.76	12.333	8.35	18.33	2.20
0.417	0.88	6.417	1.76	12.417	8.34	18.42	2.20
0.500	0.88	6.500	1.76	12.500	8.34	18.50	2.20
0.583	1.32	6.583	2.20	12.583	7.91	18.58	1.76
0.667	1.32	6.667	2.20	12.667	7.91	18.67	1.76
0.750	1.32	6.750	2.20	12.750	7.91	18.75	1.76
0.833	1.32	6.833	2.20	12.833	6.15	18.83	2.20
0.917	1.32	6.917	2.20	12.917	6.15	18.92	2.20
1.000	1.32	7.000	2.20	13.000	6.15	19.00	2.20
1.083	1.32	7.083	6.64	13.083	7.71	19.08	1.76
1.167	1.32	7.167	6.64	13.167	5.71	19.17	1.76
1.250	1.32	7.250	6.64	13.250	5.71	19.25	1.76
1.333	0.88	7.333	2.20	13.333	4.83	19.33	2.20
1.417	0.88	7.417	2.20	13.417	4.83	19.42	2.20
1.500	0.88	7.500	2.20	13.500	4.83	19.50	2.20
1.583	1.32	7.583	2.20	13.583	4.39	19.58	1.76
1.667	1.32	7.667	2.20	13.667	4.39	19.67	1.76
1.750	1.32	7.750	2.20	13.750	4.39	19.75	1.76
1.833	1.32	7.833	2.20	13.833	3.51	19.83	1.32
1.917	1.32	7.917	2.20	13.917	3.51	19.92	1.32
2.000	1.32	8.000	2.20	14.000	3.51	20.00	1.32
2.083	1.76	8.083	3.07	14.083	3.07	20.08	1.32
2.167	1.76	8.167	3.07	14.167	3.07	20.17	1.32
2.250	1.76	8.250	3.07	14.250	3.07	20.25	1.32
2.333	1.32	8.333	3.07	14.333	3.51	20.33	1.32
2.417	1.32	8.417	3.07	14.417	3.51	20.42	1.32
2.500	1.32	8.500	3.07	14.500	3.51	20.50	1.32
2.583	1.32	8.583	3.07	14.583	3.07	20.58	1.32
2.667	1.32	8.667	3.07	14.667	3.07	20.67	1.32
2.750	1.32	8.750	3.07	14.750	3.07	20.75	1.32
2.833	1.32	8.833	3.51	14.833	3.51	20.83	1.32
2.917	1.32	8.917	3.51	14.917	3.51	20.92	1.32
3.000	1.32	9.000	3.51	15.000	3.51	21.00	1.32
3.083	1.76	9.083	3.51	15.083	3.07	21.08	1.32
3.167	1.76	9.167	3.51	15.167	3.07	21.17	1.32
3.250	1.76	9.250	3.51	15.250	3.07	21.25	1.32
3.333	1.32	9.333	3.95	15.333	3.51	21.33	1.32
3.417	1.32	9.417	3.95	15.417	3.51	21.42	1.32
3.500	1.32	9.500	3.95	15.500	3.51	21.50	1.32
3.583	1.32	9.583	3.95	15.583	3.07	21.58	1.32
3.667	1.32	9.667	3.95	15.667	3.07	21.67	1.32
3.750	1.32	9.750	3.95	15.750	3.07	21.75	1.32
3.833	1.76	9.833	4.83	15.833	2.20	21.83	1.32
3.917	1.76	9.917	4.83	15.917	2.20	21.92	1.32
4.000	1.76	10.000	4.83	16.000	2.20	22.00	1.32
4.083	1.76	10.083	5.27	16.083	1.76	22.08	1.32
4.167	1.76	10.167	5.27	16.167	1.76	22.17	1.32
4.250	1.76	10.250	5.27	16.250	1.76	22.25	1.32
4.333	1.76	10.333	6.59	16.333	2.20	22.33	1.32
4.417	1.76	10.417	6.59	16.417	2.20	22.42	1.32
4.500	1.76	10.500	6.59	16.500	2.20	22.50	1.32
4.583	1.76	10.583	7.03	16.583	1.76	22.58	1.32
4.667	1.76	10.667	7.03	16.667	1.76	22.67	1.32
4.750	1.76	10.750	7.03	16.750	1.76	22.75	1.32
4.833	1.76	10.833	10.54	16.833	2.20	22.83	1.32
4.917	1.76	10.917	10.54	16.917	2.20	22.92	1.32

5.000	1.76	11.000	10.54	17.000	2.20	23.00	1.32
5.083	1.76	11.083	10.54	17.083	1.76	23.08	1.32
5.167	1.76	11.167	10.54	17.167	1.76	23.17	1.32
5.250	1.76	11.250	10.54	17.250	1.76	23.25	1.32
5.333	1.76	11.333	32.50	17.333	2.20	23.33	1.32
5.417	1.76	11.417	32.50	17.417	2.20	23.42	1.32
5.500	1.76	11.500	32.50	17.500	2.20	23.50	1.32
5.583	1.76	11.583	134.39	17.583	1.76	23.58	1.32
5.667	1.76	11.667	134.40	17.667	1.76	23.67	1.32
5.750	1.76	11.750	134.40	17.750	1.76	23.75	1.32
5.833	1.76	11.833	15.82	17.833	2.20		
5.917	1.76	11.917	15.81	17.917	2.20		
6.000	1.76	12.000	15.81	18.000	2.20		

Max. Eff. Inten. (mm/hr)=	134.40	164.18	
over (min)	5.00	10.00	
Storage Coeff. (min)=	1.83 (ii)	7.62 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.32	0.13	
		TOTALS	
PEAK FLOW (cms)=	0.04	0.19	0.222 (iii)
TIME TO PEAK (hrs)=	11.75	11.75	11.75
RUNOFF VOLUME (mm)=	189.47	45.50	53.68
TOTAL RAINFALL (mm)=	189.47	189.47	189.47
RUNOFF COEFFICIENT =	0.99	0.42	0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20% YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum. Inf. (mm)= 0.00
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0286):	0.73	0.222	11.75	53.68
+ ID2= 2 (2072):	0.34	0.042	11.83	46.71
ID = 3 (0062):	1.07	0.261	11.75	51.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0401)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0061):	NaN	0.367	11.83	NaN
+ ID2= 2 (0062):	1.07	0.261	11.75	51.47
ID = 3 (0401):	NaN	0.592	11.80	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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

V V I SSSSS U U A L (v 6.0.2006)
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 SSSSS UUUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM M O O
O O T T H H Y Y M M O O
000 T T H H Y Y M M 000
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DATE: 02-08-2021 TIME: 10:21:44

USER:

SCS 100 year (POST)

** SIMULATION : Run 06 **

MASS STORM File name: C:\Users\ASchoof\AppData\Local\Temp\

fa271cf7-23d8-4eb5-af5b-54bb506c8de|4477bc98
Total=120.80 mm Comments: SC5 Type II 24 HR MASS CURVE

Duration of storm = 23.75 hrs
Mass curve time step = 15.00 min

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.25	1.45	6.25	2.42	12.25	17.40	18.25	1.93	
0.50	0.97	6.50	1.93	12.50	9.18	18.50	2.42	
0.75	1.45	6.75	2.42	12.75	8.70	18.75	1.93	
1.00	1.45	7.00	2.42	13.00	6.76	19.00	2.42	
1.25	1.45	7.25	2.90	13.25	6.28	19.25	1.93	
1.50	0.97	7.50	2.42	13.50	5.32	19.50	2.42	
1.75	1.45	7.75	2.90	13.75	4.83	19.75	1.93	
2.00	1.45	8.00	2.90	14.00	3.87	20.00	1.45	
2.25	1.93	8.25	3.38	14.25	3.38	20.25	1.45	
2.50	1.45	8.50	3.38	14.50	3.87	20.50	1.45	
2.75	1.45	8.75	3.38	14.75	3.38	20.75	1.45	
3.00	1.45	9.00	3.87	15.00	3.87	21.00	1.45	
3.25	1.93	9.25	3.87	15.25	3.38	21.25	1.45	
3.50	1.45	9.50	4.35	15.50	3.87	21.50	1.45	
3.75	1.45	9.75	4.35	15.75	3.38	21.75	1.45	
4.00	1.93	10.00	5.32	16.00	2.42	22.00	1.45	
4.25	1.93	10.25	5.80	16.25	1.93	22.25	1.45	
4.50	1.93	10.50	7.25	16.50	2.42	22.50	1.45	
4.75	1.93	10.75	7.73	16.75	1.93	22.75	1.45	
5.00	1.93	11.00	11.60	17.00	2.42	23.00	1.45	
5.25	1.93	11.25	11.60	17.25	1.93	23.25	1.45	
5.50	1.93	11.50	35.76	17.50	2.42	23.50	1.45	
5.75	1.93	11.75	147.86	17.75	1.93	23.75	1.45	
6.00	1.93	12.00	17.40	18.00	2.42			

CALIB
WASHD (0282)
ID= 1 DF= 2.0 min
Area (ha)= 1.63
Curve Number (CN)= 44.1
Ia (mm)= 9.62
of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.17

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	1.45	6.000	1.93	11.967	17.40	17.93	2.42		
0.667	1.45	6.033	2.42	12.000	17.40	17.97	2.42		
0.100	1.45	6.067	2.42	12.033	17.40	18.00	2.41		
0.133	1.45	6.100	2.42	12.067	17.40	18.03	1.93		
0.167	1.45	6.133	2.42	12.100	17.40	18.07	1.93		
0.200	1.45	6.167	2.42	12.133	17.40	18.10	1.93		
0.233	1.45	6.200	2.42	12.167	17.40	18.13	1.93		
0.267	1.21	6.233	2.42	12.200	17.40	18.17	1.93		
0.300	0.97	6.267	2.17	12.233	17.40	18.20	1.93		
0.333	0.97	6.300	1.93	12.267	13.28	18.23	1.93		
0.367	0.97	6.333	1.93	12.300	9.18	18.27	2.18		
0.400	0.97	6.367	1.93	12.333	9.18	18.30	2.42		
0.433	0.97	6.400	1.93	12.367	9.18	18.33	2.42		
0.467	0.97	6.433	1.93	12.400	9.18	18.37	2.42		
0.500	0.97	6.467	1.93	12.433	9.18	18.40	2.42		
0.533	1.45	6.500	1.93	12.467	9.18	18.43	2.42		
0.567	1.45	6.533	2.42	12.500	9.18	18.47	2.42		
0.600	1.45	6.567	2.42	12.533	8.70	18.50	2.42		
0.633	1.45	6.600	2.42	12.567	8.70	18.53	1.93		
0.667	1.45	6.633	2.42	12.600	8.70	18.57	1.93		
0.700	1.45	6.667	2.42	12.633	8.70	18.60	1.93		
0.733	1.45	6.700	2.42	12.667	8.70	18.63	1.93		
0.767	1.45	6.733	2.42	12.700	8.70	18.67	1.93		
0.800	1.45	6.767	2.42	12.733	8.70	18.70	1.93		
0.833	1.45	6.800	2.42	12.767	7.73	18.73	1.93		
0.867	1.45	6.833	2.42	12.800	6.76	18.77	2.18		
0.900	1.45	6.867	2.42	12.833	6.76	18.80	2.42		
0.933	1.45	6.900	2.42	12.867	6.76	18.83	2.42		
0.967	1.45	6.933	2.42	12.900	6.76	18.87	2.42		
1.000	1.45	6.967	2.42	12.933	6.76	18.90	2.42		
1.033	1.45	7.000	2.42	12.967	6.76	18.93	2.42		
1.067	1.45	7.033	2.90	13.000	6.76	18.97	2.42		
1.100	1.45	7.067	2.90	13.033	6.28	19.00	2.42		
1.133	1.45	7.100	2.90	13.067	6.28	19.03	1.93		
1.167	1.45	7.133	2.90	13.100	6.28	19.07	1.93		
1.200	1.45	7.167	2.90	13.133	6.28	19.10	1.93		
1.233	1.45	7.200	2.90	13.167	6.28	19.13	1.93		
1.267	1.21	7.233	2.90	13.200	6.28	19.17	1.93		
1.300	0.97	7.267	2.66	13.233	6.28	19.20	1.93		
1.333	0.97	7.300	2.42	13.267	5.80	19.23	1.93		
1.367	0.97	7.333	2.42	13.300	5.32	19.27	2.18		
1.400	0.97	7.367	2.42	13.333	5.32	19.30	2.42		
1.433	0.97	7.400	2.42	13.367	5.32	19.33	2.42		
1.467	0.97	7.433	2.42	13.400	5.32	19.37	2.42		
1.500	0.97	7.467	2.42	13.433	5.32	19.40	2.42		
1.533	1.45	7.500	2.42	13.467	5.32	19.43	2.42		
1.567	1.45	7.533	2.90	13.500	5.31	19.47	2.42		
1.600	1.45	7.567	2.90	13.533	4.83	19.50	2.42		
1.633	1.45	7.600	2.90	13.567	4.83	19.53	1.93		
1.667	1.45	7.633	2.90	13.600	4.83	19.57	1.93		
1.700	1.45	7.667	2.90	13.633	4.83	19.60	1.93		
1.733	1.45	7.700	2.90	13.667	4.83	19.63	1.93		
1.767	1.45	7.733	2.90	13.700	4.83	19.67	1.93		
1.800	1.45	7.767	2.90	13.733	4.83	19.70	1.93		
1.833	1.45	7.800	2.90	13.767	4.35	19.73	1.93		
1.867	1.45	7.833	2.90	13.800	3.87	19.77	1.60		
1.900	1.45	7.867	2.90	13.833	3.87	19.80	1.45		
1.933	1.45	7.900	2.90	13.867	3.87	19.83	1.45		

1.967	1.45	7.933	2.90	13.900	3.87	19.87	1.45
2.000	1.45	7.967	2.90	13.933	3.87	19.90	1.45
2.033	1.93	8.000	2.90	13.967	3.87	19.93	1.45
2.067	1.93	8.033	3.38	14.000	3.86	19.97	1.45
2.100	1.93	8.067	3.38	14.033	3.38	20.00	1.45
2.133	1.93	8.100	3.38	14.067	3.38	20.03	1.45
2.167	1.93	8.133	3.38	14.100	3.38	20.07	1.45
2.200	1.93	8.167	3.38	14.133	3.38	20.10	1.45
2.233	1.93	8.200	3.38	14.167	3.38	20.13	1.45
2.267	1.69	8.233	3.38	14.200	3.38	20.17	1.45
2.300	1.45	8.267	3.38	14.233	3.38	20.20	1.45
2.333	1.45	8.300	3.38	14.267	3.63	20.23	1.45
2.367	1.45	8.333	3.38	14.300	3.87	20.27	1.45
2.400	1.45	8.367	3.38	14.333	3.87	20.30	1.45
2.433	1.45	8.400	3.38	14.367	3.87	20.33	1.45
2.467	1.45	8.433	3.38	14.400	3.87	20.37	1.45
2.500	1.45	8.467	3.38	14.433	3.87	20.40	1.45
2.533	1.45	8.500	3.38	14.467	3.87	20.43	1.45
2.567	1.45	8.533	3.38	14.500	3.86	20.47	1.45
2.600	1.45	8.567	3.38	14.533	3.38	20.50	1.45
2.633	1.45	8.600	3.38	14.567	3.38	20.53	1.45
2.667	1.45	8.633	3.38	14.600	3.38	20.57	1.45
2.700	1.45	8.667	3.38	14.633	3.38	20.60	1.45
2.733	1.45	8.700	3.38	14.667	3.38	20.63	1.45
2.767	1.45	8.733	3.38	14.700	3.38	20.67	1.45
2.800	1.45	8.767	3.62	14.733	3.38	20.70	1.45
2.833	1.45	8.800	3.87	14.767	3.63	20.73	1.45
2.867	1.45	8.833	3.87	14.800	3.87	20.77	1.45
2.900	1.45	8.867	3.87	14.833	3.87	20.80	1.45
2.933	1.45	8.900	3.87	14.867	3.87	20.83	1.45
2.967	1.45	8.933	3.87	14.900	3.87	20.87	1.45
3.000	1.45	8.967	3.87	14.933	3.87	20.90	1.45
3.033	1.93	9.000	3.87	14.967	3.87	20.93	1.45
3.067	1.93	9.033	3.87	15.000	3.86	20.97	1.45
3.100	1.93	9.067	3.87	15.033	3.38	21.00	1.45
3.133	1.93	9.100	3.87	15.067	3.38	21.03	1.45
3.167	1.93	9.133	3.87	15.100	3.38	21.07	1.45
3.200	1.93	9.167	3.87	15.133	3.38	21.10	1.45
3.233	1.93	9.200	3.87	15.167	3.38	21.13	1.45
3.267	1.69	9.233	3.87	15.200	3.38	21.17	1.45
3.300	1.45	9.267	4.11	15.233	3.38	21.20	1.45
3.333	1.45	9.300	4.35	15.267	3.63	21.23	1.45
3.367	1.45	9.333	4.35	15.300	3.87	21.27	1.45
3.400	1.45	9.367	4.35	15.333	3.87	21.30	1.45
3.433	1.45	9.400	4.35	15.367	3.87	21.33	1.45
3.467	1.45	9.433	4.35	15.400	3.87	21.37	1.45
3.500	1.45	9.467	4.35	15.433	3.87	21.40	1.45
3.533	1.45	9.500	4.35	15.467	3.87	21.43	1.45
3.567	1.45	9.533	4.35	15.500	3.86	21.47	1.45
3.600	1.45	9.567	4.35	15.533	3.38	21.50	1.45
3.633	1.45	9.600	4.35	15.567	3.38	21.53	1.45
3.667	1.45	9.633	4.35	15.600	3.38	21.57	1.45
3.700	1.45	9.667	4.35	15.633	3.38	21.60	1.45
3.733	1.45	9.700	4.35	15.667	3.38	21.63	1.45
3.767	1.69	9.733	4.35	15.700	3.38	21.67	1.45
3.800	1.93	9.767	4.83	15.733	3.38	21.70	1.45
3.833	1.93	9.800	5.32	15.767	2.90	21.73	1.45
3.867	1.93	9.833	5.32	15.800	2.90	21.77	1.45
3.900	1.93	9.867	5.32	15.833	2.42	21.80	1.45
3.933	1.93	9.900	5.32	15.867	2.42	21.83	1.45
3.967	1.93	9.933	5.32	15.900	2.42	21.87	1.45
4.000	1.93	9.967	5.32	15.933	2.42	21.90	1.45
4.033	1.93	10.000	5.32	15.967	2.42	21.93	1.45
4.067	1.93	10.033	5.80	16.000	2.41	21.97	1.45
4.100	1.93	10.067	5.80	16.033	2.41	22.00	1.45
4.133	1.93	10.100	5.80	16.067	1.93	22.03	1.45
4.167	1.93	10.133	5.80	16.100	1.93	22.07	1.45
4.200	1.93	10.167	5.80	16.133	1.93	22.10	1.45
4.233	1.93	10.200	5.80	16.167	1.93	22.13	1.45
4.267	1.93	10.233	5.80	16.200	1.93	22.17	1.45
4.300	1.93	10.267	6.52	16.233	1.93	22.20	1.45
4.333	1.93	10.300	7.25	16.267	1.93	22.23	1.45
4.367	1.93	10.333	7.25	16.300	2.42	22.27	1.45
4.400	1.93	10.367	7.25	16.333	2.42	22.30	1.45
4.433	1.93	10.400	7.25	16.367	2.42	22.33	1.45
4.467	1.93	10.433	7.25	16.400	2.42	22.37	1.45
4.500	1.93	10.467	7.25	16.433	2.42	22.40	1.45
4.533	1.93	10.500	7.25	16.467	2.42	22.43	1.45
4.567	1.93	10.533	7.25	16.500	1.93	22.47	1.45
4.600	1.93	10.567	7.73	16.533	1.93	22.50	1.45
4.633	1.93	10.600	7.73	16.567	1.93	22.53	1.45
4.667	1.93	10.633	7.73	16.600	1.93	22.57	1.45
4.700	1.93	10.667	7.73	16.633	1.93	22.60	1.45
4.733	1.93	10.700	7.73	16.667	1.93	22.63	1.45
4.767	1.93	10.733	7.73	16.700	1.93	22.67	1.45
4.800	1.93	10.767	9.99	16.733	1.93	22.70	1.45
4.833	1.93	10.800	11.60	16.767	1.93	22.73	1.45
4.867	1.93	10.833	11.60	16.800	2.42	22.77	1.45
4.900	1.93	10.867	11.60	16.833	2.42	22.80	1.45
4.933	1.93	10.900	11.60	16.867	2.42	22.83	1.45
4.967	1.93	10.933	11.60	16.900	2.42	22.87	1.45
5.000	1.93	10.967	11.60	16.933	2.42	22.90	1.45
5.033	1.93	11.000	11.60	16.967	2.42	22.93	1.45
5.067	1.93	11.033	11.60	17.000	2.41	22.97	1.45
5.100	1.93	11.067	11.60	17.033	1.93	23.00	1.45
5.133	1.93	11.100	11.60	17.067	1.93	23.03	1.45
5.167	1.93	11.133	11.60	17.100	1.93	23.07	1.45
5.200	1.93	11.167	11.60	17.133	1.93	23.10	1.45
5.233	1.93	11.200	11.60	17.167	1.93	23.13	1.45
5.267	1.93	11.233	11.60	17.200	1.93	23.17	1.45
5.300	1.93	11.267	13.70	17.233	1.93	23.20	1.45
5.333	1.93	11.300	35.76	17.267	1.93	23.23	1.45
5.367	1.93	11.333	35.76	17.300	2.42	23.27	1.45
5.400	1.93	11.367	35.76	17.333	2.42	23.30	1.45

5.433	1.93	11.400	35.76	17.367	2.42	23.33	1.45
5.467	1.93	11.433	35.76	17.400	2.42	23.37	1.45
5.500	1.93	11.467	35.76	17.433	2.42	23.40	1.45
5.533	1.93	11.500	35.89	17.467	2.42	23.43	1.45
5.567	1.93	11.533	147.86	17.500	2.41	23.47	1.45
5.600	1.93	11.567	147.86	17.533	1.93	23.50	1.45
5.633	1.93	11.600	147.86	17.567	1.93	23.53	1.45
5.667	1.93	11.633	147.86	17.600	1.93	23.57	1.45
5.700	1.93	11.667	147.86	17.633	1.93	23.60	1.45
5.733	1.93	11.700	147.86	17.667	1.93	23.63	1.45
5.767	1.93	11.733	147.86	17.700	1.93	23.67	1.45
5.800	1.93	11.767	82.46	17.733	1.93	23.70	1.45
5.833	1.93	11.800	17.40	17.767	2.18	23.73	1.45
5.867	1.93	11.833	17.40	17.800	2.42	23.77	0.73
5.900	1.93	11.867	17.40	17.833	2.42		
5.933	1.93	11.900	17.40	17.867	2.42		
5.967	1.93	11.933	17.40	17.900	2.42		

Unit Hyd Opeak (cms)= 0.366

PEAK FLOW (cms)= 0.124 (1)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 28.396
TOTAL RAINFALL (mm)= 120.437
RUNOFF COEFFICIENT = 0.236

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

CALIB	
NASHYD (0203)	Area (ha)= 2.89 Curve Number (CN)= 42.9
120= 1 D1= 2.0 min	Ia (mm)= 8.98 # of Linear Res. (N)= 3.00
	U.H. Tp(hrs)= 0.18

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.45	6.000	1.93	11.967	17.40	17.93	2.42		
0.067	1.45	6.033	2.42	12.000	17.40	17.97	2.42		
0.100	1.45	6.067	2.42	12.033	17.40	18.00	2.41		
0.133	1.45	6.100	2.42	12.067	17.40	18.03	1.93		
0.167	1.45	6.133	2.42	12.100	17.40	18.07	1.93		
0.200	1.45	6.167	2.42	12.133	17.40	18.10	1.93		
0.233	1.45	6.200	2.42	12.167	17.40	18.13	1.93		
0.267	1.21	6.233	2.42	12.200	17.40	18.17	1.93		
0.300	0.97	6.267	2.17	12.233	17.40	18.20	1.93		
0.333	0.97	6.300	1.93	12.267	18.28	18.23	1.93		
0.367	0.97	6.333	1.93	12.300	9.18	18.27	2.18		
0.400	0.97	6.367	1.93	12.333	9.18	18.30	2.42		
0.433	0.97	6.400	1.93	12.367	9.18	18.33	2.42		
0.467	0.97	6.433	1.93	12.400	9.18	18.37	2.42		
0.500	0.97	6.467	1.93	12.433	9.18	18.40	2.42		
0.533	1.45	6.500	1.93	12.467	9.18	18.43	2.42		
0.567	1.45	6.533	2.42	12.500	9.18	18.47	2.42		
0.600	1.45	6.567	2.42	12.533	8.70	18.50	2.42		
0.633	1.45	6.600	2.42	12.567	8.70	18.53	1.93		
0.667	1.45	6.633	2.42	12.600	8.70	18.57	1.93		
0.700	1.45	6.667	2.42	12.633	8.70	18.60	1.93		
0.733	1.45	6.700	2.42	12.667	8.70	18.63	1.93		
0.767	1.45	6.733	2.42	12.700	8.70	18.67	1.93		
0.800	1.45	6.767	2.42	12.733	8.70	18.70	1.93		
0.833	1.45	6.800	2.42	12.767	7.73	18.73	1.93		
0.867	1.45	6.833	2.42	12.800	6.76	18.77	2.18		
0.900	1.45	6.867	2.42	12.833	6.76	18.80	2.42		
0.933	1.45	6.900	2.42	12.867	6.76	18.83	2.42		
0.967	1.45	6.933	2.42	12.900	6.76	18.87	2.42		
1.000	1.45	6.967	2.42	12.933	6.76	18.90	2.42		
1.033	1.45	7.000	2.42	12.967	6.76	18.93	2.42		
1.067	1.45	7.033	2.90	13.000	6.76	18.97	2.42		
1.100	1.45	7.067	2.90	13.033	6.28	19.00	2.42		
1.133	1.45	7.100	2.90	13.067	6.28	19.03	1.93		
1.167	1.45	7.133	2.90	13.100	6.28	19.07	1.93		
1.200	1.45	7.167	2.90	13.133	6.28	19.10	1.93		
1.233	1.45	7.200	2.90	13.167	6.28	19.13	1.93		
1.267	1.21	7.233	2.90	13.200	6.28	19.17	1.93		
1.300	0.97	7.267	2.66	13.233	6.28	19.20	1.93		
1.333	0.97	7.300	2.42	13.267	5.80	19.23	1.93		
1.367	0.97	7.333	2.42	13.300	5.32	19.27	2.18		
1.400	0.97	7.367	2.42	13.333	5.32	19.30	2.42		
1.433	0.97	7.400	2.42	13.367	5.32	19.33	2.42		
1.467	0.97	7.433	2.42	13.400	5.32	19.37	2.42		
1.500	0.97	7.467	2.42	13.433	5.32	19.40	2.42		
1.533	1.45	7.500	2.42	13.467	5.32	19.43	2.42		
1.567	1.45	7.533	2.90	13.500	3.31	19.47	2.42		
1.600	1.45	7.567	2.90	13.533	4.83	19.50	2.42		
1.633	1.45	7.600	2.90	13.567	4.83	19.53	1.93		
1.667	1.45	7.633	2.90	13.600	4.83	19.57	1.93		
1.700	1.45	7.667	2.90	13.633	4.83	19.60	1.93		
1.733	1.45	7.700	2.90	13.667	4.83	19.63	1.93		
1.767	1.45	7.733	2.90	13.700	4.83	19.67	1.93		
1.800	1.45	7.767	2.90	13.733	4.83	19.70	1.93		
1.833	1.45	7.800	2.90	13.767	4.35	19.73	1.93		
1.867	1.45	7.833	2.90	13.800	3.87	19.77	1.69		
1.900	1.45	7.867	2.90	13.833	3.87	19.80	1.45		
1.933	1.45	7.900	2.90	13.867	3.87	19.83	1.45		
1.967	1.45	7.933	2.90	13.900	3.87	19.87	1.45		
2.000	1.45	7.967	2.90	13.933	3.87	19.90	1.45		
2.033	1.93	8.000	2.90	13.967	3.87	19.93	1.45		
2.067	1.93	8.033	3.38	14.000	3.86	19.97	1.45		
2.100	1.93	8.067	3.38	14.033	3.38	20.00	1.45		

2.133	1.93	10.00	3.38	14.067	3.38	20.03	1.45
2.167	1.93	8.133	3.38	14.100	3.38	20.07	1.45
2.200	1.93	8.167	3.38	14.133	3.38	20.10	1.45
2.233	1.93	8.200	3.38	14.167	3.38	20.13	1.45
2.267	1.69	8.233	3.38	14.200	3.38	20.17	1.45
2.300	1.45	8.267	3.38	14.233	3.38	20.20	1.45
2.333	1.45	8.300	3.38	14.267	3.63	20.23	1.45
2.367	1.45	8.333	3.38	14.300	3.87	20.27	1.45
2.400	1.45	8.367	3.38	14.333	3.87	20.30	1.45
2.433	1.45	8.400	3.38	14.367	3.87	20.33	1.45
2.467	1.45	8.433	3.38	14.400	3.87	20.37	1.45
2.500	1.45	8.467	3.38	14.433	3.87	20.40	1.45
2.533	1.45	8.500	3.38	14.467	3.87	20.43	1.45
2.567	1.45	8.533	3.38	14.500	3.86	20.47	1.45
2.600	1.45	8.567	3.38	14.533	3.38	20.50	1.45
2.633	1.45	8.600	3.38	14.567	3.38	20.53	1.45
2.667	1.45	8.633	3.38	14.600	3.38	20.57	1.45
2.700	1.45	8.667	3.38	14.633	3.38	20.60	1.45
2.733	1.45	8.700	3.38	14.667	3.38	20.63	1.45
2.767	1.45	8.733	3.38	14.700	3.38	20.67	1.45
2.800	1.45	8.767	3.62	14.733	3.38	20.70	1.45
2.833	1.45	8.800	3.87	14.767	3.63	20.73	1.45
2.867	1.45	8.833	3.87	14.800	3.87	20.77	1.45
2.900	1.45	8.867	3.87	14.833	3.87	20.80	1.45
2.933	1.45	8.900	3.87	14.867	3.87	20.83	1.45
2.967	1.45	8.933	3.87	14.900	3.87	20.87	1.45
3.000	1.45	8.967	3.87	14.933	3.87	20.90	1.45
3.033	1.93	9.000	3.87	14.967	3.87	20.93	1.45
3.067	1.93	9.033	3.87	15.000	3.86	20.97	1.45
3.100	1.93	9.067	3.87	15.033	3.38	21.00	1.45
3.133	1.93	9.100	3.87	15.067	3.38	21.03	1.45
3.167	1.93	9.133	3.87	15.100	3.38	21.07	1.45
3.200	1.93	9.167	3.87	15.133	3.38	21.10	1.45
3.233	1.93	9.200	3.87	15.167	3.38	21.13	1.45
3.267	1.69	9.233	3.87	15.200	3.38	21.17	1.45
3.300	1.45	9.267	4.11	15.233	3.38	21.20	1.45
3.333	1.45	9.300	4.35	15.267	3.63	21.23	1.45
3.367	1.45	9.333	4.35	15.300	3.87	21.27	1.45
3.400	1.45	9.367	4.35	15.333	3.87	21.30	1.45
3.433	1.45	9.400	4.35	15.367	3.87	21.33	1.45
3.467	1.45	9.433	4.35	15.400	3.87	21.37	1.45
3.500	1.45	9.467	4.35	15.433	3.87	21.40	1.45
3.533	1.45	9.500	4.35	15.467	3.87	21.43	1.45
3.567	1.45	9.533	4.35	15.500	3.86	21.47	1.45
3.600	1.45	9.567	4.35	15.533	3.38	21.50	1.45
3.633	1.45	9.600	4.35	15.567	3.38	21.53	1.45
3.667	1.45	9.633	4.35	15.600	3.38	21.57	1.45
3.700	1.45	9.667	4.35	15.633	3.38	21.60	1.45
3.733	1.45	9.700	4.35	15.667	3.38	21.63	1.45
3.767	1.69	9.733	4.35	15.700	3.38	21.67	1.45
3.800	1.93	9.767	4.83	15.733	3.38	21.70	1.45
3.833	1.93	9.800	5.32	15.767	2.90	21.73	1.45
3.867	1.93	9.833	5.32	15.800	2.42	21.77	1.45
3.900	1.93	9.867	5.32	15.833	2.42	21.80	1.45
3.933	1.93	9.900	5.32	15.867	2.42	21.83	1.45
3.967	1.93	9.933	5.32	15.900	2.42	21.87	1.45
4.000	1.93	9.967	5.32	15.933	2.42	21.90	1.45
4.033	1.93	10.000	5.32	15.967	2.42	21.93	1.45
4.067	1.93	10.033	5.80	16.000	2.41	21.97	1.45
4.100	1.93	10.067	5.80	16.033	1.93	22.00	1.45
4.133	1.93	10.100	5.80	16.067	1.93	22.03	1.45
4.167	1.93	10.133	5.80	16.100	1.93	22.07	1.45
4.200	1.93	10.167	5.80	16.133	1.93	22.10	1.45
4.233	1.93	10.200	5.80	16.167	1.93	22.13	1.45
4.267	1.93	10.233	5.80	16.200	1.93	22.17	1.45
4.300	1.93	10.267	6.52	16.233	1.93	22.20	1.45
4.333	1.93	10.300	7.25	16.267	2.18	22.23	1.45
4.367	1.93	10.333	7.25	16.300	2.42	22.27	1.45
4.400	1.93	10.367	7.25	16.333	2.42	22.30	1.45
4.433	1.93	10.400	7.25	16.367	2.42	22.33	1.45
4.467	1.93	10.433	7.25	16.400	2.42	22.37	1.45
4.500	1.93	10.467	7.25	16.433	2.42	22.40	1.45
4.533	1.93	10.500	7.25	16.467	2.42	22.43	1.45
4.567	1.93	10.533	7.73	16.500	2.41	22.47	1.45
4.600	1.93	10.567	7.73	16.533	2.41	22.50	1.45
4.633	1.93	10.600	7.73	16.567	1.93	22.53	1.45
4.667	1.93	10.633	7.73	16.600	1.93	22.57	1.45
4.700	1.93	10.667	7.73	16.633	1.93	22.60	1.45
4.733	1.93	10.700	7.73	16.667	1.93	22.63	1.45
4.767	1.93	10.733	7.73	16.700	1.93	22.67	1.45
4.800	1.93	10.767	9.67	16.733	1.93	22.70	1.45
4.833	1.93	10.800	11.60	16.767	1.93	22.73	1.45
4.867	1.93	10.833	11.60	16.800	2.42	22.77	1.45
4.900	1.93	10.867	11.60	16.833	2.42	22.80	1.45
4.933	1.93	10.900	11.60	16.867	2.42	22.83	1.45
4.967	1.93	10.933	11.60	16.900	2.42	22.87	1.45
5.000	1.93	10.967	11.60	16.933	2.42	22.90	1.45
5.033	1.93	11.000	11.60	16.967	2.42	22.93	1.45
5.067	1.93	11.033	11.60	17.000	2.42	22.97	1.45
5.100	1.93	11.067	11.60	17.033	1.93	23.00	1.45
5.133	1.93	11.100	11.60	17.067	1.93	23.03	1.45
5.167	1.93	11.133	11.60	17.100	1.93	23.07	1.45
5.200	1.93	11.167	11.60	17.133	1.93	23.10	1.45
5.233	1.93	11.200	11.60	17.167	1.93	23.13	1.45
5.267	1.93	11.233	11.60	17.200	1.93	23.17	1.45
5.300	1.93	11.267	11.60	17.233	1.93	23.20	1.45
5.333	1.93	11.300	11.60	17.267	2.18	23.23	1.45
5.367	1.93	11.333	11.60	17.300	2.42	23.27	1.45
5.400	1.93	11.367	11.60	17.333	2.42	23.30	1.45
5.433	1.93	11.400	11.60	17.367	2.42	23.33	1.45
5.467	1.93	11.433	11.60	17.400	2.42	23.37	1.45
5.500	1.93	11.467	11.60	17.433	2.42	23.40	1.45
5.533	1.93	11.500	11.60	17.467	2.42	23.43	1.45
5.567	1.93	11.533	147.86	17.500	2.41	23.47	1.45

5.600	1.93	11.567	147.86	17.533	1.93	23.50	1.45
5.633	1.93	11.600	147.86	17.567	1.93	23.53	1.45
5.667	1.93	11.633	147.86	17.600	1.93	23.57	1.45
5.700	1.93	11.667	147.86	17.633	1.93	23.60	1.45
5.733	1.93	11.700	147.86	17.667	1.93	23.63	1.45
5.767	1.93	11.733	147.86	17.700	1.93	23.67	1.45
5.800	1.93	11.767	82.46	17.733	1.93	23.70	1.45
5.833	1.93	11.800	17.40	17.767	2.18	23.73	1.45
5.867	1.93	11.833	17.40	17.800	2.42	23.77	0.73
5.900	1.93	11.867	17.40	17.833	2.42		
5.933	1.93	11.900	17.40	17.867	2.42		
5.967	1.93	11.933	17.40	17.900	2.42		

Unit Hyd Qpeak (cms)= 0.613

PEAK FLOW (cms)= 0.207 (1)
TIME TO FLOW (hrs)= 11.833
RUNOFF VOLUME (mm)= 27.658
TOTAL RAINFALL (mm)= 128.437
RUNOFF COEFFICIENT = 0.230

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

----- ADD HYD (0057) 1 + 2 = 3 -----	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	1.63	0.124	11.83	28.40
+ ID2= 2 (0203):	2.89	0.207	11.83	27.66
=====				
ID = 3 (0057):	4.52	0.332	11.83	27.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

----- CALIB NASHYD (0204) ID= 1 Df= 2.0 min -----	Area (ha)	=	0.64	Curve Number (CN)= 48.1
	Ia (mm)	=	9.20	# of Linear Res. (N)= 3.00
	U.H. Tp(hrs)	=	0.33	

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.033	1.45	6.800	1.93	11.967	17.40	17.93	2.42		
0.067	1.45	6.833	2.42	12.000	17.40	17.97	2.42		
0.100	1.45	6.867	2.42	12.033	17.40	18.00	2.41		
0.133	1.45	6.100	2.42	12.067	17.40	18.03	1.93		
0.167	1.45	6.133	2.42	12.100	17.40	18.07	1.93		
0.200	1.45	6.167	2.42	12.133	17.40	18.10	1.93		
0.233	1.45	6.200	2.42	12.167	17.40	18.13	1.93		
0.267	1.21	6.233	2.42	12.200	17.40	18.17	1.93		
0.300	0.97	6.267	2.17	12.233	17.40	18.20	1.93		
0.333	0.97	6.300	1.93	12.267	18.20	18.23	1.93		
0.367	0.97	6.333	1.93	12.300	9.18	18.27	2.18		
0.400	0.97	6.367	1.93	12.333	9.18	18.30	2.42		
0.433	0.97	6.400	1.93	12.367	9.18	18.33	2.42		
0.467	0.97	6.433	1.93	12.400	9.18	18.37	2.42		
0.500	0.97	6.467	1.93	12.433	9.18	18.40	2.42		
0.533	1.45	6.500	1.93	12.467	9.18	18.43	2.42		
0.567	1.45	6.533	2.42	12.500	9.18	18.47	2.42		
0.600	1.45	6.567	2.42	12.533	8.70	18.50	2.42		
0.633	1.45	6.600	2.42	12.567	8.70	18.53	1.93		
0.667	1.45	6.633	2.42	12.600	8.70	18.57	1.93		
0.700	1.45	6.667	2.42	12.633	8.70	18.60	1.93		
0.733	1.45	6.700	2.42	12.667	8.70	18.63	1.93		
0.767	1.45	6.733	2.42	12.700	8.70	18.67	1.93		
0.800	1.45	6.767	2.42	12.733	8.70	18.70	1.93		
0.833	1.45	6.800	2.42	12.767	7.73	18.73	1.93		
0.867	1.45	6.833	2.42	12.800	6.76	18.77	2.18		
0.900	1.45	6.867	2.42	12.833	7.76	18.80	2.42		
0.933	1.45	6.900	2.42	12.867	6.76	18.83	2.42		
0.967	1.45	6.933	2.42	12.900	6.76	18.87	2.42		
1.000	1.45	6.967	2.42	12.933	6.76	18.90	2.42		
1.033	1.45	7.000	2.42	12.967	6.76	18.93	2.42		
1.067	1.45	7.033	2.90	13.000	6.76	18.97	2.42		
1.100	1.45	7.067	2.90	13.033	6.28	19.00	2.42		
1.133	1.45	7.100	2.90	13.067	6.28	19.03	1.93		
1.167	1.45	7.133	2.90	13.100	6.28	19.07	1.93		
1.200	1.45	7.167	2.90	13.133	6.28	19.10	1.93		
1.233	1.45	7.200	2.90	13.167	6.28	19.13	1.93		
1.267	1.21	7.233	2.90	13.200	6.28	19.17	1.93		
1.300	0.97	7.267	2.66	13.233	6.28	19.20	1.93		
1.333	0.97	7.300	2.42	13.267	8.00	19.23	1.93		
1.367	0.97	7.333	2.42	13.300	5.32	19.27	2.18		
1.400	0.97	7.367	2.42	13.333	5.32	19.30	2.42		
1.433	0.97	7.400	2.42	13.367	5.32	19.33	2.42		
1.467	0.97	7.433	2.42	13.400	5.32	19.37	2.42		
1.500	0.97	7.467	2.42	13.433	5.32	19.40	2.42		
1.533	1.45	7.500	2.42	13.467	5.32	19.43	2.42		
1.567	1.45	7.533	2.90	13.500	5.31	19.47	2.42		
1.600	1.45	7.567	2.90	13.533	4.83	19.50	2.42		
1.633	1.45	7.600	2.90	13.567	4.83	19.53	1.93		
1.667	1.45	7.633	2.90	13.600	4.83	19.57	1.93		
1.700	1.45	7.667	2.90	13.633	4.83	19.60	1.93		
1.733	1.45	7.700	2.90	13.667	4.83	19.63	1.93		
1.767	1.45	7.733	2.90	13.700	4.83	19.67	1.93		
1.800	1.45	7.767	2.90	13.733	4.83	19.70	1.93		
1.833	1.45	7.800	2.90	13.767	4.35	19.73	1.93		
1.867	1.45	7.833	2.90	13.800	3.87	19.77	1.69		

1.900	1.45	7.867	2.90	13.833	3.87	19.80	1.45
1.933	1.45	7.900	2.90	13.867	3.87	19.83	1.45
1.967	1.45	7.933	2.90	13.900	3.87	19.87	1.45
2.000	1.45	7.967	2.90	13.933	3.87	19.90	1.45
2.033	1.93	8.000	2.90	13.967	3.87	19.93	1.45
2.067	1.93	8.033	3.38	14.000	3.86	19.97	1.45
2.100	1.93	8.067	3.38	14.033	3.38	20.00	1.45
2.133	1.93	8.100	3.38	14.067	3.38	20.03	1.45
2.167	1.93	8.133	3.38	14.100	3.38	20.07	1.45
2.200	1.93	8.167	3.38	14.133	3.38	20.10	1.45
2.233	1.93	8.200	3.38	14.167	3.38	20.13	1.45
2.267	1.69	8.233	3.38	14.200	3.38	20.17	1.45
2.300	1.45	8.267	3.38	14.233	3.38	20.20	1.45
2.333	1.45	8.300	3.38	14.267	3.63	20.23	1.45
2.367	1.45	8.333	3.38	14.300	3.87	20.27	1.45
2.400	1.45	8.367	3.38	14.333	3.87	20.30	1.45
2.433	1.45	8.400	3.38	14.367	3.87	20.33	1.45
2.467	1.45	8.433	3.38	14.400	3.87	20.37	1.45
2.500	1.45	8.467	3.38	14.433	3.87	20.40	1.45
2.533	1.45	8.500	3.38	14.467	3.87	20.43	1.45
2.567	1.45	8.533	3.38	14.500	3.86	20.47	1.45
2.600	1.45	8.567	3.38	14.533	3.38	20.50	1.45
2.633	1.45	8.600	3.38	14.567	3.38	20.53	1.45
2.667	1.45	8.633	3.38	14.600	3.38	20.57	1.45
2.700	1.45	8.667	3.38	14.633	3.38	20.60	1.45
2.733	1.45	8.700	3.38	14.667	3.38	20.63	1.45
2.767	1.45	8.733	3.38	14.700	3.38	20.67	1.45
2.800	1.45	8.767	3.62	14.733	3.38	20.70	1.45
2.833	1.45	8.800	3.87	14.767	3.63	20.73	1.45
2.867	1.45	8.833	3.87	14.800	3.87	20.77	1.45
2.900	1.45	8.867	3.87	14.833	3.87	20.80	1.45
2.933	1.45	8.900	3.87	14.867	3.87	20.83	1.45
2.967	1.45	8.933	3.87	14.900	3.87	20.87	1.45
3.000	1.45	8.967	3.87	14.933	3.87	20.90	1.45
3.033	1.93	9.000	3.87	14.967	3.87	20.93	1.45
3.067	1.93	9.033	3.87	15.000	3.86	20.97	1.45
3.100	1.93	9.067	3.87	15.033	3.38	21.00	1.45
3.133	1.93	9.100	3.87	15.067	3.38	21.03	1.45
3.167	1.93	9.133	3.87	15.100	3.38	21.07	1.45
3.200	1.93	9.167	3.87	15.133	3.38	21.10	1.45
3.233	1.93	9.200	3.87	15.167	3.38	21.13	1.45
3.267	1.69	9.233	3.87	15.200	3.38	21.17	1.45
3.300	1.45	9.267	4.11	15.233	3.38	21.20	1.45
3.333	1.45	9.300	4.35	15.267	3.63	21.23	1.45
3.367	1.45	9.333	4.35	15.300	3.87	21.27	1.45
3.400	1.45	9.367	4.35	15.333	3.87	21.30	1.45
3.433	1.45	9.400	4.35	15.367	3.87	21.33	1.45
3.467	1.45	9.433	4.35	15.400	3.87	21.37	1.45
3.500	1.45	9.467	4.35	15.433	3.87	21.40	1.45
3.533	1.45	9.500	4.35	15.467	3.87	21.43	1.45
3.567	1.45	9.533	4.35	15.500	3.86	21.47	1.45
3.600	1.45	9.567	4.35	15.533	3.38	21.50	1.45
3.633	1.45	9.600	4.35	15.567	3.38	21.53	1.45
3.667	1.45	9.633	4.35	15.600	3.38	21.57	1.45
3.700	1.45	9.667	4.35	15.633	3.38	21.60	1.45
3.733	1.45	9.700	4.35	15.667	3.38	21.63	1.45
3.767	1.69	9.733	4.35	15.700	3.38	21.67	1.45
3.800	1.93	9.767	4.83	15.733	3.38	21.70	1.45
3.833	1.93	9.800	5.32	15.767	2.90	21.73	1.45
3.867	1.93	9.833	5.32	15.800	2.42	21.77	1.45
3.900	1.93	9.867	5.32	15.833	2.42	21.80	1.45
3.933	1.93	9.900	5.32	15.867	2.42	21.83	1.45
3.967	1.93	9.933	5.32	15.900	2.42	21.87	1.45
4.000	1.93	9.967	5.32	15.933	2.42	21.90	1.45
4.033	1.93	10.000	5.32	15.967	2.42	21.93	1.45

5.367 1.93 11.333 35.76 17.300 2.42 23.27 1.45
5.400 1.93 11.367 35.76 17.333 2.42 23.30 1.45
5.433 1.93 11.400 35.76 17.367 2.42 23.33 1.45
5.467 1.93 11.433 35.76 17.400 2.42 23.37 1.45
5.500 1.93 11.467 35.76 17.433 2.42 23.40 1.45
5.533 1.93 11.500 35.89 17.467 2.42 23.43 1.45
5.567 1.93 11.533 147.86 17.500 2.41 23.47 1.45
5.600 1.93 11.567 147.86 17.533 1.93 23.50 1.45
5.633 1.93 11.600 147.86 17.567 1.93 23.53 1.45
5.667 1.93 11.633 147.86 17.600 1.93 23.57 1.45
5.700 1.93 11.667 147.86 17.633 1.93 23.60 1.45
5.733 1.93 11.700 147.86 17.667 1.93 23.63 1.45
5.767 1.93 11.733 147.86 17.700 1.93 23.67 1.45
5.800 1.93 11.767 82.46 17.733 1.93 23.70 1.45
5.833 1.93 11.800 17.40 17.767 2.18 23.73 1.45
5.867 1.93 11.833 17.40 17.800 2.42 23.77 0.73
5.900 1.93 11.867 17.40 17.833 2.42
5.933 1.93 11.900 17.40 17.867 2.42
5.967 1.93 11.933 17.40 17.900 2.42

Unit Hyd Qpeak (cms)= 0.074

PEAK FLOW (cms)= 0.036 (1)
TIME TO PEAK (hrs)= 11.967
RUNOFF VOLUME (mm)= 32.094
TOTAL RAINFALL (mm)= 120.437
RUNOFF COEFFICIENT = 0.266

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

| ADD HYD (0058) |
1 + 2 = 3
ID# 1 (0204): 0.64 0.036 11.97 32.09
+ ID# 2 (0057): 4.52 0.332 11.83 27.92

ID = 3 (0058): 5.16 0.361 11.83 28.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0201) |
ID# 1 DT= 5.0 min
Area (ha)= 2.20
Total Imp(%)= 43.00 Dir. Conn.(%)= 21.00

IMPERVIOUS PERVIOUS (1)
Surface Area (ha)= 0.95 1.25
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.00 1.00
Length (m)= 121.11 40.00
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 1.45 6.083 2.42 12.083 17.40 18.08 1.93
0.167 1.45 6.167 2.42 12.167 17.40 18.17 1.93
0.250 1.45 6.250 2.42 12.250 17.40 18.25 1.93
0.333 0.97 6.333 1.93 12.333 9.18 18.33 2.42
0.417 0.97 6.417 1.93 12.417 9.18 18.42 2.42
0.500 0.97 6.500 1.93 12.500 9.18 18.50 2.42
0.583 1.45 6.583 2.42 12.583 8.70 18.58 1.93
0.667 1.45 6.667 2.42 12.667 8.70 18.67 1.93
0.750 1.45 6.750 2.42 12.750 8.70 18.75 1.93
0.833 1.45 6.833 2.42 12.833 6.77 18.83 2.42
0.917 1.45 6.917 2.42 12.917 6.76 18.92 2.42
1.000 1.45 7.000 2.42 13.000 6.76 19.00 2.42
1.083 1.45 7.083 2.90 13.083 6.28 19.08 1.93
1.167 1.45 7.167 2.90 13.167 6.28 19.17 1.93
1.250 1.45 7.250 2.90 13.250 6.28 19.25 1.93
1.333 0.97 7.333 2.42 13.333 5.32 19.33 2.42
1.417 0.97 7.417 2.42 13.417 5.32 19.42 2.42
1.500 0.97 7.500 2.42 13.500 5.32 19.50 2.42
1.583 1.45 7.583 2.90 13.583 4.83 19.58 1.93
1.667 1.45 7.667 2.90 13.667 4.83 19.67 1.93
1.750 1.45 7.750 2.90 13.750 4.83 19.75 1.93
1.833 1.45 7.833 2.90 13.833 3.87 19.83 1.45
1.917 1.45 7.917 2.90 13.917 3.87 19.92 1.45
2.000 1.45 8.000 2.90 14.000 3.87 20.00 1.45
2.083 1.93 8.083 3.38 14.083 3.38 20.08 1.45
2.167 1.93 8.167 3.38 14.167 3.38 20.17 1.45
2.250 1.93 8.250 3.38 14.250 3.38 20.25 1.45
2.333 1.45 8.333 3.38 14.333 3.87 20.33 1.45
2.417 1.45 8.417 3.38 14.417 3.87 20.42 1.45
2.500 1.45 8.500 3.38 14.500 3.87 20.50 1.45
2.583 1.45 8.583 3.38 14.583 3.38 20.58 1.45
2.667 1.45 8.667 3.38 14.667 3.38 20.67 1.45
2.750 1.45 8.750 3.38 14.750 3.38 20.75 1.45
2.833 1.45 8.833 3.87 14.833 3.87 20.83 1.45
2.917 1.45 8.917 3.87 14.917 3.87 20.92 1.45
3.000 1.45 9.000 3.87 15.000 3.87 21.00 1.45
3.083 1.93 9.083 3.87 15.083 3.38 21.08 1.45
3.167 1.93 9.167 3.87 15.167 3.38 21.17 1.45
3.250 1.93 9.250 3.87 15.250 3.38 21.25 1.45
3.333 1.45 9.333 4.35 15.333 3.87 21.33 1.45
3.417 1.45 9.417 4.35 15.417 3.87 21.42 1.45
3.500 1.45 9.500 4.35 15.500 3.87 21.50 1.45
3.583 1.45 9.583 4.35 15.583 3.38 21.58 1.45

3.667 1.45 9.667 4.35 15.667 3.38 21.67 1.45
3.750 1.45 9.750 4.35 15.750 3.38 21.75 1.45
3.833 1.93 9.833 5.32 15.833 2.42 21.83 1.45
3.917 1.93 9.917 5.32 15.917 2.42 21.92 1.45
4.000 1.93 10.000 5.32 16.000 2.42 22.00 1.45
4.083 1.93 10.083 5.80 16.083 1.93 22.08 1.45
4.167 1.93 10.167 5.80 16.167 1.93 22.17 1.45
4.250 1.93 10.250 5.80 16.250 1.93 22.25 1.45
4.333 1.93 10.333 7.25 16.333 2.42 22.33 1.45
4.417 1.93 10.417 7.25 16.417 2.42 22.42 1.45
4.500 1.93 10.500 7.25 16.500 2.42 22.50 1.45
4.583 1.93 10.583 7.73 16.583 1.93 22.58 1.45
4.667 1.93 10.667 7.73 16.667 1.93 22.67 1.45
4.750 1.93 10.750 7.73 16.750 1.93 22.75 1.45
4.833 1.93 10.833 11.60 16.833 2.42 22.83 1.45
4.917 1.93 10.917 11.60 16.917 2.42 22.92 1.45
5.000 1.93 11.000 11.60 17.000 2.42 23.00 1.45
5.083 1.93 11.083 11.60 17.083 1.93 23.08 1.45
5.167 1.93 11.167 11.60 17.167 1.93 23.17 1.45
5.250 1.93 11.250 11.60 17.250 1.93 23.25 1.45
5.333 1.93 11.333 35.75 17.333 2.42 23.33 1.45
5.417 1.93 11.417 35.76 17.417 2.42 23.42 1.45
5.500 1.93 11.500 35.76 17.500 2.42 23.50 1.45
5.583 1.93 11.583 147.85 17.583 1.93 23.58 1.45
5.667 1.93 11.667 147.86 17.667 1.93 23.67 1.45
5.750 1.93 11.750 147.86 17.750 1.93 23.75 1.45
5.833 1.93 11.833 17.41 17.833 2.42
5.917 1.93 11.917 17.40 17.917 2.42
6.000 1.93 12.000 17.40 18.000 2.42

Max. Eff. Inten. (mm/hr)= 147.86 197.35
over (min)= 5.00 10.00
Storage Coeff. (min)= 2.45 (11) 9.07 (11)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.12

PEAK FLOW (cms)= 0.19 0.53 *TOTALS*
TIME TO PEAK (hrs)= 11.75 11.75 0.722 (11)
RUNOFF VOLUME (mm)= 119.44 54.09 67.81
TOTAL RAINFALL (mm)= 120.44 120.44 120.44
RUNOFF COEFFICIENT = 0.90 0.45 0.56

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

(1) HORTONS EQUATION SELECTED FOR PVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum. Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0301) |
IN= 5.0 min
OVERFLOW IS OFF
OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.1600 0.1500 0.5570
0.0440 0.2080 0.3520 0.7230
0.0990 0.3020 1.2920 0.9160
0.1320 0.4100 2.0620 1.0230

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID# 2 (0201) 2.200 0.722 11.75 67.81
OUTFLOW: ID# 1 (0301) NaN 0.000 0.00 NaN

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.00
TIME SHIFT OF PEAK FLOW (min)=*****
MAXIMUM STORAGE USED (ha.m.)= 0.0813

| ADD HYD (0059) |
1 + 2 = 3
ID# 1 (0301): NaN 0.000 0.00 NaN
+ ID# 2 (0058): 5.16 0.361 11.83 28.44

ID = 3 (0059): NaN 0.361 11.83 NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0205) |
ID# 1 DT= 5.0 min
Area (ha)= 0.03
Total Imp(%)= 56.00 Dir. Conn.(%)= 28.00

IMPERVIOUS PERVIOUS (1)
Surface Area (ha)= 0.02 0.01
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.00 1.00
Length (m)= 14.14 20.00
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 1.45 6.083 2.42 12.083 17.40 18.08 1.93
0.167 1.45 6.167 2.42 12.167 17.40 18.17 1.93

0.250	1.45	6.250	2.42	12.250	17.40	18.25	1.93
0.333	0.97	6.333	1.93	12.333	9.18	18.33	2.42
0.417	0.97	6.417	1.93	12.417	9.18	18.42	2.42
0.500	0.97	6.500	1.93	12.500	9.18	18.50	2.42
0.583	1.45	6.583	2.42	12.583	8.70	18.58	1.93
0.667	1.45	6.667	2.42	12.667	8.70	18.67	1.93
0.750	1.45	6.750	2.42	12.750	8.70	18.75	1.93
0.833	1.45	6.833	2.42	12.833	6.77	18.83	2.42
0.917	1.45	6.917	2.42	12.917	6.76	18.92	2.42
1.000	1.45	7.000	2.42	13.000	6.76	19.00	2.42
1.083	1.45	7.083	2.90	13.083	6.28	19.08	1.93
1.167	1.45	7.167	2.90	13.167	6.28	19.17	1.93
1.250	1.45	7.250	2.90	13.250	6.28	19.25	1.93
1.333	0.97	7.333	2.42	13.333	5.32	19.33	2.42
1.417	0.97	7.417	2.42	13.417	5.32	19.42	2.42
1.500	0.97	7.500	2.42	13.500	5.32	19.50	2.42
1.583	1.45	7.583	2.90	13.583	4.83	19.58	1.93
1.667	1.45	7.667	2.90	13.667	4.83	19.67	1.93
1.750	1.45	7.750	2.90	13.750	4.83	19.75	1.93
1.833	1.45	7.833	2.90	13.833	3.87	19.83	1.45
1.917	1.45	7.917	2.90	13.917	3.87	19.92	1.45
2.000	1.45	8.000	2.90	14.000	3.87	20.00	1.45
2.083	1.93	8.083	3.38	14.083	3.38	20.08	1.45
2.167	1.93	8.167	3.38	14.167	3.38	20.17	1.45
2.250	1.93	8.250	3.38	14.250	3.38	20.25	1.45
2.333	1.45	8.333	3.38	14.333	3.87	20.33	1.45
2.417	1.45	8.417	3.38	14.417	3.87	20.42	1.45
2.500	1.45	8.500	3.38	14.500	3.87	20.50	1.45
2.583	1.45	8.583	3.38	14.583	3.38	20.58	1.45
2.667	1.45	8.667	3.38	14.667	3.38	20.67	1.45
2.750	1.45	8.750	3.38	14.750	3.38	20.75	1.45
2.833	1.45	8.833	3.87	14.833	3.87	20.83	1.45
2.917	1.45	8.917	3.87	14.917	3.87	20.92	1.45
3.000	1.45	9.000	3.87	15.000	3.87	21.00	1.45
3.083	1.93	9.083	3.87	15.083	3.38	21.08	1.45
3.167	1.93	9.167	3.87	15.167	3.38	21.17	1.45
3.250	1.93	9.250	3.87	15.250	3.38	21.25	1.45
3.333	1.45	9.333	4.35	15.333	3.87	21.33	1.45
3.417	1.45	9.417	4.35	15.417	3.87	21.42	1.45
3.500	1.45	9.500	4.35	15.500	3.87	21.50	1.45
3.583	1.45	9.583	4.35	15.583	3.38	21.58	1.45
3.667	1.45	9.667	4.35	15.667	3.38	21.67	1.45
3.750	1.45	9.750	4.35	15.750	3.38	21.75	1.45
3.833	1.93	9.833	5.32	15.833	2.42	21.83	1.45
3.917	1.93	9.917	5.32	15.917	2.42	21.92	1.45
4.000	1.93	10.000	5.32	16.000	2.42	22.00	1.45
4.083	1.93	10.083	5.80	16.083	1.93	22.08	1.45
4.167	1.93	10.167	5.80	16.167	1.93	22.17	1.45
4.250	1.93	10.250	5.80	16.250	1.93	22.25	1.45
4.333	1.93	10.333	7.25	16.333	2.42	22.33	1.45
4.417	1.93	10.417	7.25	16.417	2.42	22.42	1.45
4.500	1.93	10.500	7.25	16.500	2.42	22.50	1.45
4.583	1.93	10.583	7.73	16.583	1.93	22.58	1.45
4.667	1.93	10.667	7.73	16.667	1.93	22.67	1.45
4.750	1.93	10.750	7.73	16.750	1.93	22.75	1.45
4.833	1.93	10.833	11.60	16.833	2.42	22.83	1.45
4.917	1.93	10.917	11.60	16.917	2.42	22.92	1.45
5.000	1.93	11.000	11.60	17.000	2.42	23.00	1.45
5.083	1.93	11.083	11.60	17.083	1.93	23.08	1.45
5.167	1.93	11.167	11.60	17.167	1.93	23.17	1.45
5.250	1.93	11.250	11.60	17.250	1.93	23.25	1.45
5.333	1.93	11.333	35.75	17.333	2.42	23.33	1.45
5.417	1.93	11.417	35.76	17.417	2.42	23.42	1.45
5.500	1.93	11.500	35.76	17.500	2.42	23.50	1.45
5.583	1.93	11.583	147.85	17.583	1.93	23.58	1.45
5.667	1.93	11.667	147.86	17.667	1.93	23.67	1.45
5.750	1.93	11.750	147.86	17.750	1.93	23.75	1.45
5.833	1.93	11.833	17.41	17.833	2.42		
5.917	1.93	11.917	17.40	17.917	2.42		
6.000	1.93	12.000	17.40	18.000	2.42		

Max.Eff.Inten.(mm/hr)=	147.86	234.43
over (min)	5.00	5.00
Storage Coeff. (min)=	0.68 (11)	4.75 (11)
Unit Hyd. Peak (min)=	5.00	5.00
Unit Hyd. peak (cms)=	0.34	0.22
PEAK FLOW (cms)=	0.00	0.01
TIME TO PEAK (hrs)=	11.75	11.75
RUNOFF VOLUME (mm)=	119.44	57.66
TOTAL RAINFALL (mm)=	120.44	120.44
RUNOFF COEFFICIENT =	0.99	0.48

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

- (i) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Inf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0060)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0205):	0.03	0.012	11.75	68.86
+ ID2= 2 (0059):	NaN	0.361	11.83	NaN
ID = 3 (0060):	NaN	0.365	11.83	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)	= 0.52	Curve Number	(CN)= 66.3
NASHVD (2071)	Ia	(mm)=	4.87	# of Linear Res. (N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.19			

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.45	6.083	2.42	12.083	17.40	18.08	1.93
0.167	1.45	6.167	2.42	12.167	17.40	18.17	1.93
0.250	1.45	6.250	2.42	12.250	17.40	18.25	1.93
0.333	0.97	6.333	1.93	12.333	9.18	18.33	2.42
0.417	0.97	6.417	1.93	12.417	9.18	18.42	2.42
0.500	0.97	6.500	1.93	12.500	9.18	18.50	2.42
0.583	1.45	6.583	2.42	12.583	8.70	18.58	1.93
0.667	1.45	6.667	2.42	12.667	8.70	18.67	1.93
0.750	1.45	6.750	2.42	12.750	8.70	18.75	1.93
0.833	1.45	6.833	2.42	12.833	6.77	18.83	2.42
0.917	1.45	6.917	2.42	12.917	6.76	18.92	2.42
1.000	1.45	7.000	2.42	13.000	6.76	19.00	2.42
1.083	1.45	7.083	2.90	13.083	6.28	19.08	1.93
1.167	1.45	7.167	2.90	13.167	6.28	19.17	1.93
1.250	1.45	7.250	2.90	13.250	6.28	19.25	1.93
1.333	0.97	7.333	2.42	13.333	5.32	19.33	2.42
1.417	0.97	7.417	2.42	13.417	5.32	19.42	2.42
1.500	0.97	7.500	2.42	13.500	5.32	19.50	2.42
1.583	1.45	7.583	2.90	13.583	4.83	19.58	1.93
1.667	1.45	7.667	2.90	13.667	4.83	19.67	1.93
1.750	1.45	7.750	2.90	13.750	4.83	19.75	1.93
1.833	1.45	7.833	2.90	13.833	3.87	19.83	1.45
1.917	1.45	7.917	2.90	13.917	3.87	19.92	1.45
2.000	1.45	8.000	2.90	14.000	3.87	20.00	1.45
2.083	1.93	8.083	3.38	14.083	3.38	20.08	1.45
2.167	1.93	8.167	3.38	14.167	3.38	20.17	1.45
2.250	1.93	8.250	3.38	14.250	3.38	20.25	1.45
2.333	1.45	8.333	3.38	14.333	3.87	20.33	1.45
2.417	1.45	8.417	3.38	14.417	3.87	20.42	1.45
2.500	1.45	8.500	3.38	14.500	3.87	20.50	1.45
2.583	1.45	8.583	3.38	14.583	3.38	20.58	1.45
2.667	1.45	8.667	3.38	14.667	3.38	20.67	1.45
2.750	1.45	8.750	3.38	14.750	3.38	20.75	1.45
2.833	1.45	8.833	3.87	14.833	3.87	20.83	1.45
2.917	1.45	8.917	3.87	14.917	3.87	20.92	1.45
3.000	1.45	9.000	3.87	15.000	3.87	21.00	1.45
3.083	1.93	9.083	3.87	15.083	3.38	21.08	1.45
3.167	1.93	9.167	3.87	15.167	3.38	21.17	1.45
3.250	1.93	9.250	3.87	15.250	3.38	21.25	1.45
3.333	1.45	9.333	4.35	15.333	3.87	21.33	1.45
3.417	1.45	9.417	4.35	15.417	3.87	21.42	1.45
3.500	1.45	9.500	4.35	15.500	3.87	21.50	1.45
3.583	1.45	9.583	4.35	15.583	3.38	21.58	1.45
3.667	1.45	9.667	4.35	15.667	3.38	21.67	1.45
3.750	1.45	9.750	4.35	15.750	3.38	21.75	1.45
3.833	1.93	9.833	5.32	15.833	2.42	21.83	1.45
3.917	1.93	9.917	5.32	15.917	2.42	21.92	1.45
4.000	1.93	10.000	5.32	16.000	2.42	22.00	1.45
4.083	1.93	10.083	5.80	16.083	1.93	22.08	1.45
4.167	1.93	10.167	5.80	16.167	1.93	22.17	1.45
4.250	1.93	10.250	5.80	16.250	1.93	22.25	1.45
4.333	1.93	10.333	7.25	16.333	2.42	22.33	1.45
4.417	1.93	10.417	7.25	16.417	2.42	22.42	1.45
4.500	1.93	10.500	7.25	16.500	2.42	22.50	1.45
4.583	1.93	10.583	7.73	16.583	1.93	22.58	1.45
4.667	1.93	10.667	7.73	16.667	1.93	22.67	1.45
4.750	1.93	10.750	7.73	16.750	1.93	22.75	1.45
4.833	1.93	10.833	11.60	16.833	2.42	22.83	1.45
4.917	1.93	10.917	11.60	16.917	2.42	22.92	1.45
5.000	1.93	11.000	11.60	17.000	2.42	23.00	1.45
5.083	1.93	11.083	11.60	17.083	1.93	23.08	1.45
5.167	1.93	11.167	11.60	17.167	1.93	23.17	1.45
5.250	1.93	11.250	11.60	17.250	1.93	23.25	1.45
5.333	1.93	11.333	35.75	17.333	2.42	23.33	1.45
5.417	1.93	11.417	35.76	17.417	2.42	23.42	1.45
5.500	1.93	11.500	35.76	17.500	2.42	23.50	1.45
5.583	1.93	11.583	147.85	17.583	1.93	23.58	1.45
5.667	1.93	11.667	147.86	17.667	1.93	23.67	1.45
5.750	1.93	11.750	147.86	17.750	1.93	23.75	1.45
5.833	1.93	11.833	17.41	17.833	2.42		
5.917	1.93	11.917	17.41	17.917	2.42		
6.000	1.93	12.000	17.40	18.000	2.42		

=====
ID = 3 (0061): NaN 0.439 11.83 NaN
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (2872) | Area (ha)= 0.34 Curve Number (CN)= 66.3
| ID= 1 DT= 5.0 min | Ia (mm)= 4.87 # of Linear Res.(N)= 3.00
|-----|
| U.H. Tp(hrs)= 0.19

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.45 6.083 2.42 12.083 17.40 18.08 1.93
0.167 1.45 6.167 2.42 12.167 17.40 18.17 1.93
0.250 1.45 6.250 2.42 12.250 17.40 18.25 1.93
0.333 0.97 6.333 1.93 12.333 9.18 18.33 2.42
0.417 0.97 6.417 1.93 12.417 9.18 18.42 2.42
0.500 0.97 6.500 1.93 12.500 9.18 18.50 2.42
0.583 1.45 6.583 2.42 12.583 8.70 18.58 1.93
0.667 1.45 6.667 2.42 12.667 8.70 18.67 1.93
0.750 1.45 6.750 2.42 12.750 8.70 18.75 1.93
0.833 1.45 6.833 2.42 12.833 7.77 18.83 2.42
0.917 1.45 6.917 2.42 12.917 6.76 18.92 2.42
1.000 1.45 7.000 2.42 13.000 6.76 19.00 2.42
1.083 1.45 7.083 2.90 13.083 6.28 19.08 1.93
1.167 1.45 7.167 2.90 13.167 6.28 19.17 1.93
1.250 1.45 7.250 2.90 13.250 6.28 19.25 1.93
1.333 0.97 7.333 2.42 13.333 5.32 19.33 2.42
1.417 0.97 7.417 2.42 13.417 5.32 19.42 2.42
1.500 0.97 7.500 2.42 13.500 5.32 19.50 2.42
1.583 1.45 7.583 2.90 13.583 4.83 19.58 1.93
1.667 1.45 7.667 2.90 13.667 4.83 19.67 1.93
1.750 1.45 7.750 2.90 13.750 4.83 19.75 1.93
1.833 1.45 7.833 2.90 13.833 3.87 19.83 1.45
1.917 1.45 7.917 2.90 13.917 3.87 19.92 1.45
2.000 1.45 8.000 2.90 14.000 3.87 20.00 1.45
2.083 1.93 8.083 3.38 14.083 3.38 20.08 1.45
2.167 1.93 8.167 3.38 14.167 3.38 20.17 1.45
2.250 1.93 8.250 3.38 14.250 3.38 20.25 1.45
2.333 1.45 8.333 3.38 14.333 3.87 20.33 1.45
2.417 1.45 8.417 3.38 14.417 3.87 20.42 1.45
2.500 1.45 8.500 3.38 14.500 3.87 20.50 1.45
2.583 1.45 8.583 3.38 14.583 3.38 20.58 1.45
2.667 1.45 8.667 3.38 14.667 3.38 20.67 1.45
2.750 1.45 8.750 3.38 14.750 3.38 20.75 1.45
2.833 1.45 8.833 3.87 14.833 3.87 20.83 1.45
2.917 1.45 8.917 3.87 14.917 3.87 20.92 1.45
3.000 1.45 9.000 3.87 15.000 3.87 21.00 1.45
3.083 1.93 9.083 3.87 15.083 3.38 21.08 1.45
3.167 1.93 9.167 3.87 15.167 3.38 21.17 1.45
3.250 1.93 9.250 3.87 15.250 3.38 21.25 1.45
3.333 1.45 9.333 4.35 15.333 3.87 21.33 1.45
3.417 1.45 9.417 4.35 15.417 3.87 21.42 1.45
3.500 1.45 9.500 4.35 15.500 3.87 21.50 1.45
3.583 1.45 9.583 4.35 15.583 3.38 21.58 1.45
3.667 1.45 9.667 4.35 15.667 3.38 21.67 1.45
3.750 1.45 9.750 4.35 15.750 3.38 21.75 1.45
3.833 1.93 9.833 5.32 15.833 2.42 21.83 1.45
3.917 1.93 9.917 5.32 15.917 2.42 21.92 1.45
4.000 1.93 10.000 5.32 16.000 2.42 22.00 1.45
4.083 1.93 10.083 5.80 16.083 1.93 22.08 1.45
4.167 1.93 10.167 5.80 16.167 1.93 22.17 1.45
4.250 1.93 10.250 5.80 16.250 1.93 22.25 1.45
4.333 1.93 10.333 7.25 16.333 2.42 22.33 1.45
4.417 1.93 10.417 7.25 16.417 2.42 22.42 1.45
4.500 1.93 10.500 7.25 16.500 2.42 22.50 1.45
4.583 1.93 10.583 7.73 16.583 1.93 22.58 1.45
4.667 1.93 10.667 7.73 16.667 1.93 22.67 1.45
4.750 1.93 10.750 7.73 16.750 1.93 22.75 1.45
4.833 1.93 10.833 11.60 16.833 2.42 22.83 1.45
4.917 1.93 10.917 11.60 16.917 2.42 22.92 1.45
5.000 1.93 11.000 11.60 17.000 2.42 23.00 1.45
5.083 1.93 11.083 11.60 17.083 1.93 23.08 1.45
5.167 1.93 11.167 11.60 17.167 1.93 23.17 1.45
5.250 1.93 11.250 11.60 17.250 1.93 23.25 1.45
5.333 1.93 11.333 35.75 17.333 2.42 23.33 1.45
5.417 1.93 11.417 35.76 17.417 2.42 23.42 1.45
5.500 1.93 11.500 35.76 17.500 2.42 23.50 1.45
5.583 1.93 11.583 147.85 17.583 1.93 23.58 1.45
5.667 1.93 11.667 147.86 17.667 1.93 23.67 1.45
5.750 1.93 11.750 147.86 17.750 1.93 23.75 1.45
5.833 1.93 11.833 17.41 17.833 2.42 23.83 1.45
5.917 1.93 11.917 17.40 17.917 2.42 23.92 1.45
6.000 1.93 12.000 17.40 18.000 2.42 24.00 1.45

Unit Hyd Gpeak (cms)= 0.068

PEAK FLOW (cms)= 0.049 (i)
TIME TO PEAK (hrs)= 11.833
RUNOFF VOLUME (mm)= 54.459
TOTAL RAINFALL (mm)= 120.438
RUNOFF COEFFICIENT = 0.452

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

| CALIB |
| STANDHYD (02086) | Area (ha)= 0.73

|ID= 1 DT= 5.0 min | Total Imp(%)= 32.00 Dir. Conn.(%)= 13.00

IMPERVIOUS PERVIOUS (i)
SurFace Area (ha)= 0.23 0.50
Dep. Storage (mm)= 1.00 1.50
Average Slope (%)= 1.00 2.00
Length (n)= 69.76 40.00
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 1.45 6.083 2.42 12.083 17.40 18.08 1.93
0.167 1.45 6.167 2.42 12.167 17.40 18.17 1.93
0.250 1.45 6.250 2.42 12.250 17.40 18.25 1.93
0.333 0.97 6.333 1.93 12.333 9.18 18.33 2.42
0.417 0.97 6.417 1.93 12.417 9.18 18.42 2.42
0.500 0.97 6.500 1.93 12.500 9.18 18.50 2.42
0.583 1.45 6.583 2.42 12.583 8.70 18.58 1.93
0.667 1.45 6.667 2.42 12.667 8.70 18.67 1.93
0.750 1.45 6.750 2.42 12.750 8.70 18.75 1.93
0.833 1.45 6.833 2.42 12.833 7.77 18.83 2.42
0.917 1.45 6.917 2.42 12.917 6.76 18.92 2.42
1.000 1.45 7.000 2.42 13.000 6.76 19.00 2.42
1.083 1.45 7.083 2.90 13.083 6.28 19.08 1.93
1.167 1.45 7.167 2.90 13.167 6.28 19.17 1.93
1.250 1.45 7.250 2.90 13.250 6.28 19.25 1.93
1.333 0.97 7.333 2.42 13.333 5.32 19.33 2.42
1.417 0.97 7.417 2.42 13.417 5.32 19.42 2.42
1.500 0.97 7.500 2.42 13.500 5.32 19.50 2.42
1.583 1.45 7.583 2.90 13.583 4.83 19.58 1.93
1.667 1.45 7.667 2.90 13.667 4.83 19.67 1.93
1.750 1.45 7.750 2.90 13.750 4.83 19.75 1.93
1.833 1.45 7.833 2.90 13.833 3.87 19.83 1.45
1.917 1.45 7.917 2.90 13.917 3.87 19.92 1.45
2.000 1.45 8.000 2.90 14.000 3.87 20.00 1.45
2.083 1.93 8.083 3.38 14.083 3.38 20.08 1.45
2.167 1.93 8.167 3.38 14.167 3.38 20.17 1.45
2.250 1.93 8.250 3.38 14.250 3.38 20.25 1.45
2.333 1.45 8.333 3.38 14.333 3.87 20.33 1.45
2.417 1.45 8.417 3.38 14.417 3.87 20.42 1.45
2.500 1.45 8.500 3.38 14.500 3.87 20.50 1.45
2.583 1.45 8.583 3.38 14.583 3.38 20.58 1.45
2.667 1.45 8.667 3.38 14.667 3.38 20.67 1.45
2.750 1.45 8.750 3.38 14.750 3.38 20.75 1.45
2.833 1.45 8.833 3.87 14.833 3.87 20.83 1.45
2.917 1.45 8.917 3.87 14.917 3.87 20.92 1.45
3.000 1.45 9.000 3.87 15.000 3.87 21.00 1.45
3.083 1.93 9.083 3.87 15.083 3.38 21.08 1.45
3.167 1.93 9.167 3.87 15.167 3.38 21.17 1.45
3.250 1.93 9.250 3.87 15.250 3.38 21.25 1.45
3.333 1.45 9.333 4.35 15.333 3.87 21.33 1.45
3.417 1.45 9.417 4.35 15.417 3.87 21.42 1.45
3.500 1.45 9.500 4.35 15.500 3.87 21.50 1.45
3.583 1.45 9.583 4.35 15.583 3.38 21.58 1.45
3.667 1.45 9.667 4.35 15.667 3.38 21.67 1.45
3.750 1.45 9.750 4.35 15.750 3.38 21.75 1.45
3.833 1.93 9.833 5.32 15.833 2.42 21.83 1.45
3.917 1.93 9.917 5.32 15.917 2.42 21.92 1.45
4.000 1.93 10.000 5.32 16.000 2.42 22.00 1.45
4.083 1.93 10.083 5.80 16.083 1.93 22.08 1.45
4.167 1.93 10.167 5.80 16.167 1.93 22.17 1.45
4.250 1.93 10.250 5.80 16.250 1.93 22.25 1.45
4.333 1.93 10.333 7.25 16.333 2.42 22.33 1.45
4.417 1.93 10.417 7.25 16.417 2.42 22.42 1.45
4.500 1.93 10.500 7.25 16.500 2.42 22.50 1.45
4.583 1.93 10.583 7.73 16.583 1.93 22.58 1.45
4.667 1.93 10.667 7.73 16.667 1.93 22.67 1.45
4.750 1.93 10.750 7.73 16.750 1.93 22.75 1.45
4.833 1.93 10.833 11.60 16.833 2.42 22.83 1.45
4.917 1.93 10.917 11.60 16.917 2.42 22.92 1.45
5.000 1.93 11.000 11.60 17.000 2.42 23.00 1.45
5.083 1.93 11.083 11.60 17.083 1.93 23.08 1.45
5.167 1.93 11.167 11.60 17.167 1.93 23.17 1.45
5.250 1.93 11.250 11.60 17.250 1.93 23.25 1.45
5.333 1.93 11.333 35.75 17.333 2.42 23.33 1.45
5.417 1.93 11.417 35.76 17.417 2.42 23.42 1.45
5.500 1.93 11.500 35.76 17.500 2.42 23.50 1.45
5.583 1.93 11.583 147.85 17.583 1.93 23.58 1.45
5.667 1.93 11.667 147.86 17.667 1.93 23.67 1.45
5.750 1.93 11.750 147.86 17.750 1.93 23.75 1.45
5.833 1.93 11.833 17.41 17.833 2.42 23.83 1.45
5.917 1.93 11.917 17.40 17.917 2.42 23.92 1.45
6.000 1.93 12.000 17.40 18.000 2.42 24.00 1.45

Max. Eff. Inten. (mm/hr)= 147.86 181.54
over (min)= 5.00 10.00
Storage Coeff. (min)= 1.76 (ii) 7.32 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.13

PEAK FLOW (cms)= 0.04 0.21 *TOTALS* (iii)
TIME TO PEAK (hrs)= 11.75 11.75 11.75
RUNOFF VOLUME (mm)= 119.44 52.24 60.98
TOTAL RAINFALL (mm)= 120.44 120.44 120.44
RUNOFF COEFFICIENT = 0.99 0.43 0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(1) HORTONS EQUATION SELECTED FOR PERVIOUS LOSSES:
Fo (mm/hr)= 50.00 K (1/hr)= 2.00
Fc (mm/hr)= 7.50 Cum.Intf. (mm)= 0.00
(11) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(111) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0062)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0206):	0.73	0.248	11.75	60.98
+ ID2= 2 (2072):	0.34	0.049	11.83	54.46
=====				
ID = 3 (0062):	1.07	0.294	11.75	56.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0401)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0061):	NaN	0.439	11.83	NaN
+ ID2= 2 (0062):	1.07	0.294	11.75	56.51
=====				
ID = 3 (0401):	NaN	0.693	11.80	NaN

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.