APPENDIX A:
Background

INTENSITY-DURATION-FREQUENCY

Compilation of A.E.S. Hydrometeorology Division data for Toronto International Airport, Fergus Shand Dam and Heart Lake (weighted by total years of record)

INTENSITY (mm/h) - (RAINFALL AMOUNT - (mm))

Duration (min)	FREQUENCY					
	2 year	5 year	10 year	25 year	50 year	100 year
5	104.64 (8.72)	135.36 (11.28)	155.64 (12.97)	181.44 (15.12)	200.40 (16.70)	219.36 (18.28)
10	73.08 (12.18)	94.68 (15.78)	109.02 (18.17)	127.08 (21.18)	140.46 (23.41)	153.78 (25.63)
15	61.60 (15.40)	82.88 (20.72)	97.04 (24.26)	114.84 (28.71)	128.08 (32.02)	141.24 (35.31)
30	41.22 (20.61)	56.96 (28.48)	67.40 (33.70)	80.58 (40.29)	90.32 (45.16)	100.06 (50.03)
60	24.23 (24.23)	35.32 (35.32)	42.68 (42.68)	51.97 (51.97)	58.85 (58.85)	65.69 (65.69)
120	14.73 (29.45)	21.23 (42.45)	25.54 (51.07)	30.98 (61.95)	35.01 (70.01)	39.02 (78.03)
360	6.51 (39.05)	9.11 (54.63)	10.83 (64.96)	13.00 (78.00)	14.61 (87.67)	16.22 (97.29)
720	3.76 (45.16)	5.21 (62.49)	6.17 (73.98)	7.37 (88.49)	8.27 (99.25)	9.16 (109.95)
1440	2.44 (58.49)	3.01 (72.21)	3.56 (85.50)	4.26 (102.26)	4.78 (114.69)	5.29 (127.05)

CHICAGO RAINFALL DISTRIBUTION

$I = A (B + td)^C$

A	586.10	946.46	1173.48	1368.91	1622.45	1777.20
B	6.0	7.0	8.0	8.0	9.0	9.0
C	-.760	-.788	-.794	-.789	-.797	-.795

TOWN OF HALTON HILLS

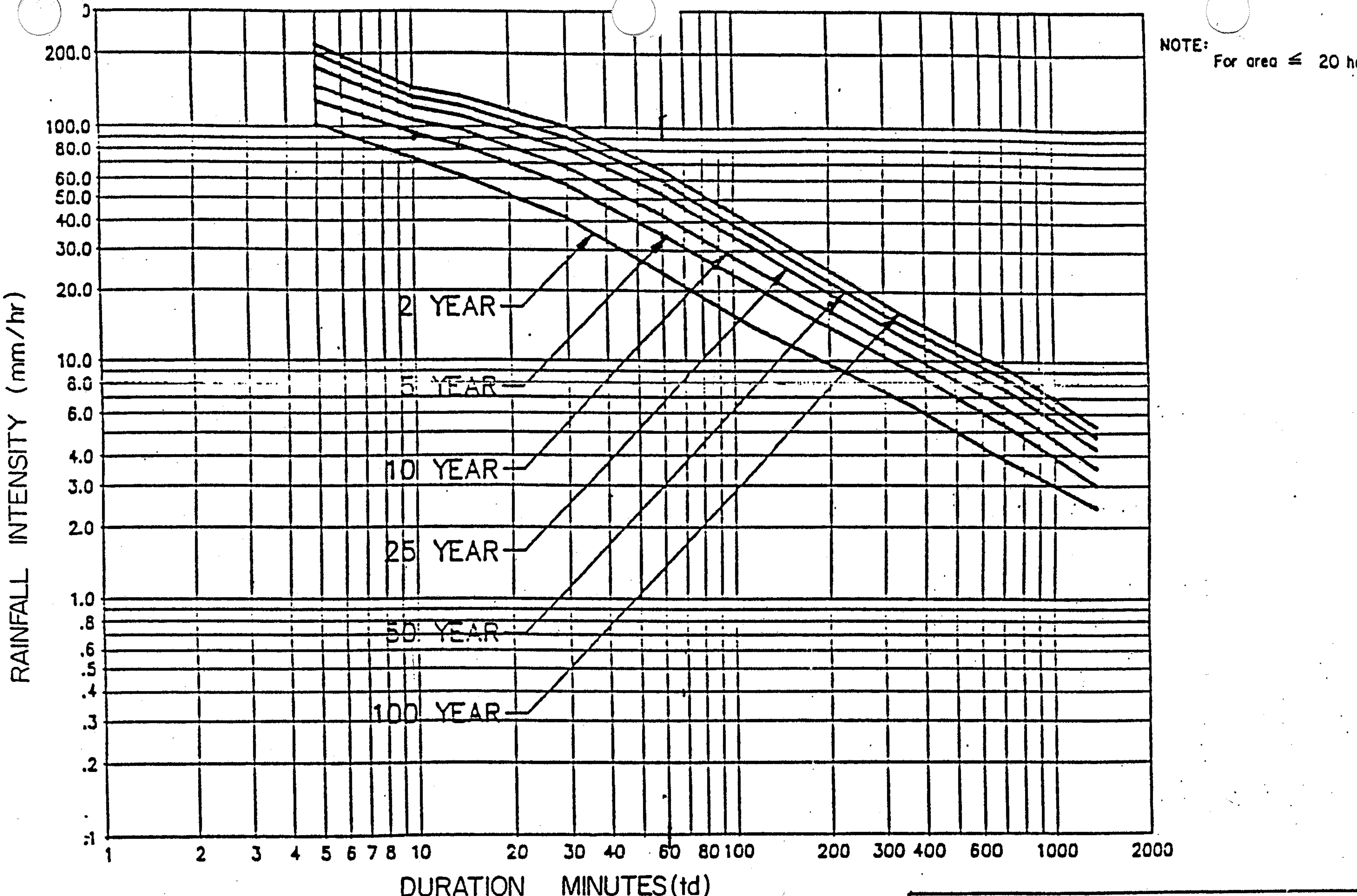
INTENSITY DURATION FREQUENCY
CHICAGO RAINFALL DISTRIBUTION

DRAWN: GDM CHK'D:
DATE: 88·06·01
TOWN ENGINEER

NO.	DATE	REVISION

STD NO. 108

COUNCIL APPROVAL 88·06·13



STD NO 105

TOWN OF HALTON HILLS

SHORT DURATION RAINFALL
INTENSITY-DURATION-FREQUENCY

DRAWN GDM CHK'D: [illegible]
DATE 88·06·01

COUNCIL APPROVAL 88·06·13

TOWN ENGINEER

NO	DATE	REVISION

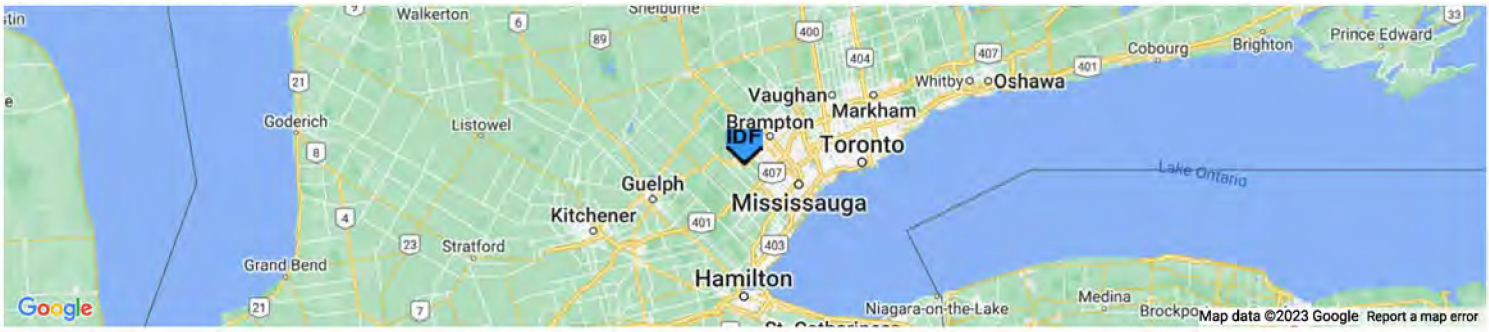
STD NO 105

Ontario IDF CURVE LOOKUP

Active coordinate

43° 38' 45" N, 79° 51' 44" W (43.645833,-79.862500)

Retrieved: Fri, 17 Feb 2023 14:51:37 GMT



Location summary

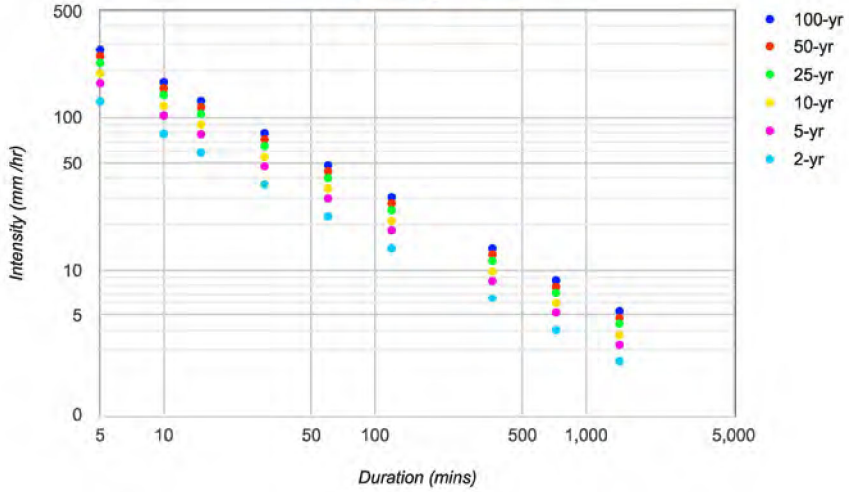
These are the locations in the selection.

IDF Curve: 43° 38' 45" N, 79° 51' 44" W (43.645833,-79.862500)

Results

An IDF curve was found.

Coordinate: 43.645833, -79.862500
IDF curve year: 2022



Coefficient summary

IDF Curve: 43° 38' 45" N, 79° 51' 44" W (43.645833,-79.862500)

Retrieved: Fri, 17 Feb 2023 14:51:37 GMT

Data year: 2010
IDF curve year: 2022

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	126.7	78.1	58.9	36.3	22.4	13.9	6.5	4.0	2.5
5-yr	166.4	102.6	77.4	47.7	29.4	18.2	8.5	5.2	3.2
10-yr	192.6	118.7	89.5	55.2	34.0	21.0	9.8	6.0	3.7
25-yr	226.1	139.4	105.0	64.8	39.9	24.6	11.5	7.1	4.4
50-yr	250.5	154.4	116.4	71.7	44.2	27.3	12.7	7.8	4.8
100-yr	274.9	169.5	127.7	78.7	48.5	29.9	13.9	8.6	5.3

Rainfall depth (mm)

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	10.6	13.0	14.7	18.1	22.4	27.8	39.0	48.0	60.0
5-yr	13.9	17.1	19.4	23.9	29.4	36.4	51.0	62.4	76.8
10-yr	16.0	19.8	22.4	27.6	34.0	42.0	58.8	72.0	88.8
25-yr	18.8	23.2	26.3	32.4	39.9	49.2	69.0	85.2	105.6
50-yr	20.9	25.7	29.1	35.9	44.2	54.6	76.2	93.6	115.2
100-yr	22.9	28.3	31.9	39.4	48.5	59.8	83.4	103.2	127.2

Terms of Use

Credit Valley Conservation
inspired by nature

March 17, 2020

Jeffrey Reid, C.E.T., LET
Project Manager, Halton Region
1151 Bronte Road
Oakville, ON L6M 3L1

Dear Mr. Reid:

Re: Norval West Bypass Transportation Corridor Improvements
Guelph Street (Highway 7) to 10 Sideroad (Regional Road 10), including 10 Sideroad from Tenth Line to Winston Churchill Boulevard/Adamson Street (Regional Road 19)
Town of Halton Hills
Halton Region File Number: PR-2921B
Notice of Study Commencement

Further to receipt of the Notice of Study Commencement dated January 23, 2020, CVC staff offer the following preliminary comments:

It is the understanding of CVC staff that Halton Region is initiating a Municipal Class Environmental Assessment (Class EA) to consider options for road improvements along both the Norval West Bypass and 10 Side Road Corridors.

Site Characteristics:

The study area is traversed by Silver Creek (Guelph Street/Highway 7) and adjacent to Levi Creek (10 Sideroad & 10th Line) and their associated floodplains. The study area is also traversed by the valley slope associated with the Credit River. In addition, the study area contains provincially significant wetlands (Hungry Hollow Wetland Complex).

The study area contains a portion of the Hungry Hollow Environmentally Significant Area (ESA). These areas contain significant natural features within the Credit River Watershed and include valley and watercourse corridors, wetlands and woodlands. The designation of these is based on criteria related to terrain, flora and fauna, hydrological significance, aesthetic qualities and educational values. Our objective is to protect these sensitive areas from impacts related to construction or development activities.

A portion of the study area is located within the Credit River Watershed Natural Heritage System (CRWNHS). The CRWNHS consists of High Functioning and Supporting terrestrial and aquatic natural heritage features, buffers, and complementary natural heritage areas (Centres for Biodiversity). Based on a watershed scale, the CRWNHS is intended to support Provincial, Regional and local municipal natural heritage systems as identified in their respective Strategies or Plans. As a watershed based management agency and landowner,

CVC intends to implement the CRWNHS by using it as a strategic program guidance tool; to inform further development of CVC projects and policies; to assist CVC staff in providing technical advice to landowners and stakeholders at a watershed scale; and to promote a more consistent approach to natural heritage system planning across CVC's jurisdiction. For more detailed information or questions please contact the undersigned to discuss further.

The study area is partially within an area designated as Natural Heritage System Key Feature by the Region of Halton. It is the policy of the Region of Halton to protect the form and function of these natural areas. CVC provides technical support to this agency with respect to delineation of natural features and reviewing potential impacts from development within and adjacent to these lands.

The subject property contains a portion of the Georgetown Credit Valley Area of Natural and Scientific Interest (ANSI). CVC and the Province of Ontario do not support incompatible development within or adjacent to ANSIs. Provincial policy states that development and site alteration may be permitted in an ANSI if it has been demonstrated that there will be no negative impacts on the natural features or the ecological functions for which the area is identified.

The study area may contain or provide habitat for a known Species-at-Risk. Under the Provincial Policy Statement, the Province protects the significant habitat of endangered and threatened species from development. Additionally, the Endangered Species Act 2007 provides legal protection and recovery for species-at-risk and their habitats. Consultation with the Ministry of Environment, Conservation and Parks is recommended to determine if any approvals are necessary.

The study area may be subject to the Approved Source Protection Plan: CTC Source Protection Region. You may also refer to the CTC Source Water Protection website www.ctcswp.ca.

Hydraulics and Erosion Hazard

Any alterations to any watercourse crossings may require a hydraulic analysis to ensure that there are no negative up or downstream impacts. In addition, the road improvements or reconstruction at a minimum should maintain existing depth flooding on the road or improve the road such that it is flood free under Regional Storm conditions.

Any new culverts should address the erosion hazard associated with the watercourse.

Stormwater Management

The project should include quality and quantity control measures to treat stormwater runoff in accordance with Ministry of Environment, Conservation and Parks and CVC guidelines. Typically we request that the proponent provide treatment for all new proposed impervious areas and where possible existing road surfaces. Opportunities to use LID techniques should be investigated.

Erosion and Sediment Controls

As part of future detailed design, all proposed methods to control sedimentation during construction and potential erosion following the completion of the project should be detailed. Furthermore, as means of minimizing impacts to aquatic habitat all works should be completed in the dry.

Methods to prevent encroachment into sensitive areas during construction should also be detailed. These methods can be combined with the erosion and sediment controls.

Restoration

Any disturbed areas will need to be stabilized and restored with native/non-invasive seed mixes and woody species.

Conclusion

Given CVC's interest, staff would like to be kept informed of future meetings and proceedings through the Environmental Assessment and detail design process. Please forward any information or plans to the undersigned when available.

Should you have any further questions please contact the Tyler Slaght at (905) 670-1615 extension 406 or Tyler.Slaght@cvc.ca.

Regards,

Tyler Slaght
Regulations Officer

APPENDIX B:
Hydrologic Model Files

Norval West Bypass - 165010598

Existing Conditions

Soil Type	Hydrologic Soil Group
Fine Sandy Loam	A
Loamy Sand	B
Clay Loam, Silty Clay Loam	C
Clay	D

TABLE OF CURVE NUMBERS (CN's)									Source
Land Use		Hydrologic Soil Type							
		A	AB	B	BC	C	CD	D	
Meadow	"Good"	30	44	58	64.5	71	74.5	78	MTO
Woodlot	"Fair"	36	48	60	66.5	73	76	79	MTO
Lawns	"Good"	39	50	61	67.5	74	77	80	USDA
Pasture/Range		58	61.5	65	70.5	76	78.5	81	MTO
Crop		66	70	74	78	82	84	86	MTO
Bare Soil (Fallow)		77	82	86	89	91	93	94	MTO
Lakes/Wetland		100	100	100	100	100	100	100	USDA
Impervious		98	98	98	98	98	98	98	MTO

MTO - Ministry of Transportation Ontario Drainage Manual (1997), Design Chart 1.09-Soil/Land Use Curve Numbers

USDA - United States Department of Agriculture (2004), National Engineering Handbook, Part 630 Hydrology, Chapter 9 Hydrologic Soil Cover Compexes

HYDROLOGIC SOIL TYPE (%)								
Catchment	Hydrologic Soil Type							
Number	A	AB	B	BC	C	CD	D	TOTAL
Existing Conditions								
100					100			100
105					100			100
110					100			100
115					100			100

LAND USE (%)									
Catchment	Meadow	Woodlot	Lawns	Pasture	Crop	Bare Soil	Lakes and Wetlands	Impervious	Total
Number				Range					
Existing Conditions									
100		25	5	5	60			5	100
105		25	25		25			25	100
110					98			2	100
115					95			5	100

CURVE NUMBER (CN)										
Catchment	Meadow	Woodlot	Lawns	Pasture	Crop	Bare Soil	Lakes and Wetlands	Impervious	Weighted CN	Weighted CN
Number				Range					w/ imp area	w/o imp area
Existing Conditions										
100		18	4	4	49			5	80	79
105		18	19		21			25	82	76
110					80			2	82	82
115					78			5	83	82

Notes:

AMC II assumed

Hydrological Soil Groups taken from MTO Drainage Manual and OMAFRA

Norval West Bypass - 165010598

Proposed Conditions

Soil Type	Hydrologic Soil Group
Fine Sandy Loam	A
Loamy Sand	B
Clay Loam, Silty Clay Loam	C
Clay	D

HYDROLOGIC SOIL TYPE (%)								
Catchment	Hydrologic Soil Type							
Number	A	AB	B	BC	C	CD	D	TOTAL
Proposed Conditions								
200					100			100
201					100			100
202					100			100
203					100			100
204					100			100
205					100			100
210					100			100
215					100			100
220					100			100
225					100			100

LAND USE (%)									
Catchment	Meadow	Woodlot	Lawns	Pasture	Crop	Bare Soil	Lakes and Wetlands	Impervious	Total
Number				Range					
Proposed Conditions									
200	5	23	2	5	60			5	100
201	15	35	25	10				15	100
202			60					40	100
203	50		35					15	100
204			40					60	100
205		30	25		25			20	100
210					95			5	100
215					95			5	100
220			20	38				42	100
225			10	11	74			5	100

CURVE NUMBER (CN)										
Catchment	Meadow	Woodlot	Lawns	Pasture	Crop	Bare Soil	Lakes and Wetlands	Impervious	Weighted CN	Weighted CN
Number				Range					w/ imp area	w/o imp area
Proposed Conditions										
200	4	17	1	4	49			5	80	79
201	11	26	19	8				15	77	73
202			44					39	84	73
203	36		26					15	76	72
204			30					59	88	72
205		22	19		21			20	81	76
210					78			5	83	82
215					78			5	83	82
220			15	29				41	85	74
225			7	8	61			5	81	80

Notes:

AMC II assumed

Hydrological Soil Groups taken from MTO Drainage Manual and OMAFRA

Norval West Bypass - 165010598
SWMHYMO Parameters

Catchment	VO Command	Area (ha)	CN	TIMP	XIMP	Length P (m)	Slope (%)	Tc (hrs)	Tp (hrs)	MNP	MNI
Existing Conditions											
100	DESIGN NASHYD	23.5	80	-	-	600	3.1	0.82	0.49	0.25	0.013
105	DESIGN STANDHYD	7.9	76	0.20	0.10	250	8.0			0.25	0.013
110	DESIGN NASHYD	16.6	82	-	-	750	1.3	1.22	0.73	0.25	0.013
115	DESIGN NASHYD	23.8	83	-	-	1000	1.0	1.55	0.93	0.25	0.013

Total to Silver Creek	23.5
Total to Levi Creek	23.8
Total To Norval / Credit River	24.5
Total	71.7

Notes:
CN calculated for pervious areas only for DESIGN STANDHYD. CN is a weighed average for DESIGN NASHYD
TIMP Total percent impervious
XIMP Percent impervious directly connected

Time of Concentration calculated using the Airport Method
(For areas less than 100 ha, and RC less than 0.4)

$Tc = [\ 3.26\ (1.1\text{-}C)\ L^{0.5}] / S^{0.33}$
C = Runoff Coefficient = 0.2 for undeveloped areas
L = Length of Overland Flow (m)
S = Slope (%)

Time of Concentration calculated using the SCS Lag Equation
(For areas greater than 100 ha)

$Tc = [259L^{0.8}\ [(1000 / CN) - 9]\ 0.7] / [1900S^{0.5}]$
L = Length of Overland Flow (m)
CN = SCS Curve Number
S = Slope (%)

Time to Peak Tp = 0.6Tc

Norval West Bypass - 165010598
SWMHYMO Parameters

Catchment	SWMHYMO Command	Area (ha)	CN	TIMP	XIMP	Length (m)	Slope (%)	Tc (hrs)	Tp (hrs)	MNP	MNI
Proposed Conditions											
200	DESIGN NASHYD	20.3	80	5.00	-	500	3.6	0.72	0.43	0.25	0.013
201	DESIGN NASHYD	3.2	77	15.00	-	160	13.8	0.26	0.16	0.25	0.013
202	DESIGN STANDHYD	4.6	73	40.00	32.00	500	5.0	-	-	0.25	0.013
203	DESIGN NASHYD	1.6	76	15.00	-	110	2.0	0.41	0.24	0.25	0.013
204	DESIGN STANDHYD	1.9	72	60.00	48.00	300	1.0	-	-	0.25	0.013
205	DESIGN STANDHYD	7.9	76	20.00	10.00	250	5.0	-	-	0.25	0.013
210	DESIGN NASHYD	6.8	83	5.00	-	400	1.3	0.90	0.54	0.25	0.013
215	DESIGN NASHYD	15.8	83	5.00	-	600	1.1	1.16	0.70	0.25	0.013
220	DESIGN STANDHYD	5.6	80	42.00	33.60	250	2.0	-	-	0.25	0.013
225	DESIGN NASHYD	4.0	81	5.00	-	500	1.2	1.03	0.62	0.25	0.013

Total to Silver Creek	28.1
Total to Levi Creek	29.0
Total To Norval / Credit River	14.7
Total	71.7

Notes:
CN calculated for pervious areas only for DESIGN STANDHYD. CN is a weighed average for DESIGN NASHYD
TIMP Total percent impervious
XIMP Percent impervious directly connected

Time of Concentration calculated using the Airport Method
(For areas less than 100 ha, and RC less than 0.4)

$Tc = [\ 3.26\ (1.1\text{-}C)\ L^{0.5}] / S^{0.33}$
C = Runoff Coefficient = 0.2 for undeveloped areas
L = Length of Overland Flow (m)
S = Slope (%)

Time of Concentration calculated using the SCS Lag Equation
(For areas greater than 100 ha)

$Tc = [259L^{0.8}\ [(1000 / CN) - 9]\ 0.7] / [1900S^{0.5}]$
L = Length of Overland Flow (m)
CN = SCS Curve Number
S = Slope (%)

Time to Peak $Tp = 0.6Tc$

Existing Visual OTTHYMO Model Schematic

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

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

      OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO   TM
     O   O    T      T    H   H   Y Y   MM MM  O   O
     O   O    T      T    H   H    Y    M M M  O   O
      OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
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              ***** DETAILED OUTPUT *****


  Input  filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\78c88c4a-
7d71-4da5-832f-bf5be4aa0cd6\scen
  Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-
26df3e227620\78c88c4a-7d71-4da5-832f-bf5be4aa0cd6\scen


DATE: 03/11/2024                    TIME: 11:36:37

USER:


COMMENTS: _____


--------------------------------------------------------------------------------
  ************************************************
  ** SIMULATION : Chicago_100yr             **
  ************************************************


-------------------
|   READ STORM    |   Filename: C:\Users\nyokich\AppD
|                 |             ata\Local\Temp\
|                 |             8a20bc98-3229-45bd-86a2-c24eba0248e6\dd8f026f
| Ptotal= 82.62 mm |   Comments: Chicago_100yr
-------------------
            TIME   RAIN | TIME   RAIN |' TIME   RAIN | TIME   RAIN
            hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
           0.00   6.88 | 0.75  15.37 | 1.50  53.67 | 2.25  11.26
           0.08   7.30 | 0.83  18.01 | 1.58  37.78 | 2.33  10.39
```



```
           0.17   7.80 | 0.92  21.80 | 1.67  29.05 | 2.42   9.65
           0.25   8.36 | 1.00  27.68 | 1.75  23.59 | 2.50   9.02
           0.33   9.02 | 1.08  37.92 | 1.83  19.87 | 2.58   8.47
           0.42   9.81 | 1.17  59.55 | 1.92  17.18 | 2.67   7.99
           0.50  10.76 | 1.25 128.51 | 2.00  15.16 | 2.75   7.57
           0.58  11.94 | 1.33 206.77 | 2.08  13.57 | 2.83   7.19
           0.67  13.42 | 1.42  89.93 | 2.17  12.30 | 2.92   6.85

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

-------------------
| CALIB           |
| NASHYD  (  0115)|  Area   (ha)=  23.79  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.93

    Unit Hyd Qpeak  (cms)=  0.977

    PEAK FLOW      (cms)=  1.455 (i)
    TIME TO PEAK   (hrs)=  2.500
    RUNOFF VOLUME  (mm)=  46.469
    TOTAL RAINFALL  (mm)=  82.617
    RUNOFF COEFFICIENT  =  0.562

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

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

  -------------------------
  | Junction Command(0005) |
  -------------------------

                    AREA    QPEAK   TPEAK    R.V.
                    (ha)    (cms)   (hrs)    (mm)
  INFLOW : ID= 2(  0115)  23.79    1.46    2.50    46.47
  OUTFLOW: ID= 2(  0005)  23.79    1.46    2.50    46.47

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

-------------------
| CALIB           |
| NASHYD  (  0110)|  Area   (ha)=  16.60  Curve Number  (CN)= 82.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.73

    Unit Hyd Qpeak  (cms)=  0.869

    PEAK FLOW      (cms)=  1.183 (i)
    TIME TO PEAK   (hrs)=  2.250
    RUNOFF VOLUME  (mm)=  45.169
    TOTAL RAINFALL  (mm)=  82.617
    RUNOFF COEFFICIENT  =  0.547

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



```
--------------------------------------------------------------------------------

-------------------
| CALIB           |
| STANDHYD (  0105)|  Area   (ha)=  7.90
|ID= 1 DT= 5.0 min |  Total Imp(%)=  20.00  Dir. Conn.(%)=  10.00
-------------------
                     IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=     1.58       6.32
    Dep. Storage     (mm)=     2.00       5.00
    Average Slope    (%)=      2.00       5.00
    Length           (m)=     50.00     250.00
    Mannings n       =         0.013      0.250

    Max.Eff.Inten.(mm/hr)=    206.77      75.00
          over (min)          5.00       20.00
    Storage Coeff.  (min)=    1.02 (ii)  19.09 (ii)
    Unit Hyd. Tpeak (min)=    5.00       20.00
    Unit Hyd. peak  (cms)=    0.34       0.06
                              *TOTALS*
    PEAK FLOW      (cms)=     0.45       0.84       0.919 (iii)
    TIME TO PEAK   (hrs)=     1.42       1.67       1.67
    RUNOFF VOLUME  (mm)=     80.62      40.88      44.86
    TOTAL RAINFALL  (mm)=    82.62      82.62      82.62
    RUNOFF COEFFICIENT  =     0.98       0.49       0.54

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

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* = 76.0   Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

-------------------
| ADD HYD  (  0006)|
|  1 + 2 =  3   |      AREA   QPEAK   TPEAK    R.V.
-------------------    (ha)   (cms)   (hrs)    (mm)
      ID1= 1 (  0105):    7.90  0.919    1.67    44.86
    + ID2= 2 (  0110):   16.60  1.183    2.25    45.17
      ==========================================================
      ID = 3 (  0006):   24.50  1.723    1.92    45.07

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

-------------------
| CALIB           |
| NASHYD  (  0100)|  Area   (ha)=  23.46  Curve Number  (CN)= 80.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.49
```



```
    Unit Hyd Qpeak  (cms)=  1.829

    PEAK FLOW      (cms)=  2.094 (i)
    TIME TO PEAK   (hrs)=  1.917
    RUNOFF VOLUME  (mm)=  42.688
    TOTAL RAINFALL  (mm)=  82.617
    RUNOFF COEFFICIENT  =  0.517

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

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

  -------------------------
  | Junction Command(0007) |
  -------------------------

                    AREA    QPEAK   TPEAK    R.V.
                    (ha)    (cms)   (hrs)    (mm)
  INFLOW : ID= 2(  0100)  23.46    2.09    1.92    42.69
  OUTFLOW: ID= 2(  0007)  23.46    2.09    1.92    42.69

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

================================================================================
================================================================================

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

      OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO   TM
     O   O    T      T    H   H   Y Y   MM MM  O   O
     O   O    T      T    H   H    Y    M M M  O   O
      OOO     T      T    H   H    Y    M   M   OOO
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              ***** DETAILED OUTPUT *****


  Input  filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\6be8793b-
d09d-4878-aed7-7a795994f00a\scen
  Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-
26df3e227620\6be8793b-d09d-4878-aed7-7a795994f00a\scen


DATE: 03/11/2024                    TIME: 11:36:37

USER:
```

COMMENTS: _____

****
** SIMULATION : Chicago_10yr **
****

| READ STORM | Filename: C:\Users\nyokich\AppD
| | ata\Local\Temp\
| | 8a20bc98-3229-45bd-86a2-c24eba0248e6\964de38b
| Ptotal= 55.07 mm | Comments: Chicago_10yr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	4.53	0.75	10.06	1.50	35.03	2.25	7.36
0.08	4.80	0.83	11.72	1.58	24.56	2.33	6.80
0.17	5.12	0.92	14.17	1.67	18.87	2.42	6.33
0.25	5.49	1.00	17.98	1.75	15.33	2.50	5.92
0.33	5.92	1.08	24.65	1.83	12.92	2.58	5.56
0.42	6.43	1.17	38.96	1.92	11.19	2.67	5.25
0.50	7.04	1.25	86.93	2.00	9.88	2.75	4.97
0.58	7.80	1.33	144.84	2.08	8.86	2.83	4.72
0.67	8.76	1.42	59.59	2.17	8.04	2.92	4.50

| CALIB |
| NASHYD (0115)| Area (ha)= 23.79 Curve Number (CN)= 83.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.93

Unit Hyd Qpeak (cms)= 0.977

PEAK FLOW (cms)= 0.765 (i)
TIME TO PEAK (hrs)= 2.500
RUNOFF VOLUME (mm)= 24.559
TOTAL RAINFALL (mm)= 55.074
RUNOFF COEFFICIENT = 0.446

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

| Junction Command(0005) |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0115)	23.79	0.77	2.50	24.56
OUTFLOW: ID= 2(0005)	23.79	0.77	2.50	24.56

| CALIB |
| NASHYD (0110)| Area (ha)= 16.60 Curve Number (CN)= 82.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.73

Unit Hyd Qpeak (cms)= 0.869

PEAK FLOW (cms)= 0.616 (i)
TIME TO PEAK (hrs)= 2.250
RUNOFF VOLUME (mm)= 23.693
TOTAL RAINFALL (mm)= 55.074
RUNOFF COEFFICIENT = 0.430

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

| CALIB |
| STANDHYD (0105)| Area (ha)= 7.90
|ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	50.00	250.00
Mannings n =	0.013	0.250

Max.Eff.Inten.(mm/hr)=	144.84	34.31	
over (min)	5.00	30.00	
Storage Coeff. (min)=	1.18 (ii)	25.88 (ii)	
Unit Hyd. Tpeak (min)=	5.00	30.00	
Unit Hyd. peak (cms)=	0.33	0.04	
		TOTALS	
PEAK FLOW (cms)=	0.32	0.35	0.384 (iii)
TIME TO PEAK (hrs)=	1.42	1.83	1.42
RUNOFF VOLUME (mm)=	53.07	21.02	24.23
TOTAL RAINFALL (mm)=	55.07	55.07	55.07
RUNOFF COEFFICIENT =	0.96	0.38	0.44

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

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

| ADD HYD (0006)|
| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0105):	7.90	0.384	1.42	24.23
+ ID2= 2 (0110):	16.60	0.616	2.25	23.69
ID = 3 (0006):	24.50	0.914	2.08	23.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0100)| Area (ha)= 23.46 Curve Number (CN)= 80.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.49

Unit Hyd Qpeak (cms)= 1.829

PEAK FLOW (cms)= 1.074 (i)
TIME TO PEAK (hrs)= 2.000
RUNOFF VOLUME (mm)= 22.076
TOTAL RAINFALL (mm)= 55.074
RUNOFF COEFFICIENT = 0.401

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

| Junction Command(0007) |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0100)	23.46	1.07	2.00	22.08
OUTFLOW: ID= 2(0007)	23.46	1.07	2.00	22.08

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

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

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

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\46abef7a-d8ad-44e8-9991-7819ace2374f\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\46abef7a-d8ad-44e8-9991-7819ace2374f\scen

DATE: 03/11/2024 TIME: 11:36:37

USER:

COMMENTS: _____

****
** SIMULATION : Chicago_25yr **
****

| READ STORM | Filename: C:\Users\nyokich\AppD
| | ata\Local\Temp\
| | 8a20bc98-3229-45bd-86a2-c24eba0248e6\ae79c4fd
| Ptotal= 65.95 mm | Comments: Chicago_25yr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	5.53	0.75	12.14	1.50	41.91	2.25	8.95
0.08	5.86	0.83	14.18	1.58	29.48	2.33	8.27
0.17	6.25	0.92	17.11	1.67	22.71	2.42	7.70
0.25	6.69	1.00	21.65	1.75	18.49	2.50	7.21
0.33	7.21	1.08	29.59	1.83	15.62	2.58	6.78
0.42	7.82	1.17	46.55	1.92	13.54	2.67	6.40
0.50	8.56	1.25	103.13	2.00	11.97	2.75	6.07
0.58	9.48	1.33	171.19	2.08	10.75	2.83	5.77
0.67	10.63	1.42	70.93	2.17	9.76	2.92	5.50

| CALIB |

```
| NASHYD  ( 0115)|  Area    (ha)=  23.79  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=  5.00  # of Linear Res.(N)= 3.00
-----------------  U.H. Tp(hrs)=  0.93

   Unit Hyd Qpeak  (cms)=  0.977

   PEAK FLOW      (cms)=  1.026 (i)
   TIME TO PEAK   (hrs)=  2.500
   RUNOFF VOLUME  (mm)=  32.879
   TOTAL RAINFALL (mm)=  65.946
   RUNOFF COEFFICIENT  =  0.499

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

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 -------------------------
 | Junction Command(0005) |
 -------------------------

                  AREA    QPEAK   TPEAK    R.V.
                  (ha)    (cms)   (hrs)    (mm)
 INFLOW : ID= 2(  0115)  23.79    1.03    2.50    32.88
 OUTFLOW: ID= 2(  0005)  23.79    1.03    2.50    32.88

 ---------------------------------------------------------------------------
-------------------
| CALIB          |
| NASHYD  ( 0110)|  Area    (ha)=  16.60  Curve Number  (CN)= 82.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=  5.00  # of Linear Res.(N)= 3.00
-----------------  U.H. Tp(hrs)=  0.73

   Unit Hyd Qpeak  (cms)=  0.869

   PEAK FLOW      (cms)=  0.829 (i)
   TIME TO PEAK   (hrs)=  2.250
   RUNOFF VOLUME  (mm)=  31.828
   TOTAL RAINFALL (mm)=  65.946
   RUNOFF COEFFICIENT  =  0.483

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

---------------------------------------------------------------------------
-------------------
| CALIB          |
| STANDHYD ( 0105)|  Area    (ha)=  7.90
|ID= 1 DT= 5.0 min |  Total Imp(%)=  20.00  Dir. Conn.(%)=  10.00
-------------------
                  IMPERVIOUS    PERVIOUS (i)
   Surface Area    (ha)=     1.58       6.32
   Dep. Storage    (mm)=     2.00       5.00
   Average Slope    (%)=     2.00       5.00
   Length          (m)=    50.00     250.00
   Mannings n         =    0.013      0.250
```



```
   Max.Eff.Inten.(mm/hr)=   171.19      46.24
          over (min)        5.00       25.00
   Storage Coeff.  (min)=     1.10 (ii)  23.02 (ii)
   Unit Hyd. Tpeak (min)=     5.00       25.00
   Unit Hyd. peak  (cms)=     0.34       0.05
                          *TOTALS*
   PEAK FLOW      (cms)=     0.37       0.51       0.562 (iii)
   TIME TO PEAK   (hrs)=     1.42       1.75       1.75
   RUNOFF VOLUME  (mm)=     63.95      28.48      32.03
   TOTAL RAINFALL (mm)=     65.95      65.95      65.95
   RUNOFF COEFFICIENT  =     0.97       0.43       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) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* = 76.0   Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

-------------------
| ADD HYD  ( 0006)|
|  1 +  2 =  3    |      AREA    QPEAK    TPEAK    R.V.
-------------------      (ha)    (cms)    (hrs)    (mm)
      ID1= 1 (  0105):    7.90   0.562    1.75    32.03
    + ID2= 2 (  0110):   16.60   0.829    2.25    31.83
      ==========================================================
      ID = 3 (  0006):   24.50   1.222    2.00    31.89

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
-------------------
| CALIB          |
| NASHYD  ( 0100)|  Area    (ha)=  23.46  Curve Number  (CN)= 80.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=  5.00  # of Linear Res.(N)= 3.00
-----------------  U.H. Tp(hrs)=  0.49

   Unit Hyd Qpeak  (cms)=  1.829

   PEAK FLOW      (cms)=  1.454 (i)
   TIME TO PEAK   (hrs)=  2.000
   RUNOFF VOLUME  (mm)=  29.846
   TOTAL RAINFALL (mm)=  65.946
   RUNOFF COEFFICIENT  =  0.453

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

---------------------------------------------------------------------------
```

file:///V|...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

```
 -------------------------
 | Junction Command(0007) |
 -------------------------

                  AREA    QPEAK   TPEAK    R.V.
                  (ha)    (cms)   (hrs)    (mm)
 INFLOW : ID= 2(  0100)  23.46    1.45    2.00    29.85
 OUTFLOW: ID= 2(  0007)  23.46    1.45    2.00    29.85

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===========================================================================
===========================

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

     OOO   TTTTT  TTTTT  H   H  Y   Y  M   M  OOO   TM
    O   O    T      T    H   H   Y Y   MM MM  O   O
    O   O    T      T    H   H    Y    M M M  O   O
     OOO     T      T    H   H    Y    M   M   OOO
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            ***** DETAILED  OUTPUT *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\1244f0f6-8b2f-4ea9-9515-97f823089791\scen
  Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\1244f0f6-8b2f-4ea9-9515-97f823089791\scen


DATE: 03/11/2024                  TIME: 11:36:37

USER:


COMMENTS: _____


---------------------------------------------------------------------------------------------------
  **************************************************
  ** SIMULATION : Chicago_2yr                     **
  **************************************************


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```

file:///V|...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

```
|   READ STORM    |  Filename: C:\Users\nyokich\AppD
|                 |  ata\Local\Temp\
|                 |  8a20bc98-3229-45bd-86a2-c24eba0248e6\248c7391
| Ptotal= 33.13 mm |  Comments: Chicago_2yr
-------------------
          TIME   RAIN |  TIME   RAIN |  TIME   RAIN |  TIME   RAIN
          hrs   mm/hr |  hrs   mm/hr |  hrs   mm/hr |  hrs   mm/hr
          0.00   3.00 |  0.75   6.21 |  1.50  19.92 |  2.25   4.68
          0.08   3.17 |  0.83   7.16 |  1.58  14.20 |  2.33   4.36
          0.17   3.36 |  0.92   8.53 |  1.67  11.11 |  2.42   4.08
          0.25   3.58 |  1.00  10.62 |  1.75   9.17 |  2.50   3.83
          0.33   3.83 |  1.08  14.25 |  1.83   7.84 |  2.58   3.62
          0.42   4.14 |  1.17  22.09 |  1.92   6.87 |  2.67   3.43
          0.50   4.50 |  1.25  50.42 |  2.00   6.13 |  2.75   3.27
          0.58   4.94 |  1.33  89.35 |  2.08   5.55 |  2.83   3.12
          0.67   5.48 |  1.42  33.74 |  2.17   5.07 |  2.92   2.98

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

-------------------
| CALIB          |
| NASHYD  ( 0115)|  Area    (ha)=  23.79  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=  5.00  # of Linear Res.(N)= 3.00
-----------------  U.H. Tp(hrs)=  0.93

   Unit Hyd Qpeak  (cms)=  0.977

   PEAK FLOW      (cms)=  0.299 (i)
   TIME TO PEAK   (hrs)=  2.583
   RUNOFF VOLUME  (mm)=  9.873
   TOTAL RAINFALL (mm)=  33.132
   RUNOFF COEFFICIENT  =  0.298

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

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

 -------------------------
 | Junction Command(0005) |
 -------------------------

                  AREA    QPEAK   TPEAK    R.V.
                  (ha)    (cms)   (hrs)    (mm)
 INFLOW : ID= 2(  0115)  23.79    0.30    2.58     9.87
 OUTFLOW: ID= 2(  0005)  23.79    0.30    2.58     9.87

 ---------------------------------------------------------------------------
-------------------
| CALIB          |
| NASHYD  ( 0110)|  Area    (ha)=  16.60  Curve Number  (CN)= 82.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=  5.00  # of Linear Res.(N)= 3.00
-----------------  U.H. Tp(hrs)=  0.73

   Unit Hyd Qpeak  (cms)=  0.869
```

file:///V|...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

```
    PEAK FLOW     (cms)=  0.236 (i)
    TIME TO PEAK  (hrs)=  2.333
    RUNOFF VOLUME  (mm)=  9.434
    TOTAL RAINFALL (mm)= 33.132
    RUNOFF COEFFICIENT  =  0.285

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

---------------------------------------------------------------------------
-------------------
| CALIB           |
| STANDHYD (  0105)|  Area   (ha)=  7.90
|ID= 1 DT= 5.0 min |  Total Imp(%)= 20.00  Dir. Conn.(%)= 10.00
-------------------
                    IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=     1.58       6.32
    Dep. Storage    (mm)=     2.00       5.00
    Average Slope   (%)=      2.00       5.00
    Length          (m)=     50.00     250.00
    Mannings n        =      0.013      0.250

    Max.Eff.Inten.(mm/hr)=    89.35      9.04
          over (min)          5.00      45.00
    Storage Coeff.  (min)=    1.43 (ii) 43.54 (ii)
    Unit Hyd. Tpeak (min)=    5.00      45.00
    Unit Hyd. peak  (cms)=    0.33       0.03
                          *TOTALS*
    PEAK FLOW     (cms)=      0.19       0.09       0.202 (iii)
    TIME TO PEAK  (hrs)=      1.42       2.17       1.42
    RUNOFF VOLUME  (mm)=     31.13       8.23      10.52
    TOTAL RAINFALL (mm)=     33.13      33.13      33.13
    RUNOFF COEFFICIENT  =     0.94       0.25       0.32

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

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* = 76.0   Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

-------------------
| ADD HYD (  0006)|
|  1 +  2 =  3    |      AREA   QPEAK   TPEAK    R.V.
-------------------        (ha)   (cms)  (hrs)    (mm)
     ID1= 1 (  0105):    7.90   0.202    1.42   10.52
   + ID2= 2 (  0110):   16.60   0.236    2.33    9.43
     ==========================================================
     ID = 3 (  0006):   24.50   0.337    2.25    9.78
```



```
    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
-------------------
| CALIB           |
| NASHYD  (  0100)|  Area   (ha)= 23.46  Curve Number  (CN)= 80.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.49

    Unit Hyd Qpeak  (cms)=  1.829

    PEAK FLOW     (cms)=  0.400 (i)
    TIME TO PEAK  (hrs)=  2.000
    RUNOFF VOLUME  (mm)=  8.637
    TOTAL RAINFALL (mm)= 33.132
    RUNOFF COEFFICIENT  =  0.261

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

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

 ------------------------
 | Junction Command(0007) |
 ------------------------

                  AREA    QPEAK   TPEAK    R.V.
                  (ha)    (cms)   (hrs)    (mm)
 INFLOW : ID= 2(  0100)  23.46    0.40    2.00    8.64
 OUTFLOW: ID= 2(  0007)  23.46    0.40    2.00    8.64

 ---------------------------------------------------------------------------
================================================================================
========================

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

     OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO   TM
    O   O    T      T    H   H   Y Y   MM MM  O   O
    O   O    T      T    H   H    Y    M M M  O   O
     OOO     T      T    H   H    Y    M   M   OOO
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            ***** DETAILED OUTPUT *****


  Input  filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\253ffa72-
```



```
4756-4d49-abb4-8ef2717e91d0\scen
  Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-
26df3e227620\253ffa72-4756-4d49-abb4-8ef2717e91d0\scen


DATE: 03/11/2024                  TIME: 11:36:37

USER:


COMMENTS: _____


---------------------------------------------------------------------------------------------
  ****************************************************
  ** SIMULATION : Chicago_50yr                **
  ****************************************************


-------------------
|   READ STORM    |  Filename: C:\Users\nyokich\AppD
|                 |           ata\Local\Temp\
|                 |           8a20bc98-3229-45bd-86a2-c24eba0248e6\6e087507
| Ptotal= 74.64 mm |  Comments: Chicago_50yr
-------------------
          TIME   RAIN | TIME   RAIN |' TIME   RAIN | TIME   RAIN
           hrs   mm/hr |  hrs  mm/hr |'  hrs  mm/hr |  hrs  mm/hr
          0.00   6.17 | 0.75  13.82 | 1.50  48.52 | 2.25  10.11
          0.08   6.55 | 0.83  16.20 | 1.58  34.11 | 2.33   9.33
          0.17   6.99 | 0.92  19.64 | 1.67  26.19 | 2.42   8.66
          0.25   7.50 | 1.00  24.96 | 1.75  21.25 | 2.50   8.10
          0.33   8.10 | 1.08  34.23 | 1.83  17.89 | 2.58   7.60
          0.42   8.81 | 1.17  53.85 | 1.92  15.46 | 2.67   7.17
          0.50   9.66 | 1.25 116.53 | 2.00  13.63 | 2.75   6.78
          0.58  10.72 | 1.33 187.75 | 2.08  12.20 | 2.83   6.44
          0.67  12.06 | 1.42  81.45 | 2.17  11.05 | 2.92   6.14

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

-------------------
| CALIB           |
| NASHYD  (  0115)|  Area   (ha)= 23.79  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.93

    Unit Hyd Qpeak  (cms)=  0.977

    PEAK FLOW     (cms)=  1.248 (i)
    TIME TO PEAK  (hrs)=  2.500
    RUNOFF VOLUME  (mm)= 39.859
    TOTAL RAINFALL (mm)= 74.637
    RUNOFF COEFFICIENT  =  0.534
```



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

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

 ------------------------
 | Junction Command(0005) |
 ------------------------

                  AREA    QPEAK   TPEAK    R.V.
                  (ha)    (cms)   (hrs)    (mm)
 INFLOW : ID= 2(  0115)  23.79    1.25    2.50   39.86
 OUTFLOW: ID= 2(  0005)  23.79    1.25    2.50   39.86

 ---------------------------------------------------------------------------
-------------------
| CALIB           |
| NASHYD  (  0110)|  Area   (ha)= 16.60  Curve Number  (CN)= 82.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.73

    Unit Hyd Qpeak  (cms)=  0.869

    PEAK FLOW     (cms)=  1.012 (i)
    TIME TO PEAK  (hrs)=  2.250
    RUNOFF VOLUME  (mm)= 38.672
    TOTAL RAINFALL (mm)= 74.637
    RUNOFF COEFFICIENT  =  0.518

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

---------------------------------------------------------------------------
-------------------
| CALIB           |
| STANDHYD (  0105)|  Area   (ha)=  7.90
|ID= 1 DT= 5.0 min |  Total Imp(%)= 20.00  Dir. Conn.(%)= 10.00
-------------------
                    IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=     1.58       6.32
    Dep. Storage    (mm)=     2.00       5.00
    Average Slope   (%)=      2.00       5.00
    Length          (m)=     50.00     250.00
    Mannings n        =      0.013      0.250

    Max.Eff.Inten.(mm/hr)=   187.75      63.97
          over (min)          5.00      25.00
    Storage Coeff.  (min)=    1.06 (ii) 20.31 (ii)
    Unit Hyd. Tpeak (min)=    5.00      25.00
    Unit Hyd. peak  (cms)=    0.34       0.05
                          *TOTALS*
    PEAK FLOW     (cms)=      0.41       0.67       0.728 (iii)
    TIME TO PEAK  (hrs)=      1.42       1.75       1.75
    RUNOFF VOLUME  (mm)=     72.64      34.82      38.60
    TOTAL RAINFALL (mm)=     74.64      74.64      74.64
    RUNOFF COEFFICIENT  =     0.97       0.47       0.52
```

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0006)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0105): 7.90 0.728 1.75 38.60
+ ID2= 2 (0110): 16.60 1.012 2.25 38.67
ID = 3 (0006): 24.50 1.506 2.00 38.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0100)| Area (ha)= 23.46 Curve Number (CN)= 80.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

Unit Hyd Qpeak (cms)= 1.829

PEAK FLOW (cms)= 1.783 (i)
TIME TO PEAK (hrs)= 1.917
RUNOFF VOLUME (mm)= 36.421
TOTAL RAINFALL (mm)= 74.637
RUNOFF COEFFICIENT = 0.488

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

| Junction Command(0007) |

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2(0100) 23.46 1.78 1.92 36.42
OUTFLOW: ID= 2(0007) 23.46 1.78 1.92 36.42

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

OOO TTTTT TTTTT H H Y Y M M M OOO TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
OOO T T H H Y M M OOO
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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\2438d19e-6780-4528-b8ea-fd18a03934f8\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\2438d19e-6780-4528-b8ea-fd18a03934f8\scen

DATE: 03/11/2024 TIME: 11:36:37

USER:

COMMENTS: _____

****
** SIMULATION : Chicago_5yr **
****

| READ STORM | Filename: C:\Users\nyokich\AppD
| | ata\Local\Temp\
| | 8a20bc98-3229-45bd-86a2-c24cba0248c6\f4232b31
| Ptotal= 46.03 mm | Comments: Chicago_5yr

TIME RAIN	TIME RAIN	' TIME RAIN	TIME RAIN
hrs mm/hr	hrs mm/hr	' hrs mm/hr	hrs mm/hr
0.00 3.81	0.75 8.28	1.50 28.53	2.25 6.13
0.08 4.04	0.83 9.65	1.58 20.00	2.33 5.67
0.17 4.30	0.92 11.63	1.67 15.41	2.42 5.28
0.25 4.60	1.00 14.69	1.75 12.56	2.50 4.95
0.33 4.95	1.08 20.08	1.83 10.62	2.58 4.66

file:///V|/...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

0.42 5.36	1.17 31.77	1.92 9.22	2.67 4.40
0.50 5.87	1.25 72.91	2.00 8.17	2.75 4.17
0.58 6.48	1.33 126.08	2.08 7.34	2.83 3.97
0.67 7.26	1.42 49.02	2.17 6.68	2.92 3.79

| CALIB |
| NASHYD (0115)| Area (ha)= 23.79 Curve Number (CN)= 83.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.93

Unit Hyd Qpeak (cms)= 0.977

PEAK FLOW (cms)= 0.561 (i)
TIME TO PEAK (hrs)= 2.500
RUNOFF VOLUME (mm)= 18.088
TOTAL RAINFALL (mm)= 46.025
RUNOFF COEFFICIENT = 0.393

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

| Junction Command(0005) |

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2(0115) 23.79 0.56 2.50 18.09
OUTFLOW: ID= 2(0005) 23.79 0.56 2.50 18.09

| CALIB |
| NASHYD (0110)| Area (ha)= 16.60 Curve Number (CN)= 82.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.73

Unit Hyd Qpeak (cms)= 0.869

PEAK FLOW (cms)= 0.449 (i)
TIME TO PEAK (hrs)= 2.250
RUNOFF VOLUME (mm)= 17.390
TOTAL RAINFALL (mm)= 46.025
RUNOFF COEFFICIENT = 0.378

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

| CALIB |

file:///V|/...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

| STANDHYD (0105)| Area (ha)= 7.90
|ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	50.00	250.00
Mannings n =	0.013	0.250

Max.Eff.Inten.(mm/hr)= 126.08 22.44
over (min) 5.00 35.00
Storage Coeff. (min)= 1.25 (ii) 30.51 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.33 0.04

	TOTALS	
PEAK FLOW (cms)=	0.27	0.22	0.308 (iii)
TIME TO PEAK (hrs)=	1.42	2.00	1.42
RUNOFF VOLUME (mm)=	44.03	15.32	18.19
TOTAL RAINFALL (mm)=	46.03	46.03	46.03
RUNOFF COEFFICIENT =	0.96	0.33	0.40

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0006)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0105): 7.90 0.308 1.42 18.19
+ ID2= 2 (0110): 16.60 0.449 2.25 17.39
ID = 3 (0006): 24.50 0.662 2.17 17.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0100)| Area (ha)= 23.46 Curve Number (CN)= 80.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

Unit Hyd Qpeak (cms)= 1.829

PEAK FLOW (cms)= 0.779 (i)

file:///V|/...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

TIME TO PEAK (hrs)= 2.000
RUNOFF VOLUME (mm)= 16.101
TOTAL RAINFALL (mm)= 46.025
RUNOFF COEFFICIENT = 0.350

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

| Junction Command(0007) |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0100)	23.46	0.78	2.00	16.10
OUTFLOW: ID= 2(0007)	23.46	0.78	2.00	16.10

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

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

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\59904cb5-6f85-4b7c-8b6a-15bdfd3a3bb8\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\59904cb5-6f85-4b7c-8b6a-15bdfd3a3bb8\scen

DATE: 03/11/2024 TIME: 11:36:38

USER:

COMMENTS: _____

****
** SIMULATION : Regional (HH_48hr) **
****

| READ STORM | Filename: C:\Users\nyokich\AppData\Local\Temp\8a20bc98-3229-45bd-86a2-c24eba0248e6\36cc42a6
| Ptotal=285.00 mm | Comments: Regional_HH

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	2.00	12.00	2.00	24.00	2.00	36.00	6.00
0.25	2.00	12.25	2.00	24.25	2.00	36.25	6.00
0.50	2.00	12.50	2.00	24.50	2.00	36.50	6.00
0.75	2.00	12.75	2.00	24.75	2.00	36.75	6.00
1.00	2.00	13.00	2.00	25.00	2.00	37.00	4.00
1.25	2.00	13.25	2.00	25.25	2.00	37.25	4.00
1.50	2.00	13.50	2.00	25.50	2.00	37.50	4.00
1.75	2.00	13.75	2.00	25.75	2.00	37.75	4.00
2.00	2.00	14.00	2.00	26.00	2.00	38.00	6.00
2.25	2.00	14.25	2.00	26.25	2.00	38.25	6.00
2.50	2.00	14.50	2.00	26.50	2.00	38.50	6.00
2.75	2.00	14.75	2.00	26.75	2.00	38.75	6.00
3.00	2.00	15.00	2.00	27.00	2.00	39.00	13.00
3.25	2.00	15.25	2.00	27.25	2.00	39.25	13.00
3.50	2.00	15.50	2.00	27.50	2.00	39.50	13.00
3.75	2.00	15.75	2.00	27.75	2.00	39.75	13.00
4.00	2.00	16.00	2.00	28.00	2.00	40.00	17.00
4.25	2.00	16.25	2.00	28.25	2.00	40.25	17.00
4.50	2.00	16.50	2.00	28.50	2.00	40.50	17.00
4.75	2.00	16.75	2.00	28.75	2.00	40.75	17.00
5.00	2.00	17.00	2.00	29.00	2.00	41.00	13.00
5.25	2.00	17.25	2.00	29.25	2.00	41.25	13.00
5.50	2.00	17.50	2.00	29.50	2.00	41.50	13.00
5.75	2.00	17.75	2.00	29.75	2.00	41.75	13.00
6.00	2.00	18.00	2.00	30.00	2.00	42.00	23.00
6.25	2.00	18.25	2.00	30.25	2.00	42.25	23.00
6.50	2.00	18.50	2.00	30.50	2.00	42.50	23.00
6.75	2.00	18.75	2.00	30.75	2.00	42.75	23.00
7.00	2.00	19.00	2.00	31.00	2.00	43.00	13.00
7.25	2.00	19.25	2.00	31.25	2.00	43.25	13.00
7.50	2.00	19.50	2.00	31.50	2.00	43.50	13.00
7.75	2.00	19.75	2.00	31.75	2.00	43.75	13.00
8.00	2.00	20.00	2.00	32.00	2.00	44.00	13.00
8.25	2.00	20.25	2.00	32.25	2.00	44.25	13.00
8.50	2.00	20.50	2.00	32.50	2.00	44.50	13.00
8.75	2.00	20.75	2.00	32.75	2.00	44.75	13.00
9.00	2.00	21.00	2.00	33.00	2.00	45.00	53.00
9.25	2.00	21.25	2.00	33.25	2.00	45.25	53.00

file:///V|...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

9.50	2.00	21.50	2.00	33.50	2.00	45.50	53.00
9.75	2.00	21.75	2.00	33.75	2.00	45.75	53.00
10.00	2.00	22.00	2.00	34.00	2.00	46.00	38.00
10.25	2.00	22.25	2.00	34.25	2.00	46.25	38.00
10.50	2.00	22.50	2.00	34.50	2.00	46.50	38.00
10.75	2.00	22.75	2.00	34.75	2.00	46.75	38.00
11.00	2.00	23.00	2.00	35.00	3.00	47.00	13.00
11.25	2.00	23.25	2.00	35.25	3.00	47.25	13.00
11.50	2.00	23.50	2.00	35.50	3.00	47.50	13.00
11.75	2.00	23.75	2.00	35.75	3.00	47.75	13.00

| CALIB |
| NASHYD (0115)| Area (ha)= 23.79 Curve Number (CN)= 83.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.93

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

--- TRANSFORMED HYETOGRAPH ---

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00

file:///V|...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00

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7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00

11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

Unit Hyd Qpeak (cms)= 0.977

PEAK FLOW (cms)= 2.533 (i)
TIME TO PEAK (hrs)= 47.083
RUNOFF VOLUME (mm)= 236.126
TOTAL RAINFALL (mm)= 285.000
RUNOFF COEFFICIENT = 0.829

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

Junction Command(0005)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0115)	23.79	2.53	47.08	236.13
OUTFLOW: ID= 2(0005)	23.79	2.53	47.08	236.13

CALIB	
NASHYD (0110)	Area (ha)= 16.60 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.73

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00

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1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00

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5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00

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10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

Unit Hyd Qpeak (cms)= 0.869

PEAK FLOW (cms)= 1.863 (i)
TIME TO PEAK (hrs)= 46.667
RUNOFF VOLUME (mm)= 233.500
TOTAL RAINFALL (mm)= 285.000
RUNOFF COEFFICIENT = 0.819

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

CALIB
STANDHYD (0105) | Area (ha)= 7.90
ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	50.00	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr

0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00

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4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00

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9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

Max.Eff.Inten.(mm/hr)=	53.00	56.01	
over (min)	5.00	25.00	
Storage Coeff. (min)=	1.76 (ii)	22.07 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.32	0.05	
	TOTALS		
PEAK FLOW (cms)=	0.12	0.90	1.007 (iii)
TIME TO PEAK (hrs)=	45.50	46.08	46.00
RUNOFF VOLUME (mm)=	283.00	223.70	229.63
TOTAL RAINFALL (mm)=	285.00	285.00	285.00
RUNOFF COEFFICIENT =	0.99	0.78	0.81

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

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CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0006)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0105): 7.90 1.007 46.00 229.63
+ ID2= 2 (0110): 16.60 1.863 46.67 233.50
ID = 3 (0006): 24.50 2.744 46.42 232.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0100)| Area (ha)= 23.46 Curve Number (CN)= 80.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00

2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00

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6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00

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11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

Unit Hyd Qpeak (cms)= 1.829

PEAK FLOW (cms)= 2.901 (i)
TIME TO PEAK (hrs)= 46.250
RUNOFF VOLUME (mm)= 228.226
TOTAL RAINFALL (mm)= 285.000
RUNOFF COEFFICIENT = 0.801

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

| Junction Command(0007) |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0100)	23.46	2.90	46.25	228.23
OUTFLOW: ID= 2(0007)	23.46	2.90	46.25	228.23

FINISH

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

OOO TTTTT TTTTT H H Y Y M M OOO TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
OOO T T H H Y M M OOO
Developed and Distributed by Smart City Water Inc

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\af54bdb4-47a6-40e1-a4eb-093c82133071\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\af54bdb4-47a6-40e1-a4eb-093c82133071\scen

DATE: 03/11/2024 TIME: 11:36:38

USER:

COMMENTS: _____

** SIMULATION : SCS_100yr **

| READ STORM | Filename: C:\Users\nyokich\AppD
| | ata\Local\Temp\
| | 8a20bc98-3229-45bd-86a2-c24eba0248e6\ef8dc614
| Ptotal=127.20 mm | Comments: SCS_100yr

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	1.40	6.00	2.54	12.00	18.32	18.00	2.29
0.25	1.40	6.25	2.54	12.25	18.32	18.25	2.29
0.50	1.40	6.50	2.54	12.50	9.41	18.50	2.29
0.75	1.40	6.75	2.54	12.75	9.41	18.75	2.29
1.00	1.40	7.00	2.54	13.00	6.87	19.00	2.29
1.25	1.40	7.25	2.54	13.25	6.87	19.25	2.29
1.50	1.40	7.50	2.54	13.50	5.34	19.50	2.29
1.75	1.40	7.75	2.54	13.75	5.34	19.75	2.29
2.00	1.65	8.00	3.43	14.00	3.82	20.00	1.53
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53
3.00	1.65	9.00	4.07	15.00	3.82	21.00	1.53
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53
3.50	1.65	9.50	4.58	15.50	3.82	21.50	1.53
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53
4.00	2.04	10.00	5.85	16.00	2.29	22.00	1.53
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53
4.50	2.04	10.50	7.89	16.50	2.29	22.50	1.53
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53
5.00	2.04	11.00	12.21	17.00	2.29	23.00	1.53
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53
5.50	2.04	11.50	52.91	17.50	2.29	23.50	1.53
5.75	2.04	11.75	140.43	17.75	2.29	23.75	1.53

| CALIB |
| NASHYD (0115) | Area (ha)= 23.79 Curve Number (CN)= 83.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.93

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53

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2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 0.977

PEAK FLOW (cms)= 1.776 (i)
TIME TO PEAK (hrs)= 12.833
RUNOFF VOLUME (mm)= 85.710
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.674

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

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| Junction Command(0005) |

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2(0115)	23.79	1.78	12.83	85.71
OUTFLOW: ID= 2(0005)	23.79	1.78	12.83	85.71

| CALIB |
| NASHYD (0110) | Area (ha)= 16.60 Curve Number (CN)= 82.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.73

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53

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2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 0.869

PEAK FLOW (cms)= 1.447 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 83.911
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.660

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

CALIB
STANDHYD (0105)| Area (ha)= 7.90

3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 93.21
over (min) 5.00 20.00
Storage Coeff. (min)= 1.20 (ii) 17.75 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.33 0.06

TOTALS

PEAK FLOW (cms)= 0.31 1.09 1.128 (iii)
TIME TO PEAK (hrs)= 12.00 12.17 12.17
RUNOFF VOLUME (mm)= 125.20 77.65 82.41
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.98 0.61 0.65

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

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|ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	50.00	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53

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

ADD HYD (0006)|				
1 + 2 = 3 |	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0105):	7.90	1.128	12.17	82.41
+ ID2= 2 (0110):	16.60	1.447	12.58	83.91
ID = 3 (0006):	24.50	2.230	12.25	83.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0100)| Area (ha)= 23.46 Curve Number (CN)= 80.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53

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2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.829

PEAK FLOW (cms)= 2.600 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 80.409
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.632

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

Junction Command(0007)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0100)	23.46	2.60	12.33	80.41
OUTFLOW: ID= 2(0007)	23.46	2.60	12.33	80.41

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

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

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\10bd51b2-9b77-4b69-95f7-cad577c25983\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\10bd51b2-9b77-4b69-95f7-cad577c25983\scen

DATE: 03/11/2024 TIME: 11:36:38

USER:

COMMENTS: _____

****
** SIMULATION : SCS_10yr **

file:///V|...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

****

READ STORM	Filename: C:\Users\nyokich\AppData\Local\Temp\8a20bc98-3229-45bd-86a2-c24eba0248e6\7983e628
Ptotal= 88.80 mm	Comments: SCS_10yr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.98	6.00	1.78	12.00	12.79	18.00	1.60
0.25	0.98	6.25	1.78	12.25	12.79	18.25	1.60
0.50	0.98	6.50	1.78	12.50	6.57	18.50	1.60
0.75	0.98	6.75	1.78	12.75	6.57	18.75	1.60
1.00	0.98	7.00	1.78	13.00	4.80	19.00	1.60
1.25	0.98	7.25	1.78	13.25	4.80	19.25	1.60
1.50	0.98	7.50	1.78	13.50	3.73	19.50	1.60
1.75	0.98	7.75	1.78	13.75	3.73	19.75	1.60
2.00	1.15	8.00	2.40	14.00	2.66	20.00	1.07
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07
3.00	1.15	9.00	2.84	15.00	2.66	21.00	1.07
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07
3.50	1.15	9.50	3.20	15.50	2.66	21.50	1.07
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07
4.00	1.42	10.00	4.09	16.00	1.60	22.00	1.07
4.25	1.42	10.25	4.09	16.25	1.60	22.25	1.07
4.50	1.42	10.50	5.51	16.50	1.60	22.50	1.07
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07
5.00	1.42	11.00	8.52	17.00	1.60	23.00	1.07
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07
5.50	1.42	11.50	36.94	17.50	1.60	23.50	1.07
5.75	1.42	11.75	98.04	17.75	1.60	23.75	1.07

CALIB	
NASHYD (0115)	Area (ha)= 23.79 Curve Number (CN)= 83.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.93

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60

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0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07

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4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 0.977

PEAK FLOW (cms)= 1.065 (i)
TIME TO PEAK (hrs)= 12.833
RUNOFF VOLUME (mm)= 51.703
TOTAL RAINFALL (mm)= 88.801
RUNOFF COEFFICIENT = 0.582

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

Junction Command(0005)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0115)	23.79	1.07	12.83	51.70
OUTFLOW: ID= 2(0005)	23.79	1.07	12.83	51.70

CALIB							
NASHYD (0110) | Area (ha)= 16.60 Curve Number (CN)= 82.0							
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00							
U.H. Tp(hrs)= 0.73							

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 0.869

PEAK FLOW (cms)= 0.862 (i)
TIME TO PEAK (hrs)= 12.667
RUNOFF VOLUME (mm)= 50.320
TOTAL RAINFALL (mm)= 88.801
RUNOFF COEFFICIENT = 0.567

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

CALIB							
STANDHYD (0105) | Area (ha)= 7.90							
ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00							

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	50.00	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07

5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 47.58
over (min) 5.00 25.00
Storage Coeff. (min)= 1.38 (ii) 23.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.33 0.05

TOTALS

PEAK FLOW (cms)= 0.22 0.54 0.570 (iii)
TIME TO PEAK (hrs)= 12.00 12.25 12.25
RUNOFF VOLUME (mm)= 86.80 45.72 49.82
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.51 0.56

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0105):	7.90	0.570	12.25	49.82	
+ ID2= 2 (0110):	16.60	0.862	12.67	50.32	
ID = 3 (0006):	24.50	1.307	12.33	50.16	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0100)| Area (ha)= 23.46 Curve Number (CN)= 80.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07

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4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.829

PEAK FLOW (cms)= 1.528 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 47.673
TOTAL RAINFALL (mm)= 88.801
RUNOFF COEFFICIENT = 0.537

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

Junction Command(0007)

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2(0100)	23.46	1.53	12.33	47.67
OUTFLOW: ID= 2(0007)	23.46	1.53	12.33	47.67

V V I SSSSS U U A L (v 6.2.2015)
V V I SS U U AA 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

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

file:///V|...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

OOO T T H H Y M M OOO

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\a023b859-ec59-44a5-9d2e-09d1e9efef45\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\a023b859-ec59-44a5-9d2e-09d1e9efef45\scen

DATE: 03/11/2024 TIME: 11:36:38

USER:

COMMENTS: _____

** SIMULATION : SCS_25yr **

READ STORM	Filename: C:\Users\nyokich\AppData\Local\Temp\8a20bc98-3229-45bd-86a2-c24eba0248e6\e33ebcda
Ptotal=105.60 mm	Comments: SCS_25yr

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	1.16	6.00	2.11	12.00	15.21	18.00	1.90
0.25	1.16	6.25	2.11	12.25	15.21	18.25	1.90
0.50	1.16	6.50	2.11	12.50	7.81	18.50	1.90
0.75	1.16	6.75	2.11	12.75	7.81	18.75	1.90
1.00	1.16	7.00	2.11	13.00	5.70	19.00	1.90
1.25	1.16	7.25	2.11	13.25	5.70	19.25	1.90
1.50	1.16	7.50	2.11	13.50	4.43	19.50	1.90
1.75	1.16	7.75	2.11	13.75	4.43	19.75	1.90
2.00	1.37	8.00	2.85	14.00	3.17	20.00	1.27
2.25	1.37	8.25	2.85	14.25	3.17	20.25	1.27
2.50	1.37	8.50	2.85	14.50	3.17	20.50	1.27
2.75	1.37	8.75	2.85	14.75	3.17	20.75	1.27
3.00	1.37	9.00	3.38	15.00	3.17	21.00	1.27
3.25	1.37	9.25	3.38	15.25	3.17	21.25	1.27
3.50	1.37	9.50	3.80	15.50	3.17	21.50	1.27

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3.75	1.37	9.75	3.80	15.75	3.17	21.75	1.27
4.00	1.69	10.00	4.86	16.00	1.90	22.00	1.27
4.25	1.69	10.25	4.86	16.25	1.90	22.25	1.27
4.50	1.69	10.50	6.55	16.50	1.90	22.50	1.27
4.75	1.69	10.75	6.55	16.75	1.90	22.75	1.27
5.00	1.69	11.00	10.14	17.00	1.90	23.00	1.27
5.25	1.69	11.25	10.14	17.25	1.90	23.25	1.27
5.50	1.69	11.50	43.93	17.50	1.90	23.50	1.27
5.75	1.69	11.75	116.58	17.75	1.90	23.75	1.27

CALIB
NASHYD (0115)| Area (ha)= 23.79 Curve Number (CN)= 83.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.93

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90
0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27

2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27
4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Unit Hyd Qpeak (cms)= 0.977

PEAK FLOW (cms)= 1.371 (i)
TIME TO PEAK (hrs)= 12.833
RUNOFF VOLUME (mm)= 66.310
TOTAL RAINFALL (mm)= 105.602
RUNOFF COEFFICIENT = 0.628

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

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Junction Command(0005)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0115)	23.79	1.37	12.83	66.31
OUTFLOW: ID= 2(0005)	23.79	1.37	12.83	66.31

CALIB
NASHYD (0110)| Area (ha)= 16.60 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.73

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90
0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27

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2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27
4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Unit Hyd Qpeak (cms)= 0.869

PEAK FLOW (cms)= 1.113 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 64.727
TOTAL RAINFALL (mm)= 105.602
RUNOFF COEFFICIENT = 0.613

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

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| CALIB |
| STANDHYD (0105)| Area (ha)= 7.90
|ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	50.00	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90
0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27
4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Max.Eff.Inten.(mm/hr)=	116.58	71.20	
over (min)	5.00	20.00	
Storage Coeff. (min)=	1.29 (ii)	19.73 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.33	0.06	
		TOTALS	
PEAK FLOW (cms)=	0.26	0.79	0.831 (iii)
TIME TO PEAK (hrs)=	12.00	12.17	12.00
RUNOFF VOLUME (mm)=	103.60	59.33	63.76
TOTAL RAINFALL (mm)=	105.60	105.60	105.60
RUNOFF COEFFICIENT =	0.98	0.56	0.60

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0105):	7.90	0.831	12.00	63.76
+ ID2= 2 (0110):	16.60	1.113	12.58	64.73
ID = 3 (0006):	24.50	1.678	12.25	64.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0100)| Area (ha)= 23.46 Curve Number (CN)= 80.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90
0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27
4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Unit Hyd Qpeak (cms)= 1.829

PEAK FLOW (cms)=	1.987 (i)
TIME TO PEAK (hrs)=	12.333
RUNOFF VOLUME (mm)=	61.670
TOTAL RAINFALL (mm)=	105.602

RUNOFF COEFFICIENT = 0.584

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

| Junction Command(0007) |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0100)	23.46	1.99	12.33	61.67
OUTFLOW: ID= 2(0007)	23.46	1.99	12.33	61.67

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

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

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\e896555b-71f3-4735-83fb-5516db7fcf78\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\e896555b-71f3-4735-83fb-5516db7fcf78\scen

DATE: 03/11/2024 TIME: 11:36:38

USER:

COMMENTS: _____

****
** SIMULATION : SCS_2yr **
****

| READ STORM | Filename: C:\Users\nyokich\AppData\Local\Temp\8a20bc98-3229-45bd-86a2-c24eba0248e6\f5461c2b
| Ptotal= 60.00 mm | Comments: SCS_2yr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.66	6.00	1.20	12.00	8.64	18.00	1.08
0.25	0.66	6.25	1.20	12.25	8.64	18.25	1.08
0.50	0.66	6.50	1.20	12.50	4.44	18.50	1.08
0.75	0.66	6.75	1.20	12.75	4.44	18.75	1.08
1.00	0.66	7.00	1.20	13.00	3.24	19.00	1.08
1.25	0.66	7.25	1.20	13.25	3.24	19.25	1.08
1.50	0.66	7.50	1.20	13.50	2.52	19.50	1.08
1.75	0.66	7.75	1.20	13.75	2.52	19.75	1.08
2.00	0.78	8.00	1.62	14.00	1.80	20.00	0.72
2.25	0.78	8.25	1.62	14.25	1.80	20.25	0.72
2.50	0.78	8.50	1.62	14.50	1.80	20.50	0.72
2.75	0.78	8.75	1.62	14.75	1.80	20.75	0.72
3.00	0.78	9.00	1.92	15.00	1.80	21.00	0.72
3.25	0.78	9.25	1.92	15.25	1.80	21.25	0.72
3.50	0.78	9.50	2.16	15.50	1.80	21.50	0.72
3.75	0.78	9.75	2.16	15.75	1.80	21.75	0.72
4.00	0.96	10.00	2.76	16.00	1.08	22.00	0.72
4.25	0.96	10.25	2.76	16.25	1.08	22.25	0.72
4.50	0.96	10.50	3.72	16.50	1.08	22.50	0.72
4.75	0.96	10.75	3.72	16.75	1.08	22.75	0.72
5.00	0.96	11.00	5.76	17.00	1.08	23.00	0.72
5.25	0.96	11.25	5.76	17.25	1.08	23.25	0.72
5.50	0.96	11.50	24.96	17.50	1.08	23.50	0.72
5.75	0.96	11.75	66.24	17.75	1.08	23.75	0.72

| CALIB |
| NASHYD (0115) | Area (ha)= 23.79 Curve Number (CN)= 83.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.93

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08

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0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72
4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72

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4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Unit Hyd Qpeak (cms)= 0.977

PEAK FLOW (cms)= 0.573 (i)
TIME TO PEAK (hrs)= 12.917
RUNOFF VOLUME (mm)= 28.265
TOTAL RAINFALL (mm)= 60.000
RUNOFF COEFFICIENT = 0.471

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

| Junction Command(0005) |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0115)	23.79	0.57	12.92	28.26
OUTFLOW: ID= 2(0005)	23.79	0.57	12.92	28.26

| CALIB |
| NASHYD (0110) | Area (ha)= 16.60 Curve Number (CN)= 82.0
| ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.73

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08

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0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72
4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72

4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Unit Hyd Qpeak (cms)= 0.869

PEAK FLOW (cms)= 0.461 (i)
TIME TO PEAK (hrs)= 12.667
RUNOFF VOLUME (mm)= 27.312
TOTAL RAINFALL (mm)= 60.000
RUNOFF COEFFICIENT = 0.455

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

CALIB
STANDHYD (0105) | Area (ha)= 7.90
ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	50.00	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08

file:///V|...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72
4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72

5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Max.Eff.Inten.(mm/hr)= 66.24 22.13
over (min) 5.00 35.00
Storage Coeff. (min)= 1.61 (ii) 31.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.32 0.03

	TOTALS		
PEAK FLOW (cms)=	0.15	0.23	0.250 (iii)
TIME TO PEAK (hrs)=	12.00	12.42	12.42
RUNOFF VOLUME (mm)=	58.00	24.33	27.70
TOTAL RAINFALL (mm)=	60.00	60.00	60.00
RUNOFF COEFFICIENT =	0.97	0.41	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) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)|				
1 + 2 = 3 |	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0105):	7.90	0.250	12.42	27.70
+ ID2= 2 (0110):	16.60	0.461	12.67	27.31
ID = 3 (0006):	24.50	0.694	12.50	27.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0100) | Area (ha)= 23.46 Curve Number (CN)= 80.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.49

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

file:///V|...4%20Updated%20EA%20Analysis/VO/Detailed%20Output/Existing%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:41:21 AM]

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72

4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Unit Hyd Qpeak (cms)= 1.829

PEAK FLOW (cms)= 0.802 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 25.526
TOTAL RAINFALL (mm)= 60.000
RUNOFF COEFFICIENT = 0.425

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

Junction Command(0007)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0100)	23.46	0.80	12.33	25.53
OUTFLOW: ID= 2(0007)	23.46	0.80	12.33	25.53

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

 OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO   TM
```



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

Developed and Distributed by Smart City Water Inc

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\7d0a4aaf-cf17-4822-a932-f46061e54517\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\7d0a4aaf-cf17-4822-a932-f46061e54517\scen

DATE: 03/11/2024 TIME: 11:36:38

USER:

COMMENTS: _____

****
** SIMULATION : SCS_50yr **
****

READ STORM	Filename: C:\Users\nyokich\AppData\Local\Temp\8a20bc98-3229-45bd-86a2-c24eba0248e6\dde6d18a
Ptotal=115.20 mm	Comments: SCS_50yr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	1.27	6.00	2.30	12.00	16.59	18.00	2.07
0.25	1.27	6.25	2.30	12.25	16.59	18.25	2.07
0.50	1.27	6.50	2.30	12.50	8.52	18.50	2.07
0.75	1.27	6.75	2.30	12.75	8.52	18.75	2.07
1.00	1.27	7.00	2.30	13.00	6.22	19.00	2.07
1.25	1.27	7.25	2.30	13.25	6.22	19.25	2.07
1.50	1.27	7.50	2.30	13.50	4.84	19.50	2.07
1.75	1.27	7.75	2.30	13.75	4.84	19.75	2.07
2.00	1.50	8.00	3.11	14.00	3.46	20.00	1.38
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38
3.00	1.50	9.00	3.69	15.00	3.46	21.00	1.38

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

CALIB
NASHYD (0115) | Area (ha)= 23.79 Curve Number (CN)= 83.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.93

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38

2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 0.977

PEAK FLOW (cms)= 1.550 (i)
TIME TO PEAK (hrs)= 12.833
RUNOFF VOLUME (mm)= 74.859
TOTAL RAINFALL (mm)= 115.199
RUNOFF COEFFICIENT = 0.650

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

Junction Command(0005)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0115)	23.79	1.55	12.83	74.86
OUTFLOW: ID= 2(0005)	23.79	1.55	12.83	74.86

CALIB	
NASHYD (0110)	Area (ha)= 16.60 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.73

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38

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2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 0.869

PEAK FLOW (cms)= 1.260 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 73.175
TOTAL RAINFALL (mm)= 115.199
RUNOFF COEFFICIENT = 0.635

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

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CALIB	
STANDHYD (0105)	Area (ha)= 7.90
ID= 1 DT= 5.0 min	Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	50.00	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38

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3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 80.89
over (min) 5.00 20.00
Storage Coeff. (min)= 1.24 (ii) 18.77 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.33 0.06

TOTALS

PEAK FLOW (cms)= 0.28 0.92 0.956 (iii)
TIME TO PEAK (hrs)= 12.00 12.17 12.17
RUNOFF VOLUME (mm)= 113.20 67.38 71.96
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.98 0.58 0.62

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0105):	7.90	0.956	12.17	71.96
+ ID2= 2 (0110):	16.60	1.260	12.58	73.17
ID = 3 (0006):	24.50	1.921	12.25	72.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0100)	Area (ha)=	23.46	Curve Number (CN)=	80.0	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.49			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07

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2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.829

PEAK FLOW (cms)= 2.257 (i)
TIME TO PEAK (hrs)= 12.333

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RUNOFF VOLUME (mm)= 69.909
TOTAL RAINFALL (mm)= 115.199
RUNOFF COEFFICIENT = 0.607

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

Junction Command(0007)				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2(0100)	23.46	2.26	12.33	69.91
OUTFLOW: ID= 2(0007)	23.46	2.26	12.33	69.91

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

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

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\18df87dc-4631-434d-bf56-90bd3337284a\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\18df87dc-4631-434d-bf56-90bd3337284a\scen

DATE: 03/11/2024 TIME: 11:36:38

USER:

COMMENTS: _____

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****
** SIMULATION : SCS_5yr **
****

| READ STORM | Filename: C:\Users\nyokich\AppD
| | ata\Local\Temp\
| | 8a20bc98-3229-45bd-86a2-c24eba0248e6\f93665c7
| Ptotal= 76.80 mm | Comments: SCS_5yr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.85	6.00	1.54	12.00	11.06	18.00	1.38
0.25	0.85	6.25	1.54	12.25	11.06	18.25	1.38
0.50	0.85	6.50	1.54	12.50	5.68	18.50	1.38
0.75	0.85	6.75	1.54	12.75	5.68	18.75	1.38
1.00	0.85	7.00	1.54	13.00	4.15	19.00	1.38
1.25	0.85	7.25	1.54	13.25	4.15	19.25	1.38
1.50	0.85	7.50	1.54	13.50	3.23	19.50	1.38
1.75	0.85	7.75	1.54	13.75	3.23	19.75	1.38
2.00	1.00	8.00	2.07	14.00	2.30	20.00	0.92
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92
3.00	1.00	9.00	2.46	15.00	2.30	21.00	0.92
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92
3.50	1.00	9.50	2.77	15.50	2.30	21.50	0.92
3.75	1.00	9.75	2.77	15.75	2.30	21.75	0.92
4.00	1.23	10.00	3.53	16.00	1.38	22.00	0.92
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92
4.50	1.23	10.50	4.76	16.50	1.38	22.50	0.92
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92
5.00	1.23	11.00	7.37	17.00	1.38	23.00	0.92
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92
5.50	1.23	11.50	31.95	17.50	1.38	23.50	0.92
5.75	1.23	11.75	84.79	17.75	1.38	23.75	0.92

| CALIB |
| NASHYD (0115)| Area (ha)= 23.79 Curve Number (CN)= 83.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.93

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92

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4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.977

PEAK FLOW (cms)= 0.854 (i)
TIME TO PEAK (hrs)= 12.833
RUNOFF VOLUME (mm)= 41.634
TOTAL RAINFALL (mm)= 76.801
RUNOFF COEFFICIENT = 0.542

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

| Junction Command(0005) |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0115)	23.79	0.85	12.83	41.63
OUTFLOW: ID= 2(0005)	23.79	0.85	12.83	41.63

| CALIB |
| NASHYD (0110)| Area (ha)= 16.60 Curve Number (CN)= 82.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.73

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38

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0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92

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4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.869

PEAK FLOW (cms)= 0.690 (i)
TIME TO PEAK (hrs)= 12.667
RUNOFF VOLUME (mm)= 40.416
TOTAL RAINFALL (mm)= 76.801
RUNOFF COEFFICIENT = 0.526

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

CALIB	
STANDHYD (0105)	Area (ha)= 7.90
ID= 1 DT= 5.0 min	Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	50.00	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38

0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92

5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 37.74
over (min) 5.00 30.00
Storage Coeff. (min)= 1.46 (ii) 25.24 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.33 0.04

	TOTALS		
PEAK FLOW (cms)=	0.19	0.40	0.422 (iii)
TIME TO PEAK (hrs)=	12.00	12.33	12.33
RUNOFF VOLUME (mm)=	74.80	36.44	40.28
TOTAL RAINFALL (mm)=	76.80	76.80	76.80
RUNOFF COEFFICIENT =	0.97	0.47	0.52

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0006)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0105):	7.90	0.422	12.33	40.28
+ ID2= 2 (0110):	16.60	0.690	12.67	40.42
ID = 3 (0006):	24.50	1.054	12.42	40.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (0100)	Area (ha)= 23.46 Curve Number (CN)= 80.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.49

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92

4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 1.829

PEAK FLOW (cms)= 1.214 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 38.101
TOTAL RAINFALL (mm)= 76.801
RUNOFF COEFFICIENT = 0.496

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

Junction Command(0007)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2(0100)	23.46	1.21	12.33	38.10
OUTFLOW: ID= 2(0007)	23.46	1.21	12.33	38.10

Proposed Visual OTTHYMO Model Schematic

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

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

     OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO   TM
    O   O    T      T    H   H   Y Y   MM MM  O   O
    O   O    T      T    H   H    Y    M M M  O   O
     OOO     T      T    H   H    Y    M   M   OOO
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             ***** DETAILED OUTPUT *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\fdde7515-
2b95-4df9-a0cc-aa6a34689c68\scen
  Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-
26df3e227620\fdde7515-2b95-4df9-a0cc-aa6a34689c68\scen


DATE: 03/11/2024                    TIME: 11:39:29

USER:


COMMENTS: _____

-------------------------------------------------------------------------------------------------
  ************************************************
  ** SIMULATION : Chicago_100yr             **
  ************************************************


-------------------
|   READ STORM    |   Filename: C:\Users\nyokich\AppD
|                 |             ata\Local\Temp\
|                 |             5e49fc0a-79f7-4237-8582-77f9360bb4e5\dd8f026f
| Ptotal= 82.62 mm |   Comments: Chicago_100yr
-------------------
            TIME   RAIN | TIME   RAIN |' TIME   RAIN | TIME   RAIN
            hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
           0.00   6.88 | 0.75  15.37 | 1.50  53.67 | 2.25  11.26
           0.08   7.30 | 0.83  18.01 | 1.58  37.78 | 2.33  10.39
```



```
           0.17   7.80 | 0.92  21.80 | 1.67  29.05 | 2.42   9.65
           0.25   8.36 | 1.00  27.68 | 1.75  23.59 | 2.50   9.02
           0.33   9.02 | 1.08  37.92 | 1.83  19.87 | 2.58   8.47
           0.42   9.81 | 1.17  59.55 | 1.92  17.18 | 2.67   7.99
           0.50  10.76 | 1.25 128.51 | 2.00  15.16 | 2.75   7.57
           0.58  11.94 | 1.33 206.77 | 2.08  13.57 | 2.83   7.19
           0.67  13.42 | 1.42  89.93 | 2.17  12.30 | 2.92   6.85

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


-------------------
| CALIB           |
| NASHYD  (  0210)|  Area    (ha)=  6.83  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.54

    Unit Hyd Qpeak  (cms)=  0.483

    PEAK FLOW      (cms)=  0.625 (i)
    TIME TO PEAK   (hrs)=  2.000
    RUNOFF VOLUME  (mm)=  46.468
    TOTAL RAINFALL  (mm)=  82.617
    RUNOFF COEFFICIENT  =  0.562

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

--------------------------------------------------------------------------------
-------------------
| CALIB           |
| STANDHYD (  0205)|  Area    (ha)=  7.90
|ID= 1 DT= 5.0 min |  Total Imp(%)=  20.00  Dir. Conn.(%)=  10.00
-------------------
                        IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=      1.58        6.32
    Dep. Storage    (mm)=      2.00        5.00
    Average Slope    (%)=      2.00        5.00
    Length          (m)=    229.49      250.00
    Mannings n           =     0.013       0.250

    Max.Eff.Inten.(mm/hr)=    206.77       75.00
            over (min)        5.00       25.00
    Storage Coeff.  (min)=     2.55 (ii)  20.62 (ii)
    Unit Hyd. Tpeak (min)=     5.00       25.00
    Unit Hyd. peak  (cms)=     0.29        0.05
                              *TOTALS*
    PEAK FLOW      (cms)=      0.43        0.78        0.851 (iii)
    TIME TO PEAK   (hrs)=      1.42        1.75        1.75
    RUNOFF VOLUME  (mm)=     80.62       40.88       44.86
    TOTAL RAINFALL  (mm)=    82.62       82.62       82.62
    RUNOFF COEFFICIENT  =     0.98        0.49        0.54

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



```
    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* = 76.0   Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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


-------------------
| ADD HYD  (  0003)|
|  1 + 2 =  3     |       AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)   (cms)   (hrs)     (mm)
      ID1= 1 (  0205):     7.90   0.851     1.75    44.86
    + ID2= 2 (  0210):     6.83   0.625     2.00    46.47
      ==========================================================
      ID = 3 (  0003):    14.73   1.400     1.83    45.60

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
-------------------
| CALIB           |
| NASHYD  (  0200)|  Area    (ha)=  20.32  Curve Number  (CN)= 80.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.43

    Unit Hyd Qpeak  (cms)=  1.805

    PEAK FLOW      (cms)=  1.981 (i)
    TIME TO PEAK   (hrs)=  1.833
    RUNOFF VOLUME  (mm)=  42.687
    TOTAL RAINFALL  (mm)=  82.617
    RUNOFF COEFFICIENT  =  0.517

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

--------------------------------------------------------------------------------
-------------------
| CALIB           |
| NASHYD  (  0201)|  Area    (ha)=  3.17  Curve Number  (CN)= 77.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.16

    Unit Hyd Qpeak  (cms)=  0.757

    PEAK FLOW      (cms)=  0.509 (i)
    TIME TO PEAK   (hrs)=  1.500
    RUNOFF VOLUME  (mm)=  39.073
    TOTAL RAINFALL  (mm)=  82.617
    RUNOFF COEFFICIENT  =  0.473

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

--------------------------------------------------------------------------------
```



```
-------------------
| CALIB           |
| STANDHYD (  0202)|  Area    (ha)=  4.57
|ID= 1 DT= 5.0 min |  Total Imp(%)=  40.00  Dir. Conn.(%)=  32.00
-------------------
                        IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=      1.83        2.74
    Dep. Storage    (mm)=      2.00        5.00
    Average Slope    (%)=      5.00        5.00
    Length          (m)=    500.00      500.00
    Mannings n           =     0.013       0.250

    Max.Eff.Inten.(mm/hr)=    206.77       49.81
            over (min)        5.00       40.00
    Storage Coeff.  (min)=     3.10 (ii)  35.34 (ii)
    Unit Hyd. Tpeak (min)=     5.00       40.00
    Unit Hyd. peak  (cms)=     0.27        0.03
                              *TOTALS*
    PEAK FLOW      (cms)=      0.76        0.22        0.800 (iii)
    TIME TO PEAK   (hrs)=      1.42        2.08        1.42
    RUNOFF VOLUME  (mm)=     80.62       37.96       51.61
    TOTAL RAINFALL  (mm)=    82.62       82.62       82.62
    RUNOFF COEFFICIENT  =     0.98        0.46        0.62

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

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* = 73.0   Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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


-------------------
| ADD HYD  (  0040)|
|  1 + 2 =  3     |       AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)   (cms)   (hrs)     (mm)
      ID1= 1 (  0201):     3.17   0.509     1.50    39.07
    + ID2= 2 (  0202):     4.57   0.800     1.42    51.61
      ==========================================================
      ID = 3 (  0040):     7.74   1.176     1.42    46.47

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
-------------------
| RESERVOIR(  0032)|    OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |    OUTFLOW    STORAGE   | OUTFLOW    STORAGE
-------------------          (cms)    (ha.m.)  |  (cms)    (ha.m.)
                        0.0000    0.0000   |  0.1020    0.2824
                        0.0400    0.1208   |  0.1160    0.3268
                        0.0640    0.1775   |  0.1330    0.3659
                        0.0790    0.2218   |  0.0000    0.0000
```

```
                    AREA    QPEAK    TPEAK      R.V.
                    (ha)    (cms)    (hrs)      (mm)
 INFLOW : ID= 2 (  0040)     7.740    1.176     1.42     46.47
 OUTFLOW: ID= 1 (  0032)     7.740    0.103     3.25     46.38

          PEAK   FLOW   REDUCTION [Qout/Qin](%)=  8.72
          TIME SHIFT OF PEAK FLOW       (min)=110.00
          MAXIMUM  STORAGE   USED      (ha.m.)=  0.2842

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

--------------------
| ADD HYD (  0001)|
|  1 +  2 =  3    |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
     ID1= 1 (  0200):   20.32   1.981    1.83   42.69
   + ID2= 2 (  0032):    7.74   0.103    3.25   46.38
     ==========================================================
     ID = 3 (  0001):   28.06   2.051    1.92   43.70

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB           |
| NASHYD  (  0215)|  Area    (ha)=  15.80  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=   5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=  0.70

   Unit Hyd Qpeak  (cms)=  0.862

   PEAK FLOW      (cms)=  1.195 (i)
   TIME TO PEAK   (hrs)=  2.167
   RUNOFF VOLUME  (mm)=  46.469
   TOTAL RAINFALL (mm)=  82.617
   RUNOFF COEFFICIENT  =  0.562

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

--------------------------------------------------------------------------------
--------------------
| CALIB           |
| NASHYD  (  0203)|  Area    (ha)=   1.61  Curve Number  (CN)= 76.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=   5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=  0.24

   Unit Hyd Qpeak  (cms)=  0.256

   PEAK FLOW      (cms)=  0.202 (i)
   TIME TO PEAK   (hrs)=  1.667
   RUNOFF VOLUME  (mm)=  38.135
   TOTAL RAINFALL (mm)=  82.617
   RUNOFF COEFFICIENT  =  0.462
```



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

--------------------------------------------------------------------------------
--------------------
| CALIB           |
| STANDHYD (  0204)|  Area    (ha)=   1.93
|ID= 1 DT= 5.0 min |  Total Imp(%)=  60.00  Dir. Conn.(%)=  48.00
--------------------
                    IMPERVIOUS    PERVIOUS (i)
   Surface Area    (ha)=     1.16        0.77
   Dep. Storage    (mm)=     2.00        5.00
   Average Slope   (%)=      1.00        1.00
   Length          (m)=    300.00      300.00
   Mannings n      =         0.013       0.250

   Max.Eff.Inten.(mm/hr)=   206.77       55.58
         over (min)         5.00        45.00
   Storage Coeff.  (min)=     3.69 (ii)   40.51 (ii)
   Unit Hyd. Tpeak (min)=     5.00        45.00
   Unit Hyd. peak  (cms)=     0.25        0.03
                              *TOTALS*
   PEAK FLOW      (cms)=      0.47        0.07        0.477 (iii)
   TIME TO PEAK   (hrs)=      1.42        2.17        1.42
   RUNOFF VOLUME  (mm)=      80.62       40.09       59.53
   TOTAL RAINFALL (mm)=      82.62       82.62       82.62
   RUNOFF COEFFICIENT  =     0.98        0.49        0.72

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

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

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

--------------------
| ADD HYD (  0042)|
|  1 +  2 =  3    |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
     ID1= 1 (  0203):    1.61   0.202    1.67   38.13
   + ID2= 2 (  0204):    1.93   0.477    1.42   59.53
     ==========================================================
     ID = 3 (  0042):    3.54   0.580    1.42   49.80

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

--------------------
| ADD HYD (  0042)|
|  3 +  2 =  1    |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
     ID1= 3 (  0042):    3.54   0.580    1.42   49.80
```



```
   + ID2= 2 (  0215):   15.80   1.195    2.17   46.47
     ==========================================================
     ID = 1 (  0042):   19.34   1.381    2.17   47.08

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0025)|   OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min    |   OUTFLOW   STORAGE  | OUTFLOW   STORAGE
--------------------     (cms)   (ha.m.) |  (cms)   (ha.m.)
                  0.0000   0.0000  |  0.6300   0.4548
                  0.2600   0.1908  |  0.7100   0.5242
                  0.3900   0.2842  |  0.8100   0.5932
                  0.4900   0.3533  |  1.4000   1.1965

                    AREA    QPEAK    TPEAK      R.V.
                    (ha)    (cms)    (hrs)      (mm)
 INFLOW : ID= 2 (  0042)    19.340    1.381     2.17     47.08
 OUTFLOW: ID= 1 (  0025)    19.340    0.653     3.25     47.07

          PEAK   FLOW   REDUCTION [Qout/Qin](%)= 47.29
          TIME SHIFT OF PEAK FLOW       (min)= 65.00
          MAXIMUM  STORAGE   USED      (ha.m.)=  0.4751

--------------------------------------------------------------------------------
--------------------
| CALIB           |
| NASHYD  (  0225)|  Area    (ha)=   3.98  Curve Number  (CN)= 81.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=   5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=  0.62

   Unit Hyd Qpeak  (cms)=  0.245

   PEAK FLOW      (cms)=  0.310 (i)
   TIME TO PEAK   (hrs)=  2.083
   RUNOFF VOLUME  (mm)=  43.909
   TOTAL RAINFALL (mm)=  82.617
   RUNOFF COEFFICIENT  =  0.531

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

--------------------------------------------------------------------------------
--------------------
| CALIB           |
| STANDHYD (  0220)|  Area    (ha)=   5.63
|ID= 1 DT= 5.0 min |  Total Imp(%)=  42.00  Dir. Conn.(%)=  34.00
--------------------
                    IMPERVIOUS    PERVIOUS (i)
   Surface Area    (ha)=     2.36        3.27
   Dep. Storage    (mm)=     2.00        5.00
   Average Slope   (%)=      2.00        2.00
   Length          (m)=    250.00       40.00
   Mannings n      =         0.013       0.250
```



```
   Max.Eff.Inten.(mm/hr)=   206.77      111.56
         over (min)         5.00        10.00
   Storage Coeff.  (min)=     2.69 (ii)   9.44 (ii)
   Unit Hyd. Tpeak (min)=     5.00        10.00
   Unit Hyd. peak  (cms)=     0.29        0.12
                              *TOTALS*
   PEAK FLOW      (cms)=      1.03        0.75        1.551 (iii)
   TIME TO PEAK   (hrs)=      1.42        1.50        1.42
   RUNOFF VOLUME  (mm)=      80.62       45.65       57.54
   TOTAL RAINFALL (mm)=      82.62       82.62       82.62
   RUNOFF COEFFICIENT  =     0.98        0.55        0.70

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

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* = 80.0   Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0050)|   OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min    |   OUTFLOW   STORAGE  | OUTFLOW   STORAGE
--------------------     (cms)   (ha.m.) |  (cms)   (ha.m.)
                  0.0000   0.0000  |  0.5800   0.1023
                  0.2500   0.0493  |  0.6600   0.1189
                  0.3700   0.0684  |  0.7600   0.1366
                  0.4600   0.0822  |  0.7800   0.1400

                    AREA    QPEAK    TPEAK      R.V.
                    (ha)    (cms)    (hrs)      (mm)
 INFLOW : ID= 2 (  0220)     5.630    1.551     1.42     57.54
 OUTFLOW: ID= 1 (  0050)     5.630    0.669     1.75     57.53

          PEAK   FLOW   REDUCTION [Qout/Qin](%)= 43.11
          TIME SHIFT OF PEAK FLOW       (min)= 20.00
          MAXIMUM  STORAGE   USED      (ha.m.)=  0.1215

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

--------------------
| ADD HYD (  0002)|
|  1 +  2 =  3    |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
     ID1= 1 (  0225):    3.98   0.310    2.08   43.91
   + ID2= 2 (  0025):   19.34   0.653    3.25   47.07
     ==========================================================
     ID = 3 (  0002):   23.32   0.820    2.75   46.53

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

```
--------------------
| ADD HYD  ( 0002)|
|  3 + 2 = 1   |        AREA   QPEAK   TPEAK    R.V.
--------------------        (ha)   (cms)   (hrs)    (mm)
      ID1= 3 ( 0002):   23.32  0.820    2.75   46.53
    + ID2= 2 ( 0050):    5.63  0.669    1.75   57.53
      ==========================================================
      ID = 1 ( 0002):   28.95  1.200    2.08   48.67

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

 FINISH
==================================================================================================
=====================

==================================================================================================
=====================

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

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

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

Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\cc7de86b-d983-419b-b502-d3da09e63189\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\cc7de86b-d983-419b-b502-d3da09e63189\scen

DATE: 03/11/2024   TIME: 11:39:28

USER:

COMMENTS: ____


```
---------------------------------------------------------------------------------------------------------
  *************************************************
  ** SIMULATION : Chicago_10yr                   **
  *************************************************

--------------------
| READ STORM    |   Filename: C:\Users\nyokich\AppD
|               |             ata\Local\Temp\
|               |             5e49fc0a-79f7-4237-8582-77f9360bb4e5\964de38b
| Ptotal= 55.07 mm |   Comments: Chicago_10yr
--------------------
           TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
           0.00    4.53 |  0.75   10.06 |  1.50   35.03 |  2.25    7.36
           0.08    4.80 |  0.83   11.72 |  1.58   24.56 |  2.33    6.80
           0.17    5.12 |  0.92   14.17 |  1.67   18.87 |  2.42    6.33
           0.25    5.49 |  1.00   17.98 |  1.75   15.33 |  2.50    5.92
           0.33    5.92 |  1.08   24.65 |  1.83   12.92 |  2.58    5.56
           0.42    6.43 |  1.17   38.96 |  1.92   11.19 |  2.67    5.25
           0.50    7.04 |  1.25   86.93 |  2.00    9.88 |  2.75    4.97
           0.58    7.80 |  1.33  144.84 |  2.08    8.86 |  2.83    4.72
           0.67    8.76 |  1.42   59.59 |  2.17    8.04 |  2.92    4.50

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

--------------------
| CALIB            |
| NASHYD   ( 0210)|   Area    (ha)=    6.83   Curve Number   (CN)= 83.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=    5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=    0.54

    Unit Hyd Qpeak  (cms)=   0.483

    PEAK FLOW       (cms)=   0.327 (i)
    TIME TO PEAK    (hrs)=   2.000
    RUNOFF VOLUME    (mm)=  24.558
    TOTAL RAINFALL   (mm)=  55.074
    RUNOFF COEFFICIENT   =   0.446

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

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

--------------------
| CALIB            |
| STANDHYD ( 0205)|   Area    (ha)=    7.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  20.00   Dir. Conn.(%)=  10.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       1.58        6.32
    Dep. Storage     (mm)=       2.00        5.00
    Average Slope     (%)=       2.00        5.00
    Length            (m)=     229.49      250.00
    Mannings n          =       0.013       0.250
```



```
    Max.Eff.Inten.(mm/hr)=     144.84       34.31
               over (min)        5.00       30.00
    Storage Coeff.  (min)=       2.95 (ii)  27.64 (ii)
    Unit Hyd. Tpeak (min)=       5.00       30.00
    Unit Hyd. peak  (cms)=       0.28        0.04
                                                 *TOTALS*
    PEAK FLOW       (cms)=       0.29        0.33        0.368 (iii)
    TIME TO PEAK    (hrs)=       1.42        1.92         1.83
    RUNOFF VOLUME    (mm)=      53.07       21.02        24.23
    TOTAL RAINFALL   (mm)=      55.07       55.07        55.07
    RUNOFF COEFFICIENT   =       0.96        0.38         0.44

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

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  76.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

--------------------
| ADD HYD  ( 0003)|
|  1 + 2 = 3   |        AREA   QPEAK   TPEAK    R.V.
--------------------        (ha)   (cms)   (hrs)    (mm)
      ID1= 1 ( 0205):    7.90  0.368    1.83   24.23
    + ID2= 2 ( 0210):    6.83  0.327    2.00   24.56
      ==========================================================
      ID = 3 ( 0003):   14.73  0.682    1.92   24.38

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 0200)|   Area    (ha)=   20.32   Curve Number   (CN)= 80.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=    5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=    0.43

    Unit Hyd Qpeak  (cms)=   1.805

    PEAK FLOW       (cms)=   1.019 (i)
    TIME TO PEAK    (hrs)=   1.917
    RUNOFF VOLUME    (mm)=  22.075
    TOTAL RAINFALL   (mm)=  55.074
    RUNOFF COEFFICIENT   =   0.401

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

-------------------------------------------------------------------------------
--------------------
```



```
| CALIB            |
| NASHYD   ( 0201)|   Area    (ha)=    3.17   Curve Number   (CN)= 77.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=    5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=    0.16

    Unit Hyd Qpeak  (cms)=   0.757

    PEAK FLOW       (cms)=   0.257 (i)
    TIME TO PEAK    (hrs)=   1.583
    RUNOFF VOLUME    (mm)=  19.819
    TOTAL RAINFALL   (mm)=  55.074
    RUNOFF COEFFICIENT   =   0.360

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

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

--------------------
| CALIB            |
| STANDHYD ( 0202)|   Area    (ha)=    4.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  40.00   Dir. Conn.(%)=  32.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       1.83        2.74
    Dep. Storage     (mm)=       2.00        5.00
    Average Slope     (%)=       5.00        5.00
    Length            (m)=     500.00      500.00
    Mannings n          =       0.013       0.250

    Max.Eff.Inten.(mm/hr)=     144.84       20.16
               over (min)        5.00       50.00
    Storage Coeff.  (min)=       3.57 (ii)  49.87 (ii)
    Unit Hyd. Tpeak (min)=       5.00       50.00
    Unit Hyd. peak  (cms)=       0.26        0.02
                                                 *TOTALS*
    PEAK FLOW       (cms)=       0.52        0.09        0.526 (iii)
    TIME TO PEAK    (hrs)=       1.42        2.25         1.42
    RUNOFF VOLUME    (mm)=      53.07       19.22        30.05
    TOTAL RAINFALL   (mm)=      55.07       55.07        55.07
    RUNOFF COEFFICIENT   =       0.96        0.35         0.55

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

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  73.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

--------------------
| ADD HYD  ( 0040)|
|  1 + 2 = 3   |        AREA   QPEAK   TPEAK    R.V.
--------------------        (ha)   (cms)   (hrs)    (mm)
```

```
    ID1= 1 (  0201):   3.17  0.257   1.58   19.82
  + ID2= 2 (  0202):   4.57  0.526   1.42   30.05
    ================================================
    ID = 3 (  0040):   7.74  0.707   1.42   25.86

  NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
------------------
| RESERVOIR(  0032)|   OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |   OUTFLOW   STORAGE  | OUTFLOW   STORAGE
------------------      (cms)    (ha.m.) |  (cms)    (ha.m.)
                    0.0000   0.0000  |  0.1020   0.2824
                    0.0400   0.1208  |  0.1160   0.3268
                    0.0640   0.1775  |  0.1330   0.3659
                    0.0790   0.2218  |  0.0000   0.0000

                       AREA    QPEAK    TPEAK      R.V.
                      (ha)    (cms)    (hrs)      (mm)
  INFLOW : ID= 2 (  0040)     7.740    0.707     1.42     25.86
  OUTFLOW: ID= 1 (  0032)     7.740    0.054     3.33     25.76

            PEAK   FLOW   REDUCTION [Qout/Qin](%)=  7.63
            TIME SHIFT OF PEAK FLOW       (min)=115.00
            MAXIMUM  STORAGE   USED      (ha.m.)=  0.1538

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

------------------
| ADD HYD  (  0001)|
|  1 +  2 =  3     |      AREA   QPEAK   TPEAK   R.V.
------------------         (ha)   (cms)   (hrs)   (mm)
      ID1= 1 (  0200):   20.32  1.019   1.92   22.08
    + ID2= 2 (  0032):    7.74  0.054   3.33   25.76
      ================================================
      ID = 3 (  0001):   28.06  1.055   1.92   23.09

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
------------------
| CALIB            |
| NASHYD  (  0215)|  Area   (ha)=  15.80  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
------------------  U.H. Tp(hrs)=   0.70

    Unit Hyd Qpeak  (cms)=   0.862

    PEAK FLOW      (cms)=   0.628 (i)
    TIME TO PEAK   (hrs)=   2.250
    RUNOFF VOLUME  (mm)=  24.558
    TOTAL RAINFALL (mm)=  55.074
    RUNOFF COEFFICIENT  =   0.446

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



```
--------------------------------------------------------------------------------
------------------
| CALIB            |
| NASHYD  (  0203)|  Area   (ha)=   1.61  Curve Number  (CN)= 76.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
------------------  U.H. Tp(hrs)=   0.24

    Unit Hyd Qpeak  (cms)=   0.256

    PEAK FLOW      (cms)=   0.102 (i)
    TIME TO PEAK   (hrs)=   1.667
    RUNOFF VOLUME  (mm)=  19.228
    TOTAL RAINFALL (mm)=  55.074
    RUNOFF COEFFICIENT  =   0.349

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

--------------------------------------------------------------------------------
------------------
| CALIB            |
| STANDHYD (  0204)|  Area   (ha)=   1.93
|ID= 1 DT= 5.0 min |  Total Imp(%)=  60.00  Dir. Conn.(%)=  48.00
------------------
                       IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=     1.16        0.77
    Dep. Storage    (mm)=     2.00        5.00
    Average Slope    (%)=     1.00        1.00
    Length           (m)=   300.00      300.00
    Mannings n           =    0.013       0.250

    Max.Eff.Inten.(mm/hr)=   144.84       23.28
          over (min)        5.00       60.00
    Storage Coeff.  (min)=     4.26 (ii)  56.41 (ii)
    Unit Hyd. Tpeak (min)=     5.00       60.00
    Unit Hyd. peak  (cms)=     0.23        0.02
                                  *TOTALS*
    PEAK FLOW      (cms)=     0.31        0.03        0.316 (iii)
    TIME TO PEAK   (hrs)=     1.42        2.42        1.42
    RUNOFF VOLUME  (mm)=    53.07       20.63       36.19
    TOTAL RAINFALL (mm)=    55.07       55.07       55.07
    RUNOFF COEFFICIENT  =     0.96        0.37        0.66

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

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

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

------------------
```



```
------------------
| ADD HYD  (  0042)|
|  1 +  2 =  3     |      AREA   QPEAK   TPEAK   R.V.
------------------         (ha)   (cms)   (hrs)   (mm)
      ID1= 1 (  0203):    1.61  0.102   1.67   19.23
    + ID2= 2 (  0204):    1.93  0.316   1.42   36.19
      ================================================
      ID = 3 (  0042):    3.54  0.363   1.42   28.47

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

------------------
| ADD HYD  (  0042)|
|  3 +  2 =  1     |      AREA   QPEAK   TPEAK   R.V.
------------------         (ha)   (cms)   (hrs)   (mm)
      ID1= 3 (  0042):    3.54  0.363   1.42   28.47
    + ID2= 2 (  0215):   15.80  0.628   2.25   24.56
      ================================================
      ID = 1 (  0042):   19.34  0.715   2.17   25.28

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
------------------
| RESERVOIR(  0025)|   OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |   OUTFLOW   STORAGE  | OUTFLOW   STORAGE
------------------      (cms)    (ha.m.) |  (cms)    (ha.m.)
                    0.0000   0.0000  |  0.6300   0.4548
                    0.2600   0.1908  |  0.7100   0.5242
                    0.3900   0.2842  |  0.8100   0.5932
                    0.4900   0.3533  |  1.4000   1.1965

                       AREA    QPEAK    TPEAK      R.V.
                      (ha)    (cms)    (hrs)      (mm)
  INFLOW : ID= 2 (  0042)    19.340    0.715     2.17     25.28
  OUTFLOW: ID= 1 (  0025)    19.340    0.347     3.25     25.27

            PEAK   FLOW   REDUCTION [Qout/Qin](%)= 48.55
            TIME SHIFT OF PEAK FLOW       (min)= 65.00
            MAXIMUM  STORAGE   USED      (ha.m.)=  0.2536

--------------------------------------------------------------------------------
------------------
| CALIB            |
| NASHYD  (  0225)|  Area   (ha)=   3.98  Curve Number  (CN)= 81.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
------------------  U.H. Tp(hrs)=   0.62

    Unit Hyd Qpeak  (cms)=   0.245

    PEAK FLOW      (cms)=   0.160 (i)
    TIME TO PEAK   (hrs)=   2.167
    RUNOFF VOLUME  (mm)=  22.866
    TOTAL RAINFALL (mm)=  55.074
```



```
    RUNOFF COEFFICIENT  =   0.415

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

--------------------------------------------------------------------------------
------------------
| CALIB            |
| STANDHYD (  0220)|  Area   (ha)=   5.63
|ID= 1 DT= 5.0 min |  Total Imp(%)=  42.00  Dir. Conn.(%)=  34.00
------------------
                       IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=     2.36        3.27
    Dep. Storage    (mm)=     2.00        5.00
    Average Slope    (%)=     2.00        2.00
    Length           (m)=   250.00       40.00
    Mannings n           =    0.013       0.250

    Max.Eff.Inten.(mm/hr)=   144.84       61.35
          over (min)        5.00       15.00
    Storage Coeff.  (min)=     3.10 (ii)  11.68 (ii)
    Unit Hyd. Tpeak (min)=     5.00       15.00
    Unit Hyd. peak  (cms)=     0.27        0.09
                                  *TOTALS*
    PEAK FLOW      (cms)=     0.70        0.34        0.854 (iii)
    TIME TO PEAK   (hrs)=     1.42        1.58        1.42
    RUNOFF VOLUME  (mm)=    53.07       24.12       33.96
    TOTAL RAINFALL (mm)=    55.07       55.07       55.07
    RUNOFF COEFFICIENT  =     0.96        0.44        0.62

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

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* = 80.0   Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
------------------
| RESERVOIR(  0050)|   OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |   OUTFLOW   STORAGE  | OUTFLOW   STORAGE
------------------      (cms)    (ha.m.) |  (cms)    (ha.m.)
                    0.0000   0.0000  |  0.5800   0.1023
                    0.2500   0.0493  |  0.6600   0.1189
                    0.3700   0.0684  |  0.7600   0.1366
                    0.4600   0.0822  |  0.7800   0.1400

                       AREA    QPEAK    TPEAK      R.V.
                      (ha)    (cms)    (hrs)      (mm)
  INFLOW : ID= 2 (  0220)     5.630    0.854     1.42     33.96
  OUTFLOW: ID= 1 (  0050)     5.630    0.373     1.75     33.96

            PEAK   FLOW   REDUCTION [Qout/Qin](%)= 43.70
```

```
          TIME SHIFT OF PEAK FLOW       (min)= 20.00
          MAXIMUM  STORAGE  USED       (ha.m.)=  0.0690

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

------------------
| ADD HYD  (  0002)|
|  1 +  2 =  3   |       AREA    QPEAK    TPEAK    R.V.
------------------          (ha)   (cms)   (hrs)    (mm)
     ID1= 1 (  0225):    3.98   0.160    2.17   22.87
   + ID2= 2 (  0025):   19.34   0.347    3.25   25.27
     ==========================================================
     ID = 3 (  0002):   23.32   0.431    2.83   24.86

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

------------------
| ADD HYD  (  0002)|
|  3 +  2 =  1   |       AREA    QPEAK    TPEAK    R.V.
------------------          (ha)   (cms)   (hrs)    (mm)
     ID1= 3 (  0002):   23.32   0.431    2.83   24.86
   + ID2= 2 (  0050):    5.63   0.373    1.75   33.96
     ==========================================================
     ID = 1 (  0002):   28.95   0.652    2.08   26.63

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

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

     OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO   TM
    O   O    T      T    H   H   Y Y   MM MM  O   O
    O   O    T      T    H   H    Y    M M M  O   O
     OOO     T      T    H   H    Y    M   M   OOO
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          ***** DETAILED  OUTPUT *****


  Input  filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\c6a78bad-
e31e-40fb-a22f-cc4534f6a033\scen
  Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-
26df3e227620\c6a78bad-e31e-40fb-a22f-cc4534f6a033\scen
```



```
DATE: 03/11/2024                  TIME: 11:39:28

USER:


COMMENTS: _____

--------------------------------------------------------------------------------
 **************************************************
 ** SIMULATION : Chicago_25yr               **
 **************************************************


------------------
|  READ STORM   |  Filename: C:\Users\nyokich\AppD
|               |           ata\Local\Temp\
|               |           5e49fc0a-79f7-4237-8582-77f9360bb4e5\ae79c4fd
| Ptotal= 65.95 mm |  Comments: Chicago_25yr
------------------
          TIME   RAIN |  TIME   RAIN |  TIME   RAIN |  TIME   RAIN
          hrs  mm/hr |  hrs  mm/hr |  hrs  mm/hr |  hrs  mm/hr
          0.00   5.53 |  0.75  12.14 |  1.50  41.91 |  2.25   8.95
          0.08   5.86 |  0.83  14.18 |  1.58  29.48 |  2.33   8.27
          0.17   6.25 |  0.92  17.11 |  1.67  22.71 |  2.42   7.70
          0.25   6.69 |  1.00  21.65 |  1.75  18.49 |  2.50   7.21
          0.33   7.21 |  1.08  29.59 |  1.83  15.62 |  2.58   6.78
          0.42   7.82 |  1.17  46.55 |  1.92  13.54 |  2.67   6.40
          0.50   8.56 |  1.25 103.13 |  2.00  11.97 |  2.75   6.07
          0.58   9.48 |  1.33 171.19 |  2.08  10.75 |  2.83   5.77
          0.67  10.63 |  1.42  70.93 |  2.17   9.76 |  2.92   5.50

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

------------------
| CALIB          |
| NASHYD  (  0210)|  Area   (ha)=  6.83  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
------------------  U.H. Tp(hrs)=  0.54

    Unit Hyd Qpeak  (cms)=  0.483

    PEAK FLOW      (cms)=  0.440 (i)
    TIME TO PEAK   (hrs)=  2.000
    RUNOFF VOLUME  (mm)=  32.878
    TOTAL RAINFALL (mm)=  65.946
    RUNOFF COEFFICIENT  =  0.499

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

--------------------------------------------------------------------------------
```



```
------------------
| CALIB          |
| STANDHYD (  0205)|  Area   (ha)=  7.90
|ID= 1 DT= 5.0 min |  Total Imp(%)=  20.00  Dir. Conn.(%)=  10.00
------------------
                     IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=     1.58       6.32
    Dep. Storage     (mm)=     2.00       5.00
    Average Slope    (%)=      2.00       5.00
    Length           (m)=    229.49     250.00
    Mannings n       =         0.013      0.250

    Max.Eff.Inten.(mm/hr)=   171.19      46.24
          over (min)         5.00       25.00
    Storage Coeff.  (min)=     2.75 (ii)  24.67 (ii)
    Unit Hyd. Tpeak (min)=     5.00       25.00
    Unit Hyd. peak  (cms)=     0.28       0.05
                          *TOTALS*
    PEAK FLOW      (cms)=      0.35       0.49       0.545 (iii)
    TIME TO PEAK   (hrs)=      1.42       1.75       1.75
    RUNOFF VOLUME  (mm)=      63.95      28.48      32.03
    TOTAL RAINFALL (mm)=      65.95      65.95      65.95
    RUNOFF COEFFICIENT  =      0.97       0.43       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) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  76.0   Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

------------------
| ADD HYD  (  0003)|
|  1 +  2 =  3   |       AREA    QPEAK    TPEAK    R.V.
------------------          (ha)   (cms)   (hrs)    (mm)
     ID1= 1 (  0205):    7.90   0.545    1.75   32.03
   + ID2= 2 (  0210):    6.83   0.440    2.00   32.88
     ==========================================================
     ID = 3 (  0003):   14.73   0.939    1.83   32.42

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

------------------
| CALIB          |
| NASHYD  (  0200)|  Area   (ha)=  20.32  Curve Number  (CN)= 80.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
------------------  U.H. Tp(hrs)=  0.43

    Unit Hyd Qpeak  (cms)=  1.805
```



```
    PEAK FLOW      (cms)=  1.380 (i)
    TIME TO PEAK   (hrs)=  1.917
    RUNOFF VOLUME  (mm)=  29.845
    TOTAL RAINFALL (mm)=  65.946
    RUNOFF COEFFICIENT  =  0.453

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

--------------------------------------------------------------------------------
------------------
| CALIB          |
| NASHYD  (  0201)|  Area   (ha)=  3.17  Curve Number  (CN)= 77.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
------------------  U.H. Tp(hrs)=  0.16

    Unit Hyd Qpeak  (cms)=  0.757

    PEAK FLOW      (cms)=  0.351 (i)
    TIME TO PEAK   (hrs)=  1.500
    RUNOFF VOLUME  (mm)=  27.026
    TOTAL RAINFALL (mm)=  65.946
    RUNOFF COEFFICIENT  =  0.410

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

--------------------------------------------------------------------------------
------------------
| CALIB          |
| STANDHYD (  0202)|  Area   (ha)=  4.57
|ID= 1 DT= 5.0 min |  Total Imp(%)=  40.00  Dir. Conn.(%)=  32.00
------------------
                     IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=     1.83       2.74
    Dep. Storage     (mm)=     2.00       5.00
    Average Slope    (%)=      5.00       5.00
    Length           (m)=    500.00     500.00
    Mannings n       =         0.013      0.250

    Max.Eff.Inten.(mm/hr)=   171.19      31.67
          over (min)         5.00       45.00
    Storage Coeff.  (min)=     3.34 (ii)  41.99 (ii)
    Unit Hyd. Tpeak (min)=     5.00       45.00
    Unit Hyd. peak  (cms)=     0.26       0.03
                          *TOTALS*
    PEAK FLOW      (cms)=      0.62       0.14       0.638 (iii)
    TIME TO PEAK   (hrs)=      1.42       2.17       1.42
    RUNOFF VOLUME  (mm)=      63.95      26.22      38.28
    TOTAL RAINFALL (mm)=      65.95      65.95      65.95
    RUNOFF COEFFICIENT  =      0.97       0.40       0.58

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

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
```

```
      CN* = 73.0   Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

--------------------
| ADD HYD  (  0040)|
|  1 +  2 =  3   |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
     ID1= 1 (  0201):    3.17  0.351    1.50   27.03
   + ID2= 2 (  0202):    4.57  0.638    1.42   38.28
     ==========================================================
     ID = 3 (  0040):    7.74  0.891    1.42   33.67

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0032)|    OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |    OUTFLOW   STORAGE  | OUTFLOW   STORAGE
--------------------      (cms)    (ha.m.) |  (cms)    (ha.m.)
                    0.0000   0.0000  |  0.1020   0.2824
                    0.0400   0.1208  |  0.1160   0.3268
                    0.0640   0.1775  |  0.1330   0.3659
                    0.0790   0.2218  |  0.0000   0.0000

                       AREA    QPEAK    TPEAK      R.V.
                       (ha)    (cms)    (hrs)      (mm)
  INFLOW : ID= 2 (  0040)     7.740    0.891     1.42     33.67
  OUTFLOW: ID= 1 (  0032)     7.740    0.073     3.25     33.58

            PEAK   FLOW   REDUCTION [Qout/Qin](%)=  8.14
            TIME SHIFT OF PEAK FLOW       (min)=110.00
            MAXIMUM  STORAGE   USED       (ha.m.)=  0.2028

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

--------------------
| ADD HYD  (  0001)|
|  1 +  2 =  3   |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
     ID1= 1 (  0200):   20.32  1.380    1.92   29.84
   + ID2= 2 (  0032):    7.74  0.073    3.25   33.58
     ==========================================================
     ID = 3 (  0001):   28.06  1.428    1.92   30.87

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD  (  0215)|  Area   (ha)=  15.80  Curve Number   (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
```



```
--------------------  U.H. Tp(hrs)=  0.70

   Unit Hyd Qpeak  (cms)=  0.862

   PEAK FLOW      (cms)=  0.841 (i)
   TIME TO PEAK   (hrs)=  2.250
   RUNOFF VOLUME  (mm)=  32.879
   TOTAL RAINFALL (mm)=  65.946
   RUNOFF COEFFICIENT  =  0.499

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD  (  0203)|  Area   (ha)=   1.61  Curve Number   (CN)= 76.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=  0.24

   Unit Hyd Qpeak  (cms)=  0.256

   PEAK FLOW      (cms)=  0.139 (i)
   TIME TO PEAK   (hrs)=  1.667
   RUNOFF VOLUME  (mm)=  26.289
   TOTAL RAINFALL (mm)=  65.946
   RUNOFF COEFFICIENT  =  0.399

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0204)|  Area   (ha)=   1.93
|ID= 1 DT= 5.0 min |  Total Imp(%)=  60.00  Dir. Conn.(%)=  48.00
--------------------
                       IMPERVIOUS    PERVIOUS (i)
   Surface Area    (ha)=      1.16        0.77
   Dep. Storage    (mm)=      2.00        5.00
   Average Slope   (%)=       1.00        1.00
   Length          (m)=     300.00      300.00
   Mannings n          =      0.013       0.250

   Max.Eff.Inten.(mm/hr)=    171.19       35.89
         over (min)          5.00       50.00
   Storage Coeff.  (min)=    3.98 (ii)   47.84 (ii)
   Unit Hyd. Tpeak (min)=    5.00        50.00
   Unit Hyd. peak  (cms)=    0.24         0.02
                              *TOTALS*
   PEAK FLOW      (cms)=     0.38         0.04        0.383 (iii)
   TIME TO PEAK   (hrs)=     1.42         2.25        1.42
   RUNOFF VOLUME  (mm)=     63.95        27.93       45.20
   TOTAL RAINFALL (mm)=     65.95        65.95       65.95
   RUNOFF COEFFICIENT  =     0.97         0.42        0.69
```



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

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

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

--------------------
| ADD HYD  (  0042)|
|  1 +  2 =  3   |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
     ID1= 1 (  0203):    1.61  0.139    1.67   26.29
   + ID2= 2 (  0204):    1.93  0.383    1.42   45.20
     ==========================================================
     ID = 3 (  0042):    3.54  0.450    1.42   36.60

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

--------------------
| ADD HYD  (  0042)|
|  3 +  2 =  1   |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
     ID1= 3 (  0042):    3.54  0.450    1.42   36.60
   + ID2= 2 (  0215):   15.80  0.841    2.25   32.88
     ==========================================================
     ID = 1 (  0042):   19.34  0.968    2.17   33.56

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0025)|    OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |    OUTFLOW   STORAGE  | OUTFLOW   STORAGE
--------------------      (cms)    (ha.m.) |  (cms)    (ha.m.)
                    0.0000   0.0000  |  0.6300   0.4548
                    0.2600   0.1908  |  0.7100   0.5242
                    0.3900   0.2842  |  0.8100   0.5932
                    0.4900   0.3533  |  1.4000   1.1965

                       AREA    QPEAK    TPEAK      R.V.
                       (ha)    (cms)    (hrs)      (mm)
  INFLOW : ID= 2 (  0042)    19.340    0.968     2.17     33.56
  OUTFLOW: ID= 1 (  0025)    19.340    0.467     3.25     33.55

            PEAK   FLOW   REDUCTION [Qout/Qin](%)= 48.20
            TIME SHIFT OF PEAK FLOW       (min)= 65.00
            MAXIMUM  STORAGE   USED       (ha.m.)=  0.3372

--------------------------------------------------------------------------------
--------------------
```



```
| CALIB            |
| NASHYD  (  0225)|  Area   (ha)=   3.98  Curve Number   (CN)= 81.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=  0.62

   Unit Hyd Qpeak  (cms)=  0.245

   PEAK FLOW      (cms)=  0.216 (i)
   TIME TO PEAK   (hrs)=  2.083
   RUNOFF VOLUME  (mm)=  30.817
   TOTAL RAINFALL (mm)=  65.946
   RUNOFF COEFFICIENT  =  0.467

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0220)|  Area   (ha)=   5.63
|ID= 1 DT= 5.0 min |  Total Imp(%)=  42.00  Dir. Conn.(%)=  34.00
--------------------
                       IMPERVIOUS    PERVIOUS (i)
   Surface Area    (ha)=      2.36        3.27
   Dep. Storage    (mm)=      2.00        5.00
   Average Slope   (%)=       2.00        2.00
   Length          (m)=     250.00       40.00
   Mannings n          =      0.013       0.250

   Max.Eff.Inten.(mm/hr)=    171.19       81.01
         over (min)          5.00       15.00
   Storage Coeff.  (min)=    2.90 (ii)   10.58 (ii)
   Unit Hyd. Tpeak (min)=    5.00        15.00
   Unit Hyd. peak  (cms)=    0.28         0.09
                              *TOTALS*
   PEAK FLOW      (cms)=     0.84         0.48        1.066 (iii)
   TIME TO PEAK   (hrs)=     1.42         1.58        1.42
   RUNOFF VOLUME  (mm)=     63.95        32.28       43.05
   TOTAL RAINFALL (mm)=     65.95        65.95       65.95
   RUNOFF COEFFICIENT  =     0.97         0.49        0.65

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

   (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
       CN* = 80.0   Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0050)|    OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |    OUTFLOW   STORAGE  | OUTFLOW   STORAGE
--------------------      (cms)    (ha.m.) |  (cms)    (ha.m.)
```

```
    0.0000   0.0000  |  0.5800   0.1023
    0.2500   0.0493  |  0.6600   0.1189
    0.3700   0.0684  |  0.7600   0.1366
    0.4600   0.0822  |  0.7800   0.1400

                AREA    QPEAK    TPEAK      R.V.
                (ha)    (cms)    (hrs)      (mm)
 INFLOW : ID= 2 (  0220)     5.630     1.066     1.42     43.05
 OUTFLOW: ID= 1 (  0050)     5.630     0.487     1.75     43.04

          PEAK  FLOW  REDUCTION [Qout/Qin](%)= 45.73
          TIME SHIFT OF PEAK FLOW       (min)= 20.00
          MAXIMUM  STORAGE  USED      (ha.m.)= 0.0868

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

-------------------
| ADD HYD  (  0002)|
|  1 +  2 =  3   |      AREA    QPEAK    TPEAK    R.V.
-------------------      (ha)    (cms)    (hrs)    (mm)
     ID1= 1 (  0225):    3.98   0.216    2.08    30.82
   + ID2= 2 (  0025):   19.34   0.467    3.25    33.55
     ==========================================================
     ID = 3 (  0002):   23.32   0.579    2.83    33.08

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

-------------------
| ADD HYD  (  0002)|
|  3 +  2 =  1   |      AREA    QPEAK    TPEAK    R.V.
-------------------      (ha)    (cms)    (hrs)    (mm)
     ID1= 3 (  0002):   23.32   0.579    2.83    33.08
   + ID2= 2 (  0050):    5.63   0.487    1.75    43.04
     ==========================================================
     ID = 1 (  0002):   28.95   0.859    2.08    35.02

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


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

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



```
          ***** DETAILED OUTPUT *****

  Input  filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\4cc8099e-645a-426e-bae5-afead8c69035\scen
  Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\4cc8099e-645a-426e-bae5-afead8c69035\scen

DATE: 03/11/2024                    TIME: 11:39:26

USER:


COMMENTS: _____

--------------------------------------------------------------------------------------------------
 ************************************************
 ** SIMULATION : Chicago_2yr                   **
 ************************************************


-------------------
|  READ STORM    |  Filename: C:\Users\nyokich\AppD
|                |           ata\Local\Temp\
|                |           5e49fc0a-79f7-4237-8582-77f9360bb4e5\248c7391
| Ptotal= 33.13 mm |  Comments: Chicago_2yr
-------------------
          TIME   RAIN |  TIME   RAIN |  TIME   RAIN |  TIME   RAIN
          hrs   mm/hr |  hrs   mm/hr |  hrs   mm/hr |  hrs   mm/hr
          0.00   3.00 |  0.75   6.21 |  1.50  19.92 |  2.25   4.68
          0.08   3.17 |  0.83   7.16 |  1.58  14.20 |  2.33   4.36
          0.17   3.36 |  0.92   8.53 |  1.67  11.11 |  2.42   4.08
          0.25   3.58 |  1.00  10.62 |  1.75   9.17 |  2.50   3.83
          0.33   3.83 |  1.08  14.25 |  1.83   7.84 |  2.58   3.62
          0.42   4.14 |  1.17  22.09 |  1.92   6.87 |  2.67   3.43
          0.50   4.50 |  1.25  50.42 |  2.00   6.13 |  2.75   3.27
          0.58   4.94 |  1.33  89.35 |  2.08   5.55 |  2.83   3.12
          0.67   5.48 |  1.42  33.74 |  2.17   5.07 |  2.92   2.98

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

-------------------
| CALIB          |
| NASHYD  (  0210)|  Area   (ha)=   6.83  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=   5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=   0.54
```



```
    Unit Hyd Qpeak  (cms)=   0.483

    PEAK FLOW      (cms)=   0.125 (i)
    TIME TO PEAK   (hrs)=   2.083
    RUNOFF VOLUME   (mm)=   9.873
    TOTAL RAINFALL  (mm)=  33.132
    RUNOFF COEFFICIENT  =   0.298

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

--------------------------------------------------------------------------------
-------------------
| CALIB          |
| STANDHYD (  0205)|  Area   (ha)=   7.90
|ID= 1 DT= 5.0 min |  Total Imp(%)=  20.00  Dir. Conn.(%)=  10.00
-------------------
                    IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=     1.58        6.32
    Dep. Storage    (mm)=     2.00        5.00
    Average Slope    (%)=     2.00        5.00
    Length          (m)=   229.49      250.00
    Mannings n          =    0.013       0.250

    Max.Eff.Inten.(mm/hr)=    89.35       9.04
          over (min)        5.00       50.00
    Storage Coeff.  (min)=    3.57 (ii)  45.68 (ii)
    Unit Hyd. Tpeak (min)=    5.00       50.00
    Unit Hyd. peak  (cms)=    0.26        0.02
                          *TOTALS*
    PEAK FLOW      (cms)=     0.17        0.09        0.178 (iii)
    TIME TO PEAK   (hrs)=     1.42        2.25        1.42
    RUNOFF VOLUME   (mm)=    31.13        8.23       10.52
    TOTAL RAINFALL  (mm)=    33.13       33.13       33.13
    RUNOFF COEFFICIENT  =     0.94        0.25        0.32

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

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* = 76.0   Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

-------------------
| ADD HYD  (  0003)|
|  1 +  2 =  3   |      AREA    QPEAK    TPEAK    R.V.
-------------------      (ha)    (cms)    (hrs)    (mm)
     ID1= 1 (  0205):    7.90   0.178    1.42    10.52
   + ID2= 2 (  0210):    6.83   0.125    2.08     9.87
     ==========================================================
```



```
     ID = 3 (  0003):   14.73   0.223    2.17    10.22

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
-------------------
| CALIB          |
| NASHYD  (  0200)|  Area   (ha)=  20.32  Curve Number  (CN)= 80.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=   5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=   0.43

    Unit Hyd Qpeak  (cms)=   1.805

    PEAK FLOW      (cms)=   0.378 (i)
    TIME TO PEAK   (hrs)=   1.917
    RUNOFF VOLUME   (mm)=   8.636
    TOTAL RAINFALL  (mm)=  33.132
    RUNOFF COEFFICIENT  =   0.261

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

--------------------------------------------------------------------------------
-------------------
| CALIB          |
| NASHYD  (  0201)|  Area   (ha)=   3.17  Curve Number  (CN)= 77.0
|ID= 1 DT= 5.0 min |  Ia      (mm)=   5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=   0.16

    Unit Hyd Qpeak  (cms)=   0.757

    PEAK FLOW      (cms)=   0.093 (i)
    TIME TO PEAK   (hrs)=   1.583
    RUNOFF VOLUME   (mm)=   7.575
    TOTAL RAINFALL  (mm)=  33.132
    RUNOFF COEFFICIENT  =   0.229

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

--------------------------------------------------------------------------------
-------------------
| CALIB          |
| STANDHYD (  0202)|  Area   (ha)=   4.57
|ID= 1 DT= 5.0 min |  Total Imp(%)=  40.00  Dir. Conn.(%)=  32.00
-------------------
                    IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=     1.83        2.74
    Dep. Storage    (mm)=     2.00        5.00
    Average Slope    (%)=     5.00        5.00
    Length          (m)=   500.00      500.00
    Mannings n          =    0.013       0.250

    Max.Eff.Inten.(mm/hr)=    89.35       6.76
          over (min)        5.00       80.00
    Storage Coeff.  (min)=    4.33 (ii)  76.01 (ii)
    Unit Hyd. Tpeak (min)=    5.00       80.00
```

```
    Unit Hyd. peak  (cms)=      0.23        0.01
                              *TOTALS*
    PEAK FLOW      (cms)=      0.30        0.02        0.302 (iii)
    TIME TO PEAK   (hrs)=      1.42        2.83        1.42
    RUNOFF VOLUME  (mm)=      31.13        7.39       14.98
    TOTAL RAINFALL (mm)=      33.13       33.13       33.13
    RUNOFF COEFFICIENT  =      0.94        0.22        0.45

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

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* = 73.0   Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

--------------------
| ADD HYD  (  0040)|
|  1 +  2 =  3   |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
      ID1= 1 (  0201):    3.17  0.093    1.58    7.58
    + ID2= 2 (  0202):    4.57  0.302    1.42   14.98
      ========================================================
      ID = 3 (  0040):    7.74  0.361    1.42   11.95

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0032)|    OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min    |    OUTFLOW   STORAGE  | OUTFLOW   STORAGE
--------------------      (cms)    (ha.m.) |  (cms)    (ha.m.)
                  0.0000   0.0000  |  0.1020    0.2824
                  0.0400   0.1208  |  0.1160    0.3268
                  0.0640   0.1775  |  0.1330    0.3659
                  0.0790   0.2218  |  0.0000    0.0000

                      AREA    QPEAK    TPEAK     R.V.
                      (ha)    (cms)    (hrs)     (mm)
    INFLOW : ID= 2 (  0040)     7.740    0.361     1.42     11.95
    OUTFLOW: ID= 1 (  0032)     7.740    0.022     3.42     11.85

              PEAK  FLOW  REDUCTION [Qout/Qin](%)=  6.17
              TIME SHIFT OF PEAK FLOW       (min)=120.00
              MAXIMUM  STORAGE  USED       (ha.m.)=  0.0673

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

--------------------
| ADD HYD  (  0001)|
|  1 +  2 =  3   |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
```



```
      ID1= 1 (  0200):   20.32  0.378    1.92    8.64
    + ID2= 2 (  0032):    7.74  0.022    3.42   11.85
      ========================================================
      ID = 3 (  0001):   28.06  0.395    1.92    9.52

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD  (  0215)|  Area   (ha)=  15.80  Curve Number  (CN)= 83.0
|ID= 1 DT=  5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=   0.70

    Unit Hyd Qpeak  (cms)=   0.862

    PEAK FLOW      (cms)=   0.242 (i)
    TIME TO PEAK   (hrs)=   2.250
    RUNOFF VOLUME  (mm)=   9.873
    TOTAL RAINFALL  (mm)=  33.132
    RUNOFF COEFFICIENT  =   0.298

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD  (  0203)|  Area   (ha)=   1.61  Curve Number  (CN)= 76.0
|ID= 1 DT=  5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=   0.24

    Unit Hyd Qpeak  (cms)=   0.256

    PEAK FLOW      (cms)=   0.036 (i)
    TIME TO PEAK   (hrs)=   1.667
    RUNOFF VOLUME  (mm)=   7.298
    TOTAL RAINFALL  (mm)=  33.132
    RUNOFF COEFFICIENT  =   0.220

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0204)|  Area   (ha)=   1.93
|ID= 1 DT=  5.0 min |  Total Imp(%)=  60.00  Dir. Conn.(%)=  48.00
--------------------
                      IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=     1.16        0.77
    Dep. Storage    (mm)=     2.00        5.00
    Average Slope    (%)=     1.00        1.00
    Length          (m)=   300.00      300.00
    Mannings n          =     0.013       0.250

    Max.Eff.Inten.(mm/hr)=    89.35        8.53
```



```
          over (min)       5.00       85.00
    Storage Coeff.  (min)=     5.17 (ii)  83.10 (ii)
    Unit Hyd. Tpeak (min)=     5.00       85.00
    Unit Hyd. peak  (cms)=     0.21        0.01
                              *TOTALS*
    PEAK FLOW      (cms)=      0.18        0.01        0.180 (iii)
    TIME TO PEAK   (hrs)=      1.42        2.92        1.42
    RUNOFF VOLUME  (mm)=      31.13        8.15       19.16
    TOTAL RAINFALL (mm)=      33.13       33.13       33.13
    RUNOFF COEFFICIENT  =      0.94        0.25        0.58


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

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

--------------------
| ADD HYD  (  0042)|
|  1 +  2 =  3   |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
      ID1= 1 (  0203):    1.61  0.036    1.67    7.30
    + ID2= 2 (  0204):    1.93  0.180    1.42   19.16
      ========================================================
      ID = 3 (  0042):    3.54  0.195    1.42   13.76

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

--------------------
| ADD HYD  (  0042)|
|  3 +  2 =  1   |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
      ID1= 3 (  0042):    3.54  0.195    1.42   13.76
    + ID2= 2 (  0215):   15.80  0.242    2.25    9.87
      ========================================================
      ID = 1 (  0042):   19.34  0.276    2.25   10.59

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0025)|    OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min    |    OUTFLOW   STORAGE  | OUTFLOW   STORAGE
--------------------      (cms)    (ha.m.) |  (cms)    (ha.m.)
                  0.0000   0.0000  |  0.6300    0.4548
                  0.2600   0.1908  |  0.7100    0.5242
                  0.3900   0.2842  |  0.8100    0.5932
                  0.4900   0.3533  |  1.4000    1.1965

                      AREA    QPEAK    TPEAK     R.V.
```



```
                      (ha)    (cms)    (hrs)     (mm)
    INFLOW : ID= 2 (  0042)    19.340    0.276     2.25     10.59
    OUTFLOW: ID= 1 (  0025)    19.340    0.141     3.33     10.58

              PEAK  FLOW  REDUCTION [Qout/Qin](%)= 51.26
              TIME SHIFT OF PEAK FLOW       (min)= 65.00
              MAXIMUM  STORAGE  USED       (ha.m.)=  0.1038

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD  (  0225)|  Area   (ha)=   3.98  Curve Number  (CN)= 81.0
|ID= 1 DT=  5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=   0.62

    Unit Hyd Qpeak  (cms)=   0.245

    PEAK FLOW      (cms)=   0.061 (i)
    TIME TO PEAK   (hrs)=   2.167
    RUNOFF VOLUME  (mm)=   9.022
    TOTAL RAINFALL  (mm)=  33.132
    RUNOFF COEFFICIENT  =   0.272

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0220)|  Area   (ha)=   5.63
|ID= 1 DT=  5.0 min |  Total Imp(%)=  42.00  Dir. Conn.(%)=  34.00
--------------------
                      IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=     2.36        3.27
    Dep. Storage    (mm)=     2.00        5.00
    Average Slope    (%)=     2.00        2.00
    Length          (m)=   250.00       40.00
    Mannings n          =     0.013       0.250

    Max.Eff.Inten.(mm/hr)=    89.35       20.14
          over (min)       5.00       20.00
    Storage Coeff.  (min)=     3.76 (ii)  17.16 (ii)
    Unit Hyd. Tpeak (min)=     5.00       20.00
    Unit Hyd. peak  (cms)=     0.25        0.06
                              *TOTALS*
    PEAK FLOW      (cms)=      0.41        0.10        0.438 (iii)
    TIME TO PEAK   (hrs)=      1.42        1.67        1.42
    RUNOFF VOLUME  (mm)=      31.13        9.77       17.03
    TOTAL RAINFALL (mm)=      33.13       33.13       33.13
    RUNOFF COEFFICIENT  =      0.94        0.29        0.51

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

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* = 80.0   Ia = Dep. Storage  (Above)
```

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0050)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min | OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 0.5800 0.1023
0.2500 0.0493 | 0.6600 0.1189
0.3700 0.0684 | 0.7600 0.1366
0.4600 0.0822 | 0.7800 0.1400

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0220) 5.630 0.438 1.42 17.03
OUTFLOW: ID= 1 (0050) 5.630 0.163 1.75 17.02

PEAK FLOW REDUCTION [Qout/Qin](%)= 37.13
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.0322

| ADD HYD (0002)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0225): 3.98 0.061 2.17 9.02
+ ID2= 2 (0025): 19.34 0.141 3.33 10.58
ID = 3 (0002): 23.32 0.175 3.00 10.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0002)|
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0002): 23.32 0.175 3.00 10.31
+ ID2= 2 (0050): 5.63 0.163 1.75 17.02
ID = 1 (0002): 28.95 0.282 2.17 11.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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

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OOO TTTTT TTTTT H H Y Y M M OOO TM
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OOO T T H H Y M M OOO
Developed and Distributed by Smart City Water Inc

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\900412d4-24e2-4223-aea5-9df5457f0fe4\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\900412d4-24e2-4223-aea5-9df5457f0fe4\scen

DATE: 03/11/2024 TIME: 11:39:27

USER:

COMMENTS: _____

****
** SIMULATION : Chicago_50yr **
****

| READ STORM | Filename: C:\Users\nyokich\AppD
| | ata\Local\Temp\
| | 5e49fc0a-79f7-4237-8582-77f9360bb4e5\6e087507
| Ptotal= 74.64 mm | Comments: Chicago_50yr

TIME RAIN | TIME RAIN |' TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr |' hrs mm/hr | hrs mm/hr
0.00 6.17 | 0.75 13.82 | 1.50 48.52 | 2.25 10.11
0.08 6.55 | 0.83 16.20 | 1.58 34.11 | 2.33 9.33
0.17 6.99 | 0.92 19.64 | 1.67 26.19 | 2.42 8.66
0.25 7.50 | 1.00 24.96 | 1.75 21.25 | 2.50 8.10
0.33 8.10 | 1.08 34.23 | 1.83 17.89 | 2.58 7.60
0.42 8.81 | 1.17 53.85 | 1.92 15.46 | 2.67 7.17
0.50 9.66 | 1.25 116.53 | 2.00 13.63 | 2.75 6.78
0.58 10.72 | 1.33 187.75 | 2.08 12.20 | 2.83 6.44

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0.67 12.06 | 1.42 81.45 | 2.17 11.05 | 2.92 6.14

| CALIB |
| NASHYD (0210)| Area (ha)= 6.83 Curve Number (CN)= 83.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.54

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.535 (i)
TIME TO PEAK (hrs)= 2.000
RUNOFF VOLUME (mm)= 39.857
TOTAL RAINFALL (mm)= 74.637
RUNOFF COEFFICIENT = 0.534

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

| CALIB |
| STANDHYD (0205)| Area (ha)= 7.90
|ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.58 6.32
Dep. Storage (mm)= 2.00 5.00
Average Slope (%)= 2.00 5.00
Length (m)= 229.49 250.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 187.75 63.97
over (min) 5.00 25.00
Storage Coeff. (min)= 2.65 (ii) 21.90 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05
TOTALS
PEAK FLOW (cms)= 0.38 0.64 0.705 (iii)
TIME TO PEAK (hrs)= 1.42 1.75 1.75
RUNOFF VOLUME (mm)= 72.64 34.82 38.60
TOTAL RAINFALL (mm)= 74.64 74.64 74.64
RUNOFF COEFFICIENT = 0.97 0.47 0.52

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

file:///V|...%20Updated%20EA%20Analysis/VO/Detailed%20Output/Proposed%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:44:24 AM]

| ADD HYD (0003)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0205): 7.90 0.705 1.75 38.60
+ ID2= 2 (0210): 6.83 0.535 2.00 39.86
ID = 3 (0003): 14.73 1.180 1.83 39.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0200)| Area (ha)= 20.32 Curve Number (CN)= 80.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.43

Unit Hyd Qpeak (cms)= 1.805

PEAK FLOW (cms)= 1.689 (i)
TIME TO PEAK (hrs)= 1.917
RUNOFF VOLUME (mm)= 36.420
TOTAL RAINFALL (mm)= 74.637
RUNOFF COEFFICIENT = 0.488

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

| CALIB |
| NASHYD (0201)| Area (ha)= 3.17 Curve Number (CN)= 77.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.16

Unit Hyd Qpeak (cms)= 0.757

PEAK FLOW (cms)= 0.430 (i)
TIME TO PEAK (hrs)= 1.500
RUNOFF VOLUME (mm)= 33.176
TOTAL RAINFALL (mm)= 74.637
RUNOFF COEFFICIENT = 0.445

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

| CALIB |
| STANDHYD (0202)| Area (ha)= 4.57
|ID= 1 DT= 5.0 min | Total Imp(%)= 40.00 Dir. Conn.(%)= 32.00

IMPERVIOUS PERVIOUS (i)

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```
    Surface Area    (ha)=      1.83        2.74
    Dep. Storage    (mm)=      2.00        5.00
    Average Slope   (%)=       5.00        5.00
    Length          (m)=     500.00      500.00
    Mannings n          =     0.013       0.250

    Max.Eff.Inten.(mm/hr)=    187.75       42.28
          over (min)          5.00        40.00
    Storage Coeff.  (min)=      3.22 (ii)  37.65 (ii)
    Unit Hyd. Tpeak (min)=      5.00        40.00
    Unit Hyd. peak  (cms)=      0.27        0.03
                               *TOTALS*
    PEAK FLOW       (cms)=      0.69        0.18        0.717 (iii)
    TIME TO PEAK    (hrs)=      1.42        2.08        1.42
    RUNOFF VOLUME   (mm)=      72.64       32.21       45.14
    TOTAL RAINFALL  (mm)=      74.64       74.64       74.64
    RUNOFF COEFFICIENT  =       0.97        0.43        0.60

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

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* = 73.0   Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

--------------------
| ADD HYD  (  0040)|
|  1 +  2 =  3   |       AREA    QPEAK    TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
      ID1= 1 (  0201):    3.17   0.430    1.50    33.18
    + ID2= 2 (  0202):    4.57   0.717    1.42    45.14
      ========================================================
      ID = 3 (  0040):    7.74   1.031    1.42    40.24

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0032)|    OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |    OUTFLOW    STORAGE   | OUTFLOW    STORAGE
--------------------      (cms)    (ha.m.)  |  (cms)     (ha.m.)
                    0.0000    0.0000   |  0.1020    0.2824
                    0.0400    0.1208   |  0.1160    0.3268
                    0.0640    0.1775   |  0.1330    0.3659
                    0.0790    0.2218   |  0.0000    0.0000

                        AREA    QPEAK    TPEAK     R.V.
                        (ha)    (cms)    (hrs)     (mm)
  INFLOW : ID= 2 (  0040)     7.740    1.031     1.42     40.24
  OUTFLOW: ID= 1 (  0032)     7.740    0.088     3.25     40.14
```



```
                PEAK  FLOW  REDUCTION [Qout/Qin](%)=  8.53
                TIME SHIFT OF PEAK FLOW       (min)=110.00
                MAXIMUM  STORAGE  USED      (ha.m.)=  0.2453

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

--------------------
| ADD HYD  (  0001)|
|  1 +  2 =  3   |       AREA    QPEAK    TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
      ID1= 1 (  0200):   20.32   1.689    1.92    36.42
    + ID2= 2 (  0032):    7.74   0.088    3.25    40.14
      ========================================================
      ID = 3 (  0001):   28.06   1.750    1.92    37.45

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD  (  0215)|  Area   (ha)=  15.80  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=   0.70

    Unit Hyd Qpeak  (cms)=   0.862

    PEAK FLOW       (cms)=   1.023 (i)
    TIME TO PEAK    (hrs)=   2.250
    RUNOFF VOLUME   (mm)=   39.858
    TOTAL RAINFALL  (mm)=   74.637
    RUNOFF COEFFICIENT  =    0.534

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD  (  0203)|  Area   (ha)=   1.61  Curve Number  (CN)= 76.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=   0.24

    Unit Hyd Qpeak  (cms)=   0.256

    PEAK FLOW       (cms)=   0.171 (i)
    TIME TO PEAK    (hrs)=   1.667
    RUNOFF VOLUME   (mm)=  32.331
    TOTAL RAINFALL  (mm)=  74.637
    RUNOFF COEFFICIENT  =    0.433

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0204)|  Area   (ha)=   1.93
```

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```
|ID= 1 DT= 5.0 min |  Total Imp(%)=  60.00  Dir. Conn.(%)=  48.00
--------------------
                    IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=      1.16        0.77
    Dep. Storage    (mm)=      2.00        5.00
    Average Slope   (%)=       1.00        1.00
    Length          (m)=     300.00      300.00
    Mannings n          =     0.013       0.250

    Max.Eff.Inten.(mm/hr)=    187.75       47.39
          over (min)          5.00        45.00
    Storage Coeff.  (min)=      3.84 (ii)  43.08 (ii)
    Unit Hyd. Tpeak (min)=      5.00        45.00
    Unit Hyd. peak  (cms)=      0.25        0.03
                               *TOTALS*
    PEAK FLOW       (cms)=      0.42        0.06        0.428 (iii)
    TIME TO PEAK    (hrs)=      1.42        2.17        1.42
    RUNOFF VOLUME   (mm)=      72.64       34.14       52.61
    TOTAL RAINFALL  (mm)=      74.64       74.64       74.64
    RUNOFF COEFFICIENT  =       0.97        0.46        0.70

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

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

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

--------------------
| ADD HYD  (  0042)|
|  1 +  2 =  3   |       AREA    QPEAK    TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
      ID1= 1 (  0203):    1.61   0.171    1.67    32.33
    + ID2= 2 (  0204):    1.93   0.428    1.42    52.61
      ========================================================
      ID = 3 (  0042):    3.54   0.513    1.42    43.39

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

--------------------
| ADD HYD  (  0042)|
|  3 +  2 =  1   |       AREA    QPEAK    TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
      ID1= 3 (  0042):    3.54   0.513    1.42    43.39
    + ID2= 2 (  0215):   15.80   1.023    2.25    39.86
      ========================================================
      ID = 1 (  0042):   19.34   1.182    2.17    40.50

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

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```
--------------------
| RESERVOIR(  0025)|    OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |    OUTFLOW    STORAGE   | OUTFLOW    STORAGE
--------------------      (cms)    (ha.m.)  |  (cms)     (ha.m.)
                    0.0000    0.0000   |  0.6300    0.4548
                    0.2600    0.1908   |  0.7100    0.5242
                    0.3900    0.2842   |  0.8100    0.5932
                    0.4900    0.3533   |  1.4000    1.1965

                        AREA    QPEAK    TPEAK     R.V.
                        (ha)    (cms)    (hrs)     (mm)
  INFLOW : ID= 2 (  0042)    19.340    1.182     2.17     40.50
  OUTFLOW: ID= 1 (  0025)    19.340    0.565     3.25     40.49

                PEAK  FLOW  REDUCTION [Qout/Qin](%)= 47.81
                TIME SHIFT OF PEAK FLOW       (min)= 65.00
                MAXIMUM  STORAGE  USED      (ha.m.)= 0.4080

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD  (  0225)|  Area   (ha)=   3.98  Curve Number  (CN)= 81.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=   0.62

    Unit Hyd Qpeak  (cms)=   0.245

    PEAK FLOW       (cms)=   0.264 (i)
    TIME TO PEAK    (hrs)=   2.083
    RUNOFF VOLUME   (mm)=  37.527
    TOTAL RAINFALL  (mm)=  74.637
    RUNOFF COEFFICIENT  =    0.503

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0220)|  Area   (ha)=   5.63
|ID= 1 DT= 5.0 min |  Total Imp(%)=  42.00  Dir. Conn.(%)=  34.00
--------------------
                    IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=      2.36        3.27
    Dep. Storage    (mm)=      2.00        5.00
    Average Slope   (%)=       2.00        2.00
    Length          (m)=     250.00       40.00
    Mannings n          =     0.013       0.250

    Max.Eff.Inten.(mm/hr)=    187.75       96.31
          over (min)          5.00        10.00
    Storage Coeff.  (min)=      2.79 (ii)  9.96 (ii)
    Unit Hyd. Tpeak (min)=      5.00        10.00
    Unit Hyd. peak  (cms)=      0.28        0.11
```

file:///V|...%20Updated%20EA%20Analysis/VO/Detailed%20Output/Proposed%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:44:24 AM]

```
                                *TOTALS*
  PEAK FLOW     (cms)=     0.93       0.63       1.357 (iii)
  TIME TO PEAK  (hrs)=     1.42       1.50       1.42
  RUNOFF VOLUME  (mm)=    72.64      39.14      50.53
  TOTAL RAINFALL (mm)=    74.64      74.64      74.64
  RUNOFF COEFFICIENT  =    0.97       0.52       0.68

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

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* = 80.0   Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 0050)|   OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min    |   OUTFLOW   STORAGE  | OUTFLOW   STORAGE
--------------------      (cms)   (ha.m.) |  (cms)   (ha.m.)
                    0.0000   0.0000  |  0.5800   0.1023
                    0.2500   0.0493  |  0.6600   0.1189
                    0.3700   0.0684  |  0.7600   0.1366
                    0.4600   0.0822  |  0.7800   0.1400

                      AREA    QPEAK    TPEAK      R.V.
                      (ha)    (cms)    (hrs)      (mm)
  INFLOW : ID= 2 (  0220)     5.630    1.357     1.42      50.53
  OUTFLOW: ID= 1 (  0050)     5.630    0.592     1.75      50.52

            PEAK   FLOW   REDUCTION [Qout/Qin](%)= 43.62
            TIME SHIFT OF PEAK FLOW       (min)= 20.00
            MAXIMUM  STORAGE  USED      (ha.m.)= 0.1057

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

--------------------
| ADD HYD  (  0002)|
|  1 +  2 =  3    |       AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
     ID1= 1 (  0225):    3.98   0.264     2.08    37.53
   + ID2= 2 (  0025):   19.34   0.565     3.25    40.49
     ==========================================================
     ID = 3 (  0002):   23.32   0.704     2.83    39.99

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

--------------------
| ADD HYD  (  0002)|
|  3 +  2 =  1    |       AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
     ID1= 3 (  0002):   23.32   0.704     2.83    39.99
```



```
   + ID2= 2 (  0050):    5.63   0.592     1.75    50.52
     ==========================================================
     ID = 1 (  0002):   28.95   1.031     2.08    42.04

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

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

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


  Input  filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\94155239-
92bf-4ed2-9c10-010b48af8d21\scen
  Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-
26df3e227620\94155239-92bf-4ed2-9c10-010b48af8d21\scen


 DATE: 03/11/2024                    TIME: 11:39:28

 USER:


 COMMENTS: _____


--------------------------------------------------------------------------------
  **************************************************
  ** SIMULATION : Chicago_5yr                     **
  **************************************************


--------------------
|   READ STORM    |  Filename: C:\Users\nyokich\AppD
|                 |           ata\Local\Temp\
|                 |           5e49fc0a-79f7-4237-8582-77f9360bb4e5\f4232b31
| Ptotal= 46.03 mm |  Comments: Chicago_5yr
```



```
--------------------
     TIME   RAIN |  TIME   RAIN |  TIME   RAIN |  TIME   RAIN
     hrs   mm/hr |  hrs   mm/hr |  hrs   mm/hr |  hrs   mm/hr
    0.00   3.81 |  0.75   8.28 |  1.50  28.53 |  2.25   6.13
    0.08   4.04 |  0.83   9.65 |  1.58  20.00 |  2.33   5.67
    0.17   4.30 |  0.92  11.63 |  1.67  15.41 |  2.42   5.28
    0.25   4.60 |  1.00  14.69 |  1.75  12.56 |  2.50   4.95
    0.33   4.95 |  1.08  20.08 |  1.83  10.62 |  2.58   4.66
    0.42   5.36 |  1.17  31.77 |  1.92   9.22 |  2.67   4.40
    0.50   5.87 |  1.25  72.91 |  2.00   8.17 |  2.75   4.17
    0.58   6.48 |  1.33 126.08 |  2.08   7.34 |  2.83   3.97
    0.67   7.26 |  1.42  49.02 |  2.17   6.68 |  2.92   3.79

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

--------------------
| CALIB          |
| NASHYD  (  0210)|  Area   (ha)=   6.83   Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=   0.54

   Unit Hyd Qpeak  (cms)=   0.483

   PEAK FLOW     (cms)=   0.239 (i)
   TIME TO PEAK  (hrs)=   2.000
   RUNOFF VOLUME  (mm)=  18.087
   TOTAL RAINFALL (mm)=  46.025
   RUNOFF COEFFICIENT  =   0.393

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

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

--------------------
| CALIB          |
| STANDHYD (  0205)|  Area   (ha)=   7.90
|ID= 1 DT= 5.0 min |  Total Imp(%)=  20.00   Dir. Conn.(%)=  10.00
--------------------
                    IMPERVIOUS    PERVIOUS (i)
   Surface Area    (ha)=     1.58       6.32
   Dep. Storage    (mm)=     2.00       5.00
   Average Slope    (%)=     2.00       5.00
   Length          (m)=   229.49     250.00
   Mannings n          =     0.013      0.250

   Max.Eff.Inten.(mm/hr)=   126.08      22.44
         over (min)        5.00      35.00
   Storage Coeff.  (min)=    3.11 (ii)  32.38 (ii)
   Unit Hyd. Tpeak (min)=    5.00      35.00
   Unit Hyd. peak  (cms)=    0.27       0.03
                                *TOTALS*
   PEAK FLOW     (cms)=      0.25       0.22       0.281 (iii)
   TIME TO PEAK  (hrs)=      1.42       2.00       1.42
   RUNOFF VOLUME  (mm)=     44.03      15.32      18.19
   TOTAL RAINFALL (mm)=     46.03      46.03      46.03
```



```
   RUNOFF COEFFICIENT  =   0.96       0.33       0.40

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

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* = 76.0   Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

--------------------
| ADD HYD  (  0003)|
|  1 +  2 =  3    |       AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
     ID1= 1 (  0205):    7.90   0.281     1.42    18.19
   + ID2= 2 (  0210):    6.83   0.239     2.00    18.09
     ==========================================================
     ID = 3 (  0003):   14.73   0.478     2.00    18.14

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB          |
| NASHYD  (  0200)|  Area   (ha)=  20.32   Curve Number  (CN)= 80.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=   0.43

   Unit Hyd Qpeak  (cms)=   1.805

   PEAK FLOW     (cms)=   0.739 (i)
   TIME TO PEAK  (hrs)=   1.917
   RUNOFF VOLUME  (mm)=  16.101
   TOTAL RAINFALL (mm)=  46.025
   RUNOFF COEFFICIENT  =   0.350

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

--------------------------------------------------------------------------------
--------------------
| CALIB          |
| NASHYD  (  0201)|  Area   (ha)=   3.17   Curve Number  (CN)= 77.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=   0.16

   Unit Hyd Qpeak  (cms)=   0.757

   PEAK FLOW     (cms)=   0.187 (i)
   TIME TO PEAK  (hrs)=   1.583
   RUNOFF VOLUME  (mm)=  14.333
   TOTAL RAINFALL (mm)=  46.025
```

```
    RUNOFF COEFFICIENT  =  0.311

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

---------------------------------------------------------------------------
-------------------
| CALIB           |
| STANDHYD (  0202)|  Area   (ha)=  4.57
|ID= 1 DT= 5.0 min |  Total Imp(%)= 40.00  Dir. Conn.(%)= 32.00
-------------------
                    IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=     1.83       2.74
    Dep. Storage    (mm)=     2.00       5.00
    Average Slope   (%)=      5.00       5.00
    Length          (m)=    500.00     500.00
    Mannings n      =       0.013      0.250

    Max.Eff.Inten.(mm/hr)=   126.08      13.70
          over (min)        5.00       60.00
    Storage Coeff.  (min)=    3.77 (ii)  57.82 (ii)
    Unit Hyd. Tpeak (min)=    5.00       60.00
    Unit Hyd. peak  (cms)=    0.25        0.02
                              *TOTALS*
    PEAK FLOW       (cms)=    0.44       0.06       0.446 (iii)
    TIME TO PEAK    (hrs)=    1.42       2.42       1.42
    RUNOFF VOLUME   (mm)=    44.03      13.91      23.54
    TOTAL RAINFALL  (mm)=    46.03      46.03      46.03
    RUNOFF COEFFICIENT  =     0.96       0.30       0.51

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

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* = 73.0   Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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

-------------------
| ADD HYD (  0040)|
|  1 +  2 =  3    |      AREA   QPEAK   TPEAK    R.V.
-------------------          (ha)   (cms)   (hrs)    (mm)
      ID1= 1 (  0201):    3.17  0.187    1.58   14.33
    + ID2= 2 (  0202):    4.57  0.446    1.42   23.54
    ==========================================================
      ID = 3 (  0040):    7.74  0.573    1.42   19.77

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
-------------------
| RESERVOIR(  0032)|    OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |    OUTFLOW    STORAGE   | OUTFLOW    STORAGE
```



```
-------------------      (cms)    (ha.m.)  |  (cms)    (ha.m.)
                       0.0000    0.0000   |  0.1020    0.2824
                       0.0400    0.1208   |  0.1160    0.3268
                       0.0640    0.1775   |  0.1330    0.3659
                       0.0790    0.2218   |  0.0000    0.0000

                          AREA    QPEAK    TPEAK     R.V.
                          (ha)    (cms)    (hrs)     (mm)
  INFLOW : ID= 2 (  0040)     7.740    0.573     1.42     19.77
  OUTFLOW: ID= 1 (  0032)     7.740    0.038     3.42     19.67

            PEAK  FLOW  REDUCTION [Qout/Qin](%)=  6.68
            TIME SHIFT OF PEAK FLOW       (min)=120.00
            MAXIMUM  STORAGE  USED      (ha.m.)=  0.1157

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

-------------------
| ADD HYD (  0001)|
|  1 +  2 =  3    |      AREA   QPEAK   TPEAK    R.V.
-------------------          (ha)   (cms)   (hrs)    (mm)
      ID1= 1 (  0200):   20.32  0.739    1.92   16.10
    + ID2= 2 (  0032):    7.74  0.038    3.42   19.67
    ==========================================================
      ID = 3 (  0001):   28.06  0.766    1.92   17.09

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
-------------------
| CALIB           |
| NASHYD (  0215)|  Area   (ha)= 15.80  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.70

    Unit Hyd Qpeak  (cms)=  0.862

    PEAK FLOW       (cms)=  0.460 (i)
    TIME TO PEAK    (hrs)=  2.250
    RUNOFF VOLUME   (mm)=  18.088
    TOTAL RAINFALL  (mm)=  46.025
    RUNOFF COEFFICIENT  =  0.393

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

---------------------------------------------------------------------------
-------------------
| CALIB           |
| NASHYD (  0203)|  Area   (ha)=  1.61  Curve Number  (CN)= 76.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.24

    Unit Hyd Qpeak  (cms)=  0.256

    PEAK FLOW       (cms)=  0.073 (i)
```



```
    TIME TO PEAK    (hrs)=  1.667
    RUNOFF VOLUME   (mm)=  13.869
    TOTAL RAINFALL  (mm)=  46.025
    RUNOFF COEFFICIENT  =  0.301

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

---------------------------------------------------------------------------
-------------------
| CALIB           |
| STANDHYD (  0204)|  Area   (ha)=  1.93
|ID= 1 DT= 5.0 min |  Total Imp(%)= 60.00  Dir. Conn.(%)= 48.00
-------------------
                    IMPERVIOUS    PERVIOUS (i)
    Surface Area    (ha)=     1.16       0.77
    Dep. Storage    (mm)=     2.00       5.00
    Average Slope   (%)=      1.00       1.00
    Length          (m)=    300.00     300.00
    Mannings n      =       0.013      0.250

    Max.Eff.Inten.(mm/hr)=   126.08      16.03
          over (min)        5.00       70.00
    Storage Coeff.  (min)=    4.50 (ii)  65.04 (ii)
    Unit Hyd. Tpeak (min)=    5.00       70.00
    Unit Hyd. peak  (cms)=    0.23        0.02
                              *TOTALS*
    PEAK FLOW       (cms)=    0.27       0.02       0.268 (iii)
    TIME TO PEAK    (hrs)=    1.42       2.58       1.42
    RUNOFF VOLUME   (mm)=    44.03      15.06      28.94
    TOTAL RAINFALL  (mm)=    46.03      46.03      46.03
    RUNOFF COEFFICIENT  =     0.96       0.33       0.63

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

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

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

-------------------
| ADD HYD (  0042)|
|  1 +  2 =  3    |      AREA   QPEAK   TPEAK    R.V.
-------------------          (ha)   (cms)   (hrs)    (mm)
      ID1= 1 (  0203):    1.61  0.073    1.67   13.87
    + ID2= 2 (  0204):    1.93  0.268    1.42   28.94
    ==========================================================
      ID = 3 (  0042):    3.54  0.300    1.42   22.09

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



```
-------------------
| ADD HYD (  0042)|
|  3 +  2 =  1    |      AREA   QPEAK   TPEAK    R.V.
-------------------          (ha)   (cms)   (hrs)    (mm)
      ID1= 3 (  0042):    3.54  0.300    1.42   22.09
    + ID2= 2 (  0215):   15.80  0.460    2.25   18.09
    ==========================================================
      ID = 1 (  0042):   19.34  0.521    2.17   18.82

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
-------------------
| RESERVOIR(  0025)|    OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |    OUTFLOW    STORAGE   | OUTFLOW    STORAGE
-------------------      (cms)    (ha.m.)  |  (cms)    (ha.m.)
                       0.0000    0.0000   |  0.6300    0.4548
                       0.2600    0.1908   |  0.7100    0.5242
                       0.3900    0.2842   |  0.8100    0.5932
                       0.4900    0.3533   |  1.4000    1.1965

                          AREA    QPEAK    TPEAK     R.V.
                          (ha)    (cms)    (hrs)     (mm)
  INFLOW : ID= 2 (  0042)    19.340    0.521     2.17     18.82
  OUTFLOW: ID= 1 (  0025)    19.340    0.256     3.25     18.81

            PEAK  FLOW  REDUCTION [Qout/Qin](%)= 49.12
            TIME SHIFT OF PEAK FLOW       (min)= 65.00
            MAXIMUM  STORAGE  USED      (ha.m.)=  0.1878

---------------------------------------------------------------------------
-------------------
| CALIB           |
| NASHYD (  0225)|  Area   (ha)=  3.98  Curve Number  (CN)= 81.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
-------------------  U.H. Tp(hrs)=  0.62

    Unit Hyd Qpeak  (cms)=  0.245

    PEAK FLOW       (cms)=  0.116 (i)
    TIME TO PEAK    (hrs)=  2.167
    RUNOFF VOLUME   (mm)=  16.729
    TOTAL RAINFALL  (mm)=  46.025
    RUNOFF COEFFICIENT  =  0.363

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

---------------------------------------------------------------------------
-------------------
| CALIB           |
| STANDHYD (  0220)|  Area   (ha)=  5.63
|ID= 1 DT= 5.0 min |  Total Imp(%)= 42.00  Dir. Conn.(%)= 34.00
-------------------
                    IMPERVIOUS    PERVIOUS (i)
```

```
    Surface Area    (ha)=      2.36       3.27
    Dep. Storage    (mm)=      2.00       5.00
    Average Slope   (%)=       2.00       2.00
    Length          (m)=     250.00      40.00
    Mannings n          =     0.013      0.250

    Max.Eff.Inten.(mm/hr)=    126.08      46.37
          over (min)          5.00       15.00
    Storage Coeff.  (min)=    3.28 (ii)  12.87 (ii)
    Unit Hyd. Tpeak (min)=    5.00       15.00
    Unit Hyd. peak  (cms)=    0.27       0.08
                              *TOTALS*
    PEAK FLOW       (cms)=    0.60       0.24       0.701 (iii)
    TIME TO PEAK    (hrs)=    1.42       1.58       1.42
    RUNOFF VOLUME   (mm)=     44.03      17.79      26.71
    TOTAL RAINFALL  (mm)=     46.03      46.03      46.03
    RUNOFF COEFFICIENT  =     0.96       0.39       0.58

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

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* = 80.0   Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 0050)|   OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min     |   OUTFLOW   STORAGE  | OUTFLOW   STORAGE
--------------------     (cms)    (ha.m.) |  (cms)    (ha.m.)
                    0.0000   0.0000  |  0.5800   0.1023
                    0.2500   0.0493  |  0.6600   0.1189
                    0.3700   0.0684  |  0.7600   0.1366
                    0.4600   0.0822  |  0.7800   0.1400

                       AREA    QPEAK    TPEAK     R.V.
                       (ha)    (cms)    (hrs)     (mm)
  INFLOW : ID= 2 (  0220)     5.630    0.701     1.42     26.71
  OUTFLOW: ID= 1 (  0050)     5.630    0.283     1.75     26.70

            PEAK  FLOW  REDUCTION [Qout/Qin](%)= 40.36
            TIME SHIFT OF PEAK FLOW       (min)= 20.00
            MAXIMUM  STORAGE  USED      (ha.m.)= 0.0547

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

--------------------
| ADD HYD  (  0002)|
|  1 +  2 =  3   |      AREA    QPEAK    TPEAK    R.V.
--------------------     (ha)    (cms)    (hrs)    (mm)
     ID1= 1 (  0225):    3.98   0.116    2.17    16.73
   + ID2= 2 (  0025):   19.34   0.256    3.25    18.81
```



```
    ==========
    ID = 3 (  0002):   23.32   0.317    2.92    18.46

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

--------------------
| ADD HYD  (  0002)|
|  3 +  2 =  1   |      AREA    QPEAK    TPEAK    R.V.
--------------------     (ha)    (cms)    (hrs)    (mm)
     ID1= 3 (  0002):   23.32   0.317    2.92    18.46
   + ID2= 2 (  0050):    5.63   0.283    1.75    26.70
    ==========
    ID = 1 (  0002):   28.95   0.492    2.17    20.06

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


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

    OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO   TM
   O   O    T      T    H   H   Y Y   MM MM  O   O
   O   O    T      T    H   H    Y    M M M  O   O
    OOO     T      T    H   H    Y    M   M   OOO
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            ***** DETAILED  OUTPUT *****


 Input  filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
 Output  filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\8354b6b5-
bb4d-4561-88f9-011292a4a2b9\scen
 Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-
26df3e227620\8354b6b5-bb4d-4561-88f9-011292a4a2b9\scen


DATE: 03/11/2024                  TIME: 11:39:27

USER:


COMMENTS: _____
```



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--------------------------------------------------------------------------------------------------------
 **************************************************
 ** SIMULATION : Regional (HH_48hr)          **
 **************************************************


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|   READ STORM    |   Filename: C:\Users\nyokich\AppD
|                 |           ata\Local\Temp\
|                 |           5e49fc0a-79f7-4237-8582-77f9360bb4e5\36cc42a6
| Ptotal=285.00 mm |   Comments: Regional_HH
--------------------
          TIME   RAIN |  TIME   RAIN |'  TIME   RAIN |  TIME   RAIN
          hrs  mm/hr |  hrs  mm/hr |'  hrs  mm/hr |  hrs  mm/hr
          0.00   2.00 | 12.00   2.00 | 24.00   2.00 | 36.00   6.00
          0.25   2.00 | 12.25   2.00 | 24.25   2.00 | 36.25   6.00
          0.50   2.00 | 12.50   2.00 | 24.50   2.00 | 36.50   6.00
          0.75   2.00 | 12.75   2.00 | 24.75   2.00 | 36.75   6.00
          1.00   2.00 | 13.00   2.00 | 25.00   2.00 | 37.00   4.00
          1.25   2.00 | 13.25   2.00 | 25.25   2.00 | 37.25   4.00
          1.50   2.00 | 13.50   2.00 | 25.50   2.00 | 37.50   4.00
          1.75   2.00 | 13.75   2.00 | 25.75   2.00 | 37.75   4.00
          2.00   2.00 | 14.00   2.00 | 26.00   2.00 | 38.00   6.00
          2.25   2.00 | 14.25   2.00 | 26.25   2.00 | 38.25   6.00
          2.50   2.00 | 14.50   2.00 | 26.50   2.00 | 38.50   6.00
          2.75   2.00 | 14.75   2.00 | 26.75   2.00 | 38.75   6.00
          3.00   2.00 | 15.00   2.00 | 27.00   2.00 | 39.00  13.00
          3.25   2.00 | 15.25   2.00 | 27.25   2.00 | 39.25  13.00
          3.50   2.00 | 15.50   2.00 | 27.50   2.00 | 39.50  13.00
          3.75   2.00 | 15.75   2.00 | 27.75   2.00 | 39.75  13.00
          4.00   2.00 | 16.00   2.00 | 28.00   2.00 | 40.00  17.00
          4.25   2.00 | 16.25   2.00 | 28.25   2.00 | 40.25  17.00
          4.50   2.00 | 16.50   2.00 | 28.50   2.00 | 40.50  17.00
          4.75   2.00 | 16.75   2.00 | 28.75   2.00 | 40.75  17.00
          5.00   2.00 | 17.00   2.00 | 29.00   2.00 | 41.00  13.00
          5.25   2.00 | 17.25   2.00 | 29.25   2.00 | 41.25  13.00
          5.50   2.00 | 17.50   2.00 | 29.50   2.00 | 41.50  13.00
          5.75   2.00 | 17.75   2.00 | 29.75   2.00 | 41.75  13.00
          6.00   2.00 | 18.00   2.00 | 30.00   2.00 | 42.00  23.00
          6.25   2.00 | 18.25   2.00 | 30.25   2.00 | 42.25  23.00
          6.50   2.00 | 18.50   2.00 | 30.50   2.00 | 42.50  23.00
          6.75   2.00 | 18.75   2.00 | 30.75   2.00 | 42.75  23.00
          7.00   2.00 | 19.00   2.00 | 31.00   2.00 | 43.00  13.00
          7.25   2.00 | 19.25   2.00 | 31.25   2.00 | 43.25  13.00
          7.50   2.00 | 19.50   2.00 | 31.50   2.00 | 43.50  13.00
          7.75   2.00 | 19.75   2.00 | 31.75   2.00 | 43.75  13.00
          8.00   2.00 | 20.00   2.00 | 32.00   2.00 | 44.00  13.00
          8.25   2.00 | 20.25   2.00 | 32.25   2.00 | 44.25  13.00
          8.50   2.00 | 20.50   2.00 | 32.50   2.00 | 44.50  13.00
          8.75   2.00 | 20.75   2.00 | 32.75   2.00 | 44.75  13.00
          9.00   2.00 | 21.00   2.00 | 33.00   2.00 | 45.00  53.00
          9.25   2.00 | 21.25   2.00 | 33.25   2.00 | 45.25  53.00
          9.50   2.00 | 21.50   2.00 | 33.50   2.00 | 45.50  53.00
          9.75   2.00 | 21.75   2.00 | 33.75   2.00 | 45.75  53.00
```



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         10.00   2.00 | 22.00   2.00 | 34.00   2.00 | 46.00  38.00
         10.25   2.00 | 22.25   2.00 | 34.25   2.00 | 46.25  38.00
         10.50   2.00 | 22.50   2.00 | 34.50   2.00 | 46.50  38.00
         10.75   2.00 | 22.75   2.00 | 34.75   2.00 | 46.75  38.00
         11.00   2.00 | 23.00   2.00 | 35.00   3.00 | 47.00  13.00
         11.25   2.00 | 23.25   2.00 | 35.25   3.00 | 47.25  13.00
         11.50   2.00 | 23.50   2.00 | 35.50   3.00 | 47.50  13.00
         11.75   2.00 | 23.75   2.00 | 35.75   3.00 | 47.75  13.00

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| CALIB           |
| NASHYD  (  0210)|  Area   (ha)=  6.83  Curve Number  (CN)= 83.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=  0.54

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


                  ---- TRANSFORMED HYETOGRAPH ----
          TIME   RAIN |  TIME   RAIN |'  TIME   RAIN |  TIME   RAIN
          hrs  mm/hr |  hrs  mm/hr |'  hrs  mm/hr |  hrs  mm/hr
         0.083   2.00 |12.083   2.00 |24.083   2.00 | 36.08   6.00
         0.167   2.00 |12.167   2.00 |24.167   2.00 | 36.17   6.00
         0.250   2.00 |12.250   2.00 |24.250   2.00 | 36.25   6.00
         0.333   2.00 |12.333   2.00 |24.333   2.00 | 36.33   6.00
         0.417   2.00 |12.417   2.00 |24.417   2.00 | 36.42   6.00
         0.500   2.00 |12.500   2.00 |24.500   2.00 | 36.50   6.00
         0.583   2.00 |12.583   2.00 |24.583   2.00 | 36.58   6.00
         0.667   2.00 |12.667   2.00 |24.667   2.00 | 36.67   6.00
         0.750   2.00 |12.750   2.00 |24.750   2.00 | 36.75   6.00
         0.833   2.00 |12.833   2.00 |24.833   2.00 | 36.83   6.00
         0.917   2.00 |12.917   2.00 |24.917   2.00 | 36.92   6.00
         1.000   2.00 |13.000   2.00 |25.000   2.00 | 37.00   6.00
         1.083   2.00 |13.083   2.00 |25.083   2.00 | 37.08   4.00
         1.167   2.00 |13.167   2.00 |25.167   2.00 | 37.17   4.00
         1.250   2.00 |13.250   2.00 |25.250   2.00 | 37.25   4.00
         1.333   2.00 |13.333   2.00 |25.333   2.00 | 37.33   4.00
         1.417   2.00 |13.417   2.00 |25.417   2.00 | 37.42   4.00
         1.500   2.00 |13.500   2.00 |25.500   2.00 | 37.50   4.00
         1.583   2.00 |13.583   2.00 |25.583   2.00 | 37.58   4.00
         1.667   2.00 |13.667   2.00 |25.667   2.00 | 37.67   4.00
         1.750   2.00 |13.750   2.00 |25.750   2.00 | 37.75   4.00
         1.833   2.00 |13.833   2.00 |25.833   2.00 | 37.83   4.00
         1.917   2.00 |13.917   2.00 |25.917   2.00 | 37.92   4.00
         2.000   2.00 |14.000   2.00 |26.000   2.00 | 38.00   4.00
         2.083   2.00 |14.083   2.00 |26.083   2.00 | 38.08   6.00
         2.167   2.00 |14.167   2.00 |26.167   2.00 | 38.17   6.00
         2.250   2.00 |14.250   2.00 |26.250   2.00 | 38.25   6.00
         2.333   2.00 |14.333   2.00 |26.333   2.00 | 38.33   6.00
         2.417   2.00 |14.417   2.00 |26.417   2.00 | 38.42   6.00
         2.500   2.00 |14.500   2.00 |26.500   2.00 | 38.50   6.00
         2.583   2.00 |14.583   2.00 |26.583   2.00 | 38.58   6.00
```

2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01

7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00

file:///V|...%20Updated%20EA%20Analysis/VO/Detailed%20Output/Proposed%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:44:24 AM]

11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.836 (i)
TIME TO PEAK (hrs)= 46.333
RUNOFF VOLUME (mm)= 236.119
TOTAL RAINFALL (mm)= 285.000
RUNOFF COEFFICIENT = 0.828

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

CALIB
STANDHYD (0205) | Area (ha)= 7.90
ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	229.49	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00

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1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99

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6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00

10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

```
  Max.Eff.Inten.(mm/hr)=    53.00      56.01
        over (min)          5.00      25.00
  Storage Coeff.  (min)=    4.40 (ii)  24.70 (ii)
  Unit Hyd. Tpeak (min)=    5.00       25.00
  Unit Hyd. peak  (cms)=    0.23       0.05
                          *TOTALS*
  PEAK FLOW     (cms)=      0.12       0.89       0.985 (iii)
  TIME TO PEAK  (hrs)=      46.00      46.17      46.00
  RUNOFF VOLUME (mm)=     283.00     223.70     229.63
  TOTAL RAINFALL (mm)=    285.00     285.00     285.00
  RUNOFF COEFFICIENT  =     0.99       0.78       0.81

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

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* = 76.0   Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0003)|
|  1 +  2 =  3   |      AREA   QPEAK   TPEAK   R.V.
--------------------     (ha)   (cms)   (hrs)    (mm)
     ID1= 1 (  0205):    7.90   0.985   46.00   229.63
   + ID2= 2 (  0210):    6.83   0.836   46.33   236.12
     ==========================================================
     ID = 3 (  0003):   14.73   1.796   46.17   232.64

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB          |
| NASHYD  (  0200)|  Area   (ha)=  20.32  Curve Number  (CN)= 80.0
|ID= 1 DT= 5.0 min |  Ia     (mm)=  5.00  # of Linear Res.(N)= 3.00
--------------------  U.H. Tp(hrs)=  0.43

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00

3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00

8.167	2.00	20.167	2.00	32.167	2.00	44.17 13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25 13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33 13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42 13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50 13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58 13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67 13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75 13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83 13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92 13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00 13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08 52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17 53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25 53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33 53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42 53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50 53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58 53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67 53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75 53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83 53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92 53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00 53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08 38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17 38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25 38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33 38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42 38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50 38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58 38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67 38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75 38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83 38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92 38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00 38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08 13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17 13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25 13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33 13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42 13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50 13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58 13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67 13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75 13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83 13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92 13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00 13.00

Unit Hyd Qpeak (cms)= 1.805

PEAK FLOW (cms)= 2.595 (i)
TIME TO PEAK (hrs)= 46.167
RUNOFF VOLUME (mm)= 228.218
TOTAL RAINFALL (mm)= 285.000

RUNOFF COEFFICIENT = 0.801

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

CALIB
NASHYD (0201)| Area (ha)= 3.17 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.16

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00

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3.167	2.00	15.167	2.00	27.167	2.00	39.17 13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25 13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33 13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42 13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50 13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58 13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67 13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75 13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83 13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92 13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00 13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08 17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17 17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25 17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33 17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42 17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50 17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58 17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67 17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75 17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83 17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92 17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00 17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08 13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17 13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25 13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33 13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42 13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50 13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58 13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67 13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75 13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83 13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92 13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00 13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08 22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17 23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25 23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33 23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42 23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50 23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58 23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67 23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75 23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83 23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92 23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00 23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08 13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17 13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25 13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33 13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42 13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50 13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58 13.00

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7.667	2.00	19.667	2.00	31.667	2.00	43.67 13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75 13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83 13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92 13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00 13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08 13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17 13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25 13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33 13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42 13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50 13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58 13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67 13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75 13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83 13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92 13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00 13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08 52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17 53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25 53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33 53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42 53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50 53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58 53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67 53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75 53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83 53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92 53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00 53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08 38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17 38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25 38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33 38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42 38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50 38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58 38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67 38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75 38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83 38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92 38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00 38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08 13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17 13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25 13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33 13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42 13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50 13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58 13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67 13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75 13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83 13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92 13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00 13.00

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Unit Hyd Qpeak (cms)= 0.757

PEAK FLOW (cms)= 0.434 (i)
TIME TO PEAK (hrs)= 46.000
RUNOFF VOLUME (mm)= 219.312
TOTAL RAINFALL (mm)= 285.000
RUNOFF COEFFICIENT = 0.770

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

| CALIB |
| STANDHYD (0202)| Area (ha)= 4.57
|ID= 1 DT= 5.0 min | Total Imp(%)= 40.00 Dir. Conn.(%)= 32.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.83	2.74
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	5.00	5.00
Length (m)=	500.00	500.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

Max.Eff.Inten.(mm/hr)=	53.00	55.38	
over (min)	5.00	40.00	
Storage Coeff. (min)=	5.34 (ii)	36.25 (ii)	
Unit Hyd. Tpeak (min)=	5.00	40.00	
Unit Hyd. peak (cms)=	0.21	0.03	
		TOTALS	
PEAK FLOW (cms)=	0.22	0.35	0.524 (iii)
TIME TO PEAK (hrs)=	46.00	46.42	46.00
RUNOFF VOLUME (mm)=	283.00	216.60	237.84
TOTAL RAINFALL (mm)=	285.00	285.00	285.00
RUNOFF COEFFICIENT =	0.99	0.76	0.83

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 73.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0040)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0201):	3.17	0.434	46.00	219.31
+ ID2= 2 (0202):	4.57	0.524	46.00	237.84
ID = 3 (0040):	7.74	0.957	46.00	230.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0032)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1020	0.2824
	0.0400	0.1208	0.1160	0.3268
	0.0640	0.1775	0.1330	0.3659
	0.0790	0.2218	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0040)	7.740	0.957	46.00	230.25
OUTFLOW: ID= 1 (0032)	7.740	0.367	47.83	230.16

PEAK FLOW REDUCTION [Qout/Qin](%)= 38.32
TIME SHIFT OF PEAK FLOW (min)=110.00
MAXIMUM STORAGE USED (ha.m.)= 0.9037

ADD HYD (0001)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0200):	20.32	2.595	46.17	228.22
+ ID2= 2 (0032):	7.74	0.367	47.83	230.16
ID = 3 (0001):	28.06	2.879	46.17	228.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0215)	Area (ha)= 15.80	Curve Number (CN)= 83.0		
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00		
	U.H. Tp(hrs)= 0.70			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00

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6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00

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10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

Unit Hyd Qpeak (cms)= 0.862

PEAK FLOW (cms)= 1.801 (i)
TIME TO PEAK (hrs)= 46.583
RUNOFF VOLUME (mm)= 236.124
TOTAL RAINFALL (mm)= 285.000
RUNOFF COEFFICIENT = 0.829

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

CALIB				
NASHYD (0203)	Area (ha)= 1.61	Curve Number (CN)= 76.0		
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00		
	U.H. Tp(hrs)= 0.24			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00

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1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00

5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00

10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

Unit Hyd Qpeak (cms)= 0.256

PEAK FLOW (cms)= 0.218 (i)
TIME TO PEAK (hrs)= 46.000
RUNOFF VOLUME (mm)= 217.447
TOTAL RAINFALL (mm)= 285.000
RUNOFF COEFFICIENT = 0.763

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

CALIB
STANDHYD (0204) Area (ha)= 1.93
ID= 1 DT= 5.0 min Total Imp(%)= 60.00 Dir. Conn.(%)= 48.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.16	0.77
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	1.00	1.00
Length (m)=	300.00	300.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00

0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00

4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00

9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

Max.Eff.Inten.(mm/hr)=	53.00	64.18	
over (min)	5.00	45.00	
Storage Coeff. (min)=	6.37 (ii)	41.12 (ii)	
Unit Hyd. Tpeak (min)=	5.00	45.00	
Unit Hyd. peak (cms)=	0.18	0.03	
	TOTALS		
PEAK FLOW (cms)=	0.14	0.11	0.229 (iii)
TIME TO PEAK (hrs)=	46.00	46.58	46.00
RUNOFF VOLUME (mm)=	283.00	221.33	250.92
TOTAL RAINFALL (mm)=	285.00	285.00	285.00
RUNOFF COEFFICIENT =	0.99	0.78	0.88

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

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ADD HYD (0042)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0203):	1.61	0.218	46.00	217.45
+ ID2= 2 (0204):	1.93	0.229	46.00	250.92
ID = 3 (0042):	3.54	0.447	46.00	235.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0042)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0042):	3.54	0.447	46.00	235.70
+ ID2= 2 (0215):	15.80	1.801	46.58	236.12
ID = 1 (0042):	19.34	2.174	46.58	236.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0025)| OVERFLOW IS OFF
IN= 2---> OUT= 1

DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.6300	0.4548
	0.2600	0.1908	0.7100	0.5242
	0.3900	0.2842	0.8100	0.5932
	0.4900	0.3533	1.4000	1.1965

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0042)	19.340	2.174	46.58	236.05
OUTFLOW: ID= 1 (0025)	19.340	1.397	47.75	236.04

PEAK FLOW REDUCTION [Qout/Qin](%)= 64.27
TIME SHIFT OF PEAK FLOW (min)= 70.00
MAXIMUM STORAGE USED (ha.m.)= 1.1938

CALIB					
NASHYD (0225)	Area (ha)=	3.98	Curve Number (CN)=	81.0	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.62			

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

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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00
3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00

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4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00
7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00

8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

Unit Hyd Qpeak (cms)= 0.245

PEAK FLOW (cms)= 0.464 (i)
TIME TO PEAK (hrs)= 46.417
RUNOFF VOLUME (mm)= 230.868
TOTAL RAINFALL (mm)= 285.000
RUNOFF COEFFICIENT = 0.810

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

CALIB
STANDHYD (0220) | Area (ha)= 5.63

|ID= 1 DT= 5.0 min | Total Imp(%)= 42.00 Dir. Conn.(%)= 34.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.36	3.27
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	250.00	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.00	12.083	2.00	24.083	2.00	36.08	6.00
0.167	2.00	12.167	2.00	24.167	2.00	36.17	6.00
0.250	2.00	12.250	2.00	24.250	2.00	36.25	6.00
0.333	2.00	12.333	2.00	24.333	2.00	36.33	6.00
0.417	2.00	12.417	2.00	24.417	2.00	36.42	6.00
0.500	2.00	12.500	2.00	24.500	2.00	36.50	6.00
0.583	2.00	12.583	2.00	24.583	2.00	36.58	6.00
0.667	2.00	12.667	2.00	24.667	2.00	36.67	6.00
0.750	2.00	12.750	2.00	24.750	2.00	36.75	6.00
0.833	2.00	12.833	2.00	24.833	2.00	36.83	6.00
0.917	2.00	12.917	2.00	24.917	2.00	36.92	6.00
1.000	2.00	13.000	2.00	25.000	2.00	37.00	6.00
1.083	2.00	13.083	2.00	25.083	2.00	37.08	4.00
1.167	2.00	13.167	2.00	25.167	2.00	37.17	4.00
1.250	2.00	13.250	2.00	25.250	2.00	37.25	4.00
1.333	2.00	13.333	2.00	25.333	2.00	37.33	4.00
1.417	2.00	13.417	2.00	25.417	2.00	37.42	4.00
1.500	2.00	13.500	2.00	25.500	2.00	37.50	4.00
1.583	2.00	13.583	2.00	25.583	2.00	37.58	4.00
1.667	2.00	13.667	2.00	25.667	2.00	37.67	4.00
1.750	2.00	13.750	2.00	25.750	2.00	37.75	4.00
1.833	2.00	13.833	2.00	25.833	2.00	37.83	4.00
1.917	2.00	13.917	2.00	25.917	2.00	37.92	4.00
2.000	2.00	14.000	2.00	26.000	2.00	38.00	4.00
2.083	2.00	14.083	2.00	26.083	2.00	38.08	6.00
2.167	2.00	14.167	2.00	26.167	2.00	38.17	6.00
2.250	2.00	14.250	2.00	26.250	2.00	38.25	6.00
2.333	2.00	14.333	2.00	26.333	2.00	38.33	6.00
2.417	2.00	14.417	2.00	26.417	2.00	38.42	6.00
2.500	2.00	14.500	2.00	26.500	2.00	38.50	6.00
2.583	2.00	14.583	2.00	26.583	2.00	38.58	6.00
2.667	2.00	14.667	2.00	26.667	2.00	38.67	6.00
2.750	2.00	14.750	2.00	26.750	2.00	38.75	6.00
2.833	2.00	14.833	2.00	26.833	2.00	38.83	6.00
2.917	2.00	14.917	2.00	26.917	2.00	38.92	6.00
3.000	2.00	15.000	2.00	27.000	2.00	39.00	6.00
3.083	2.00	15.083	2.00	27.083	2.00	39.08	13.00
3.167	2.00	15.167	2.00	27.167	2.00	39.17	13.00
3.250	2.00	15.250	2.00	27.250	2.00	39.25	13.00

3.333	2.00	15.333	2.00	27.333	2.00	39.33	13.00
3.417	2.00	15.417	2.00	27.417	2.00	39.42	13.00
3.500	2.00	15.500	2.00	27.500	2.00	39.50	13.00
3.583	2.00	15.583	2.00	27.583	2.00	39.58	13.00
3.667	2.00	15.667	2.00	27.667	2.00	39.67	13.00
3.750	2.00	15.750	2.00	27.750	2.00	39.75	13.00
3.833	2.00	15.833	2.00	27.833	2.00	39.83	13.00
3.917	2.00	15.917	2.00	27.917	2.00	39.92	13.00
4.000	2.00	16.000	2.00	28.000	2.00	40.00	13.00
4.083	2.00	16.083	2.00	28.083	2.00	40.08	17.00
4.167	2.00	16.167	2.00	28.167	2.00	40.17	17.00
4.250	2.00	16.250	2.00	28.250	2.00	40.25	17.00
4.333	2.00	16.333	2.00	28.333	2.00	40.33	17.00
4.417	2.00	16.417	2.00	28.417	2.00	40.42	17.00
4.500	2.00	16.500	2.00	28.500	2.00	40.50	17.00
4.583	2.00	16.583	2.00	28.583	2.00	40.58	17.00
4.667	2.00	16.667	2.00	28.667	2.00	40.67	17.00
4.750	2.00	16.750	2.00	28.750	2.00	40.75	17.00
4.833	2.00	16.833	2.00	28.833	2.00	40.83	17.00
4.917	2.00	16.917	2.00	28.917	2.00	40.92	17.00
5.000	2.00	17.000	2.00	29.000	2.00	41.00	17.00
5.083	2.00	17.083	2.00	29.083	2.00	41.08	13.00
5.167	2.00	17.167	2.00	29.167	2.00	41.17	13.00
5.250	2.00	17.250	2.00	29.250	2.00	41.25	13.00
5.333	2.00	17.333	2.00	29.333	2.00	41.33	13.00
5.417	2.00	17.417	2.00	29.417	2.00	41.42	13.00
5.500	2.00	17.500	2.00	29.500	2.00	41.50	13.00
5.583	2.00	17.583	2.00	29.583	2.00	41.58	13.00
5.667	2.00	17.667	2.00	29.667	2.00	41.67	13.00
5.750	2.00	17.750	2.00	29.750	2.00	41.75	13.00
5.833	2.00	17.833	2.00	29.833	2.00	41.83	13.00
5.917	2.00	17.917	2.00	29.917	2.00	41.92	13.00
6.000	2.00	18.000	2.00	30.000	2.00	42.00	13.00
6.083	2.00	18.083	2.00	30.083	2.00	42.08	22.99
6.167	2.00	18.167	2.00	30.167	2.00	42.17	23.00
6.250	2.00	18.250	2.00	30.250	2.00	42.25	23.00
6.333	2.00	18.333	2.00	30.333	2.00	42.33	23.00
6.417	2.00	18.417	2.00	30.417	2.00	42.42	23.00
6.500	2.00	18.500	2.00	30.500	2.00	42.50	23.00
6.583	2.00	18.583	2.00	30.583	2.00	42.58	23.00
6.667	2.00	18.667	2.00	30.667	2.00	42.67	23.00
6.750	2.00	18.750	2.00	30.750	2.00	42.75	23.00
6.833	2.00	18.833	2.00	30.833	2.00	42.83	23.00
6.917	2.00	18.917	2.00	30.917	2.00	42.92	23.00
7.000	2.00	19.000	2.00	31.000	2.00	43.00	23.00
7.083	2.00	19.083	2.00	31.083	2.00	43.08	13.01
7.167	2.00	19.167	2.00	31.167	2.00	43.17	13.00
7.250	2.00	19.250	2.00	31.250	2.00	43.25	13.00
7.333	2.00	19.333	2.00	31.333	2.00	43.33	13.00
7.417	2.00	19.417	2.00	31.417	2.00	43.42	13.00
7.500	2.00	19.500	2.00	31.500	2.00	43.50	13.00
7.583	2.00	19.583	2.00	31.583	2.00	43.58	13.00
7.667	2.00	19.667	2.00	31.667	2.00	43.67	13.00
7.750	2.00	19.750	2.00	31.750	2.00	43.75	13.00

7.833	2.00	19.833	2.00	31.833	2.00	43.83	13.00
7.917	2.00	19.917	2.00	31.917	2.00	43.92	13.00
8.000	2.00	20.000	2.00	32.000	2.00	44.00	13.00
8.083	2.00	20.083	2.00	32.083	2.00	44.08	13.00
8.167	2.00	20.167	2.00	32.167	2.00	44.17	13.00
8.250	2.00	20.250	2.00	32.250	2.00	44.25	13.00
8.333	2.00	20.333	2.00	32.333	2.00	44.33	13.00
8.417	2.00	20.417	2.00	32.417	2.00	44.42	13.00
8.500	2.00	20.500	2.00	32.500	2.00	44.50	13.00
8.583	2.00	20.583	2.00	32.583	2.00	44.58	13.00
8.667	2.00	20.667	2.00	32.667	2.00	44.67	13.00
8.750	2.00	20.750	2.00	32.750	2.00	44.75	13.00
8.833	2.00	20.833	2.00	32.833	2.00	44.83	13.00
8.917	2.00	20.917	2.00	32.917	2.00	44.92	13.00
9.000	2.00	21.000	2.00	33.000	2.00	45.00	13.00
9.083	2.00	21.083	2.00	33.083	2.00	45.08	52.95
9.167	2.00	21.167	2.00	33.167	2.00	45.17	53.00
9.250	2.00	21.250	2.00	33.250	2.00	45.25	53.00
9.333	2.00	21.333	2.00	33.333	2.00	45.33	53.00
9.417	2.00	21.417	2.00	33.417	2.00	45.42	53.00
9.500	2.00	21.500	2.00	33.500	2.00	45.50	53.00
9.583	2.00	21.583	2.00	33.583	2.00	45.58	53.00
9.667	2.00	21.667	2.00	33.667	2.00	45.67	53.00
9.750	2.00	21.750	2.00	33.750	2.00	45.75	53.00
9.833	2.00	21.833	2.00	33.833	2.00	45.83	53.00
9.917	2.00	21.917	2.00	33.917	2.00	45.92	53.00
10.000	2.00	22.000	2.00	34.000	2.00	46.00	53.00
10.083	2.00	22.083	2.00	34.083	2.00	46.08	38.02
10.167	2.00	22.167	2.00	34.167	2.00	46.17	38.00
10.250	2.00	22.250	2.00	34.250	2.00	46.25	38.00
10.333	2.00	22.333	2.00	34.333	2.00	46.33	38.00
10.417	2.00	22.417	2.00	34.417	2.00	46.42	38.00
10.500	2.00	22.500	2.00	34.500	2.00	46.50	38.00
10.583	2.00	22.583	2.00	34.583	2.00	46.58	38.00
10.667	2.00	22.667	2.00	34.667	2.00	46.67	38.00
10.750	2.00	22.750	2.00	34.750	2.00	46.75	38.00
10.833	2.00	22.833	2.00	34.833	2.00	46.83	38.00
10.917	2.00	22.917	2.00	34.917	2.00	46.92	38.00
11.000	2.00	23.000	2.00	35.000	2.00	47.00	38.00
11.083	2.00	23.083	2.00	35.083	3.00	47.08	13.04
11.167	2.00	23.167	2.00	35.167	3.00	47.17	13.00
11.250	2.00	23.250	2.00	35.250	3.00	47.25	13.00
11.333	2.00	23.333	2.00	35.333	3.00	47.33	13.00
11.417	2.00	23.417	2.00	35.417	3.00	47.42	13.00
11.500	2.00	23.500	2.00	35.500	3.00	47.50	13.00
11.583	2.00	23.583	2.00	35.583	3.00	47.58	13.00
11.667	2.00	23.667	2.00	35.667	3.00	47.67	13.00
11.750	2.00	23.750	2.00	35.750	3.00	47.75	13.00
11.833	2.00	23.833	2.00	35.833	3.00	47.83	13.00
11.917	2.00	23.917	2.00	35.917	3.00	47.92	13.00
12.000	2.00	24.000	2.00	36.000	3.00	48.00	13.00

Max.Eff.Inten.(mm/hr)= 53.00 57.93
over (min) 5.00 15.00

Storage Coeff. (min)= 4.64 (ii) 13.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

TOTALS

PEAK FLOW (cms)= 0.28 0.52 0.798 (iii)
TIME TO PEAK (hrs)= 46.00 46.00 46.00
RUNOFF VOLUME (mm)= 283.00 234.06 250.70
TOTAL RAINFALL (mm)= 285.00 285.00 285.00
RUNOFF COEFFICIENT = 0.99 0.82 0.88

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0050)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min | OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 0.5800 0.1023
0.2500 0.0493 | 0.6600 0.1189
0.3700 0.0684 | 0.7600 0.1366
0.4600 0.0822 | 0.7800 0.1400

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0220) 5.630 0.798 46.00 250.70
OUTFLOW: ID= 1 (0050) 5.630 0.681 46.17 250.69

PEAK FLOW REDUCTION [Qout/Qin](%)= 85.33
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.1229

| ADD HYD (0002)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0225): 3.98 0.464 46.42 230.87
+ ID2= 2 (0025): 19.34 1.397 47.75 236.04
ID = 3 (0002): 23.32 1.755 47.25 235.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0002)|

| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0002): 23.32 1.755 47.25 235.16
+ ID2= 2 (0050): 5.63 0.681 46.17 250.69
ID = 1 (0002): 28.95 2.347 47.08 238.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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

OOO TTTTT TTTTT H H Y Y M M OOO TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
OOO T T H H Y M M OOO
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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\f6006141-f7c1-467c-9bdb-412a2d9d1fdf\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\f6006141-f7c1-467c-9bdb-412a2d9d1fdf\scen

DATE: 03/11/2024 TIME: 11:39:28

USER:

COMMENTS: _____

****
** SIMULATION : SCS_100yr **
****

| READ STORM | Filename: C:\Users\nyokich\AppD

| ata\Local\Temp\
| 5e49fc0a-79f7-4237-8582-77f9360bb4e5\ef8dc614
| Ptotal=127.20 mm | Comments: SCS_100yr

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	1.40	6.00	2.54	12.00	18.32	18.00	2.29
0.25	1.40	6.25	2.54	12.25	18.32	18.25	2.29
0.50	1.40	6.50	2.54	12.50	9.41	18.50	2.29
0.75	1.40	6.75	2.54	12.75	9.41	18.75	2.29
1.00	1.40	7.00	2.54	13.00	6.87	19.00	2.29
1.25	1.40	7.25	2.54	13.25	6.87	19.25	2.29
1.50	1.40	7.50	2.54	13.50	5.34	19.50	2.29
1.75	1.40	7.75	2.54	13.75	5.34	19.75	2.29
2.00	1.65	8.00	3.43	14.00	3.82	20.00	1.53
2.25	1.65	8.25	3.43	14.25	3.82	20.25	1.53
2.50	1.65	8.50	3.43	14.50	3.82	20.50	1.53
2.75	1.65	8.75	3.43	14.75	3.82	20.75	1.53
3.00	1.65	9.00	4.07	15.00	3.82	21.00	1.53
3.25	1.65	9.25	4.07	15.25	3.82	21.25	1.53
3.50	1.65	9.50	4.58	15.50	3.82	21.50	1.53
3.75	1.65	9.75	4.58	15.75	3.82	21.75	1.53
4.00	2.04	10.00	5.85	16.00	2.29	22.00	1.53
4.25	2.04	10.25	5.85	16.25	2.29	22.25	1.53
4.50	2.04	10.50	7.89	16.50	2.29	22.50	1.53
4.75	2.04	10.75	7.89	16.75	2.29	22.75	1.53
5.00	2.04	11.00	12.21	17.00	2.29	23.00	1.53
5.25	2.04	11.25	12.21	17.25	2.29	23.25	1.53
5.50	2.04	11.50	52.91	17.50	2.29	23.50	1.53
5.75	2.04	11.75	140.43	17.75	2.29	23.75	1.53

| CALIB |
| NASHYD (0210)| Area (ha)= 6.83 Curve Number (CN)= 83.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.54

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29

0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53

5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.756 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 85.707
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.674

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

CALIB							
STANDHYD (0205)	Area (ha)= 7.90						
ID= 1 DT= 5.0 min	Total Imp(%)= 20.00			Dir. Conn.(%)= 10.00			

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	229.49	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29

1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53

5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)=	140.43	93.21	
over (min)	5.00	20.00	
Storage Coeff. (min)=	2.98 (ii)	19.54 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.28	0.06	
	TOTALS		
PEAK FLOW (cms)=	0.31	1.04	1.092 (iii)
TIME TO PEAK (hrs)=	12.00	12.17	12.17
RUNOFF VOLUME (mm)=	125.20	77.65	82.41
TOTAL RAINFALL (mm)=	127.20	127.20	127.20
RUNOFF COEFFICIENT =	0.98	0.61	0.65

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0205):	7.90	1.092	12.17	82.41
+ ID2= 2 (0210):	6.83	0.756	12.42	85.71
ID = 3 (0003):	14.73	1.757	12.25	83.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB							
NASHYD (0200)	Area (ha)= 20.32			Curve Number (CN)= 80.0			
ID= 1 DT= 5.0 min	Ia (mm)= 5.00			# of Linear Res.(N)= 3.00			
U.H. Tp(hrs)= 0.43							

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29

0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53

4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 1.805

PEAK FLOW (cms)= 2.467 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 80.406
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.632

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

CALIB							
NASHYD (0201)	Area (ha)= 3.17	Curve Number (CN)= 77.0					
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00					
	U.H. Tp(hrs)= 0.16						

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29

1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53

5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 0.757

PEAK FLOW (cms)= 0.670 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 75.051
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.590

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

CALIB							
STANDHYD (0202)	Area (ha)= 4.57						
ID= 1 DT= 5.0 min	Total Imp(%)= 40.00	Dir. Conn.(%)= 32.00					

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.83	2.74
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	5.00	5.00
Length (m)=	500.00	500.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29

1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 69.17
over (min) 5.00 35.00

Storage Coeff. (min)= 3.61 (ii) 31.89 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.25 0.03

TOTALS

PEAK FLOW (cms)= 0.56 0.31 0.712 (iii)
TIME TO PEAK (hrs)= 12.00 12.42 12.00
RUNOFF VOLUME (mm)= 125.20 73.30 89.90
TOTAL RAINFALL (mm)= 127.20 127.20 127.20
RUNOFF COEFFICIENT = 0.98 0.58 0.71

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 73.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0040)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0201):	3.17	0.670	12.00	75.05
+ ID2= 2 (0202):	4.57	0.712	12.00	89.90
ID = 3 (0040):	7.74	1.382	12.00	83.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0032)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1020	0.2824
	0.0400	0.1208	0.1160	0.3268
	0.0640	0.1775	0.1330	0.3659
	0.0790	0.2218	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0040)	7.740	1.382	12.00	83.82
OUTFLOW: ID= 1 (0032)	7.740	0.133	13.83	83.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.62
TIME SHIFT OF PEAK FLOW (min)=110.00
MAXIMUM STORAGE USED (ha.m.)= 0.3656

ADD HYD (0001)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0200):	20.32	2.467	12.25	80.41
+ ID2= 2 (0032):	7.74	0.133	13.83	83.72
ID = 3 (0001):	28.06	2.560	12.25	81.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0215)	Area (ha)= 15.80	Curve Number (CN)= 83.0			
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00			
U.H. Tp(hrs)= 0.70					

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 0.862

PEAK FLOW (cms)= 1.454 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 85.709
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.674

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

CALIB					
NASHYD (0203)	Area (ha)= 1.61	Curve Number (CN)= 76.0			

|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
---------- U.H. Tp(hrs)= 0.24

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 0.256

PEAK FLOW (cms)= 0.266 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 73.705
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.579

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

| CALIB |
| STANDHYD (0204)| Area (ha)= 1.93
|ID= 1 DT= 5.0 min | Total Imp(%)= 60.00 Dir. Conn.(%)= 48.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.16	0.77
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	1.00	1.00
Length (m)=	300.00	300.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)=	140.43	73.57	
over (min)	5.00	40.00	
Storage Coeff. (min)=	4.31 (ii)	37.22 (ii)	
Unit Hyd. Tpeak (min)=	5.00	40.00	
Unit Hyd. peak (cms)=	0.23	0.03	
		TOTALS	
PEAK FLOW (cms)=	0.35	0.09	0.395 (iii)
TIME TO PEAK (hrs)=	12.00	12.50	12.00
RUNOFF VOLUME (mm)=	125.20	76.33	99.78
TOTAL RAINFALL (mm)=	127.20	127.20	127.20
RUNOFF COEFFICIENT =	0.98	0.60	0.78

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

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

| ADD HYD (0042)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
---------- (ha) (cms) (hrs) (mm)
ID1= 1 (0203): 1.61 0.266 12.08 73.71
+ ID2= 2 (0204): 1.93 0.395 12.00 99.78
==========
ID = 3 (0042): 3.54 0.631 12.00 87.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0042)					
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 3 (0042):	3.54	0.631	12.00	87.92	
+ ID2= 2 (0215):	15.80	1.454	12.58	85.71	
ID = 1 (0042):	19.34	1.694	12.50	86.11	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0025)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.6300	0.4548
	0.2600	0.1908	0.7100	0.5242
	0.3900	0.2842	0.8100	0.5932
	0.4900	0.3533	1.4000	1.1965

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0042)	19.340	1.694	12.50	86.11
OUTFLOW: ID= 1 (0025)	19.340	0.808	13.58	86.10

PEAK FLOW REDUCTION [Qout/Qin](%)= 47.69
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.5920

CALIB	
NASHYD (0225)| Area (ha)=	3.98 Curve Number (CN)= 81.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)=	0.62	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53
5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Unit Hyd Qpeak (cms)= 0.245

PEAK FLOW (cms)= 0.382 (i)
TIME TO PEAK (hrs)= 12.500
RUNOFF VOLUME (mm)= 82.145
TOTAL RAINFALL (mm)= 127.199
RUNOFF COEFFICIENT = 0.646

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

CALIB	
STANDHYD (0220)| Area (ha)=	5.63
ID= 1 DT= 5.0 min	Total Imp(%)=	42.00 Dir. Conn.(%)= 34.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.36	3.27
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	250.00	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.40	6.083	2.54	12.083	18.33	18.08	2.29
0.167	1.40	6.167	2.54	12.167	18.32	18.17	2.29
0.250	1.40	6.250	2.54	12.250	18.32	18.25	2.29
0.333	1.40	6.333	2.54	12.333	18.32	18.33	2.29
0.417	1.40	6.417	2.54	12.417	18.32	18.42	2.29
0.500	1.40	6.500	2.54	12.500	18.32	18.50	2.29
0.583	1.40	6.583	2.54	12.583	9.41	18.58	2.29
0.667	1.40	6.667	2.54	12.667	9.41	18.67	2.29
0.750	1.40	6.750	2.54	12.750	9.41	18.75	2.29
0.833	1.40	6.833	2.54	12.833	9.41	18.83	2.29
0.917	1.40	6.917	2.54	12.917	9.41	18.92	2.29
1.000	1.40	7.000	2.54	13.000	9.41	19.00	2.29
1.083	1.40	7.083	2.54	13.083	6.87	19.08	2.29
1.167	1.40	7.167	2.54	13.167	6.87	19.17	2.29
1.250	1.40	7.250	2.54	13.250	6.87	19.25	2.29
1.333	1.40	7.333	2.54	13.333	6.87	19.33	2.29
1.417	1.40	7.417	2.54	13.417	6.87	19.42	2.29
1.500	1.40	7.500	2.54	13.500	6.87	19.50	2.29
1.583	1.40	7.583	2.54	13.583	5.34	19.58	2.29
1.667	1.40	7.667	2.54	13.667	5.34	19.67	2.29
1.750	1.40	7.750	2.54	13.750	5.34	19.75	2.29
1.833	1.40	7.833	2.54	13.833	5.34	19.83	2.29
1.917	1.40	7.917	2.54	13.917	5.34	19.92	2.29
2.000	1.40	8.000	2.54	14.000	5.34	20.00	2.29
2.083	1.65	8.083	3.43	14.083	3.82	20.08	1.53
2.167	1.65	8.167	3.43	14.167	3.82	20.17	1.53
2.250	1.65	8.250	3.43	14.250	3.82	20.25	1.53
2.333	1.65	8.333	3.43	14.333	3.82	20.33	1.53
2.417	1.65	8.417	3.43	14.417	3.82	20.42	1.53
2.500	1.65	8.500	3.43	14.500	3.82	20.50	1.53
2.583	1.65	8.583	3.43	14.583	3.82	20.58	1.53
2.667	1.65	8.667	3.43	14.667	3.82	20.67	1.53
2.750	1.65	8.750	3.43	14.750	3.82	20.75	1.53
2.833	1.65	8.833	3.43	14.833	3.82	20.83	1.53
2.917	1.65	8.917	3.43	14.917	3.82	20.92	1.53
3.000	1.65	9.000	3.43	15.000	3.82	21.00	1.53
3.083	1.65	9.083	4.07	15.083	3.82	21.08	1.53
3.167	1.65	9.167	4.07	15.167	3.82	21.17	1.53
3.250	1.65	9.250	4.07	15.250	3.82	21.25	1.53
3.333	1.65	9.333	4.07	15.333	3.82	21.33	1.53
3.417	1.65	9.417	4.07	15.417	3.82	21.42	1.53
3.500	1.65	9.500	4.07	15.500	3.82	21.50	1.53
3.583	1.65	9.583	4.58	15.583	3.82	21.58	1.53
3.667	1.65	9.667	4.58	15.667	3.82	21.67	1.53
3.750	1.65	9.750	4.58	15.750	3.82	21.75	1.53
3.833	1.65	9.833	4.58	15.833	3.82	21.83	1.53
3.917	1.65	9.917	4.58	15.917	3.82	21.92	1.53
4.000	1.65	10.000	4.58	16.000	3.82	22.00	1.53
4.083	2.03	10.083	5.85	16.083	2.29	22.08	1.53
4.167	2.04	10.167	5.85	16.167	2.29	22.17	1.53
4.250	2.04	10.250	5.85	16.250	2.29	22.25	1.53
4.333	2.04	10.333	5.85	16.333	2.29	22.33	1.53
4.417	2.04	10.417	5.85	16.417	2.29	22.42	1.53
4.500	2.04	10.500	5.85	16.500	2.29	22.50	1.53
4.583	2.04	10.583	7.89	16.583	2.29	22.58	1.53
4.667	2.04	10.667	7.89	16.667	2.29	22.67	1.53
4.750	2.04	10.750	7.89	16.750	2.29	22.75	1.53
4.833	2.04	10.833	7.89	16.833	2.29	22.83	1.53
4.917	2.04	10.917	7.89	16.917	2.29	22.92	1.53
5.000	2.04	11.000	7.89	17.000	2.29	23.00	1.53
5.083	2.04	11.083	12.21	17.083	2.29	23.08	1.53
5.167	2.04	11.167	12.21	17.167	2.29	23.17	1.53
5.250	2.04	11.250	12.21	17.250	2.29	23.25	1.53
5.333	2.04	11.333	12.21	17.333	2.29	23.33	1.53
5.417	2.04	11.417	12.21	17.417	2.29	23.42	1.53
5.500	2.04	11.500	12.21	17.500	2.29	23.50	1.53
5.583	2.04	11.583	52.91	17.583	2.29	23.58	1.53
5.667	2.04	11.667	52.91	17.667	2.29	23.67	1.53
5.750	2.04	11.750	52.91	17.750	2.29	23.75	1.53

5.833	2.04	11.833	140.42	17.833	2.29	23.83	1.53
5.917	2.04	11.917	140.43	17.917	2.29	23.92	1.53
6.000	2.04	12.000	140.43	18.000	2.29	24.00	1.53

Max.Eff.Inten.(mm/hr)= 140.43 127.17
over (min) 5.00 10.00
Storage Coeff. (min)= 3.14 (ii) 9.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.27 0.12

TOTALS

PEAK FLOW	(cms)=	0.74	0.88 1.622 (iii)
TIME TO PEAK	(hrs)=	12.00	12.00 12.00
RUNOFF VOLUME	(mm)=	125.20	84.44 98.30
TOTAL RAINFALL	(mm)=	127.20	127.20 127.20
RUNOFF COEFFICIENT	=	0.98	0.66 0.77

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0050)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |

DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.5800	0.1023
	0.2500	0.0493	0.6600	0.1189
	0.3700	0.0684	0.7600	0.1366
	0.4600	0.0822	0.7800	0.1400

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0220)	5.630	1.622	12.00	98.30
OUTFLOW: ID= 1 (0050)	5.630	0.759	12.17	98.29

PEAK FLOW REDUCTION [Qout/Qin](%)= 46.82
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.1377

ADD HYD (0002)			AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3						
	ID1= 1 (0225):		3.98	0.382	12.50	82.15
	+ ID2= 2 (0025):		19.34	0.808	13.58	86.10
	ID = 3 (0002):		23.32	1.012	13.08	85.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0002)			AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3 + 2 = 1						
	ID1= 3 (0002):		23.32	1.012	13.08	85.43
	+ ID2= 2 (0050):		5.63	0.759	12.17	98.29
	ID = 1 (0002):		28.95	1.491	12.50	87.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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

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

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\5b4d618b-3b80-42b8-877b-c4ed71ed8d13\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\5b4d618b-3b80-42b8-877b-c4ed71ed8d13\scen

DATE: 03/11/2024 TIME: 11:39:27

USER:

COMMENTS: _____

****

file:///V|...%20Updated%20EA%20Analysis/VO/Detailed%20Output/Proposed%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:44:24 AM]

** SIMULATION : SCS_10yr **

| READ STORM | Filename: C:\Users\nyokich\AppD ata\Local\Temp\ 5e49fc0a-79f7-4237-8582-77f9360bb4e5\7983e628
| Ptotal= 88.80 mm | Comments: SCS_10yr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.98	6.00	1.78	12.00	12.79	18.00	1.60
0.25	0.98	6.25	1.78	12.25	12.79	18.25	1.60
0.50	0.98	6.50	1.78	12.50	6.57	18.50	1.60
0.75	0.98	6.75	1.78	12.75	6.57	18.75	1.60
1.00	0.98	7.00	1.78	13.00	4.80	19.00	1.60
1.25	0.98	7.25	1.78	13.25	4.80	19.25	1.60
1.50	0.98	7.50	1.78	13.50	3.73	19.50	1.60
1.75	0.98	7.75	1.78	13.75	3.73	19.75	1.60
2.00	1.15	8.00	2.40	14.00	2.66	20.00	1.07
2.25	1.15	8.25	2.40	14.25	2.66	20.25	1.07
2.50	1.15	8.50	2.40	14.50	2.66	20.50	1.07
2.75	1.15	8.75	2.40	14.75	2.66	20.75	1.07
3.00	1.15	9.00	2.84	15.00	2.66	21.00	1.07
3.25	1.15	9.25	2.84	15.25	2.66	21.25	1.07
3.50	1.15	9.50	3.20	15.50	2.66	21.50	1.07
3.75	1.15	9.75	3.20	15.75	2.66	21.75	1.07
4.00	1.42	10.00	4.09	16.00	1.60	22.00	1.07
4.25	1.42	10.25	4.09	16.25	1.60	22.25	1.07
4.50	1.42	10.50	5.51	16.50	1.60	22.50	1.07
4.75	1.42	10.75	5.51	16.75	1.60	22.75	1.07
5.00	1.42	11.00	8.52	17.00	1.60	23.00	1.07
5.25	1.42	11.25	8.52	17.25	1.60	23.25	1.07
5.50	1.42	11.50	36.94	17.50	1.60	23.50	1.07
5.75	1.42	11.75	98.04	17.75	1.60	23.75	1.07

CALIB
NASHYD (0210)| Area (ha)= 6.83 Curve Number (CN)= 83.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.54

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60

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0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07

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4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.455 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 51.701
TOTAL RAINFALL (mm)= 88.801
RUNOFF COEFFICIENT = 0.582

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

CALIB	
STANDHYD (0205)	Area (ha)= 7.90
ID= 1 DT= 5.0 min	Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	229.49	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)=	98.04	47.58	
over (min)	5.00	30.00	
Storage Coeff. (min)=	3.44 (ii)	25.11 (ii)	
Unit Hyd. Tpeak (min)=	5.00	30.00	
Unit Hyd. peak (cms)=	0.26	0.04	
	TOTALS		
PEAK FLOW (cms)=	0.21	0.50	0.532 (iii)
TIME TO PEAK (hrs)=	12.00	12.33	12.33
RUNOFF VOLUME (mm)=	86.80	45.72	49.82
TOTAL RAINFALL (mm)=	88.80	88.80	88.80
RUNOFF COEFFICIENT =	0.98	0.51	0.56

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0205):	7.90	0.532	12.33	49.82
+ ID2= 2 (0210):	6.83	0.455	12.42	51.70
ID = 3 (0003):	14.73	0.981	12.33	50.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (0200)	Area (ha)= 20.32 Curve Number (CN)= 80.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.43

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07

4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 1.805

PEAK FLOW (cms)= 1.449 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 47.671
TOTAL RAINFALL (mm)= 88.801
RUNOFF COEFFICIENT = 0.537

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

CALIB
NASHYD (0201)| Area (ha)= 3.17 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.16

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60

0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07

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5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 0.757

PEAK FLOW (cms)= 0.389 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 43.783
TOTAL RAINFALL (mm)= 88.801
RUNOFF COEFFICIENT = 0.493

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

CALIB
STANDHYD (0202)| Area (ha)= 4.57
ID= 1 DT= 5.0 min | Total Imp(%)= 40.00 Dir. Conn.(%)= 32.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.83	2.74
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	5.00	5.00
Length (m)=	500.00	500.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60

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1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07

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5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 31.99
over (min) 5.00 45.00
Storage Coeff. (min)= 4.17 (ii) 42.67 (ii)
Unit Hyd. Tpeak (min)= 5.00 45.00
Unit Hyd. peak (cms)= 0.24 0.03

TOTALS

PEAK FLOW (cms)= 0.39 0.15 0.445 (iii)
TIME TO PEAK (hrs)= 12.00 12.58 12.00
RUNOFF VOLUME (mm)= 86.80 42.57 56.72
TOTAL RAINFALL (mm)= 88.80 88.80 88.80
RUNOFF COEFFICIENT = 0.98 0.48 0.64

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 73.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0040)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0201):	3.17	0.389	12.00	43.78	
+ ID2= 2 (0202):	4.57	0.445	12.00	56.72	
ID = 3 (0040):	7.74	0.834	12.00	51.42	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0032)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.1020	0.2824
	0.0400	0.1208	0.1160	0.3268
	0.0640	0.1775	0.1330	0.3659
	0.0790	0.2218	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	7.740	0.834	12.00	51.42
OUTFLOW: ID= 1 (0032)	7.740	0.078	14.17	51.32

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.35
TIME SHIFT OF PEAK FLOW (min)=130.00

MAXIMUM STORAGE USED (ha.m.)= 0.2186

ADD HYD (0001)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0200):	20.32	1.449	12.25	47.67	
+ ID2= 2 (0032):	7.74	0.078	14.17	51.32	
ID = 3 (0001):	28.06	1.501	12.25	48.68	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (0215)| Area (ha)= 15.80 Curve Number (CN)= 83.0	
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.70	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07

2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 0.862

PEAK FLOW (cms)= 0.873 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 51.703
TOTAL RAINFALL (mm)= 88.801
RUNOFF COEFFICIENT = 0.582

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

CALIB	
NASHYD (0203)| Area (ha)= 1.61 Curve Number (CN)= 76.0	
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.24	

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07

3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 0.256

PEAK FLOW (cms)= 0.153 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 42.778
TOTAL RAINFALL (mm)= 88.801
RUNOFF COEFFICIENT = 0.482

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

CALIB
STANDHYD (0204)| Area (ha)= 1.93
ID= 1 DT= 5.0 min | Total Imp(%)= 60.00 Dir. Conn.(%)= 48.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.16	0.77
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	1.00	1.00

Length (m)= 300.00 300.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07

3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)=	98.04	35.71	
over (min)	5.00	50.00	
Storage Coeff. (min)=	4.98 (ii)	48.92 (ii)	
Unit Hyd. Tpeak (min)=	5.00	50.00	
Unit Hyd. peak (cms)=	0.22	0.02	
	TOTALS		
PEAK FLOW (cms)=	0.24	0.05	0.260 (iii)
TIME TO PEAK (hrs)=	12.00	12.67	12.00
RUNOFF VOLUME (mm)=	86.80	44.84	64.97
TOTAL RAINFALL (mm)=	88.80	88.80	88.80
RUNOFF COEFFICIENT =	0.98	0.51	0.73

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

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

ADD HYD (0042)|				
1 + 2 = 3 |	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)

ID1= 1 (0203):	1.61	0.153	12.08	42.78
+ ID2= 2 (0204):	1.93	0.260	12.00	64.97
ID = 3 (0042):	3.54	0.395	12.00	54.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0042)|				
3 + 2 = 1 |	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0042):	3.54	0.395	12.00	54.88
+ ID2= 2 (0215):	15.80	0.873	12.58	51.70
ID = 1 (0042):	19.34	1.003	12.50	52.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0025)| OVERFLOW IS OFF				
IN= 2---> OUT= 1 |				
DT= 5.0 min |	OUTFLOW	STORAGE |	OUTFLOW	STORAGE
	(cms)	(ha.m.) |	(cms)	(ha.m.)
	0.0000	0.0000 |	0.6300	0.4548
	0.2600	0.1908 |	0.7100	0.5242
	0.3900	0.2842 |	0.8100	0.5932
	0.4900	0.3533 |	1.4000	1.1965

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0042)	19.340	1.003	12.50	52.28
OUTFLOW: ID= 1 (0025)	19.340	0.490	13.58	52.27

PEAK FLOW REDUCTION [Qout/Qin](%)= 48.83
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.3532

CALIB
NASHYD (0225)| Area (ha)= 3.98 Curve Number (CN)= 81.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.62

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60

0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60
0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07

4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07
5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Unit Hyd Qpeak (cms)= 0.245

PEAK FLOW (cms)= 0.226 (i)
TIME TO PEAK (hrs)= 12.500
RUNOFF VOLUME (mm)= 48.977
TOTAL RAINFALL (mm)= 88.801
RUNOFF COEFFICIENT = 0.552

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

CALIB
STANDHYD (0220) | Area (ha)= 5.63
ID= 1 DT= 5.0 min | Total Imp(%)= 42.00 Dir. Conn.(%)= 34.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.36	3.27
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	250.00	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.98	6.083	1.78	12.083	12.80	18.08	1.60
0.167	0.98	6.167	1.78	12.167	12.79	18.17	1.60
0.250	0.98	6.250	1.78	12.250	12.79	18.25	1.60
0.333	0.98	6.333	1.78	12.333	12.79	18.33	1.60
0.417	0.98	6.417	1.78	12.417	12.79	18.42	1.60
0.500	0.98	6.500	1.78	12.500	12.79	18.50	1.60
0.583	0.98	6.583	1.78	12.583	6.57	18.58	1.60
0.667	0.98	6.667	1.78	12.667	6.57	18.67	1.60
0.750	0.98	6.750	1.78	12.750	6.57	18.75	1.60

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0.833	0.98	6.833	1.78	12.833	6.57	18.83	1.60
0.917	0.98	6.917	1.78	12.917	6.57	18.92	1.60
1.000	0.98	7.000	1.78	13.000	6.57	19.00	1.60
1.083	0.98	7.083	1.78	13.083	4.80	19.08	1.60
1.167	0.98	7.167	1.78	13.167	4.80	19.17	1.60
1.250	0.98	7.250	1.78	13.250	4.80	19.25	1.60
1.333	0.98	7.333	1.78	13.333	4.79	19.33	1.60
1.417	0.98	7.417	1.78	13.417	4.80	19.42	1.60
1.500	0.98	7.500	1.78	13.500	4.80	19.50	1.60
1.583	0.98	7.583	1.78	13.583	3.73	19.58	1.60
1.667	0.98	7.667	1.78	13.667	3.73	19.67	1.60
1.750	0.98	7.750	1.78	13.750	3.73	19.75	1.60
1.833	0.98	7.833	1.78	13.833	3.73	19.83	1.60
1.917	0.98	7.917	1.78	13.917	3.73	19.92	1.60
2.000	0.98	8.000	1.78	14.000	3.73	20.00	1.60
2.083	1.15	8.083	2.40	14.083	2.66	20.08	1.07
2.167	1.15	8.167	2.40	14.167	2.66	20.17	1.07
2.250	1.15	8.250	2.40	14.250	2.66	20.25	1.07
2.333	1.15	8.333	2.40	14.333	2.66	20.33	1.07
2.417	1.15	8.417	2.40	14.417	2.66	20.42	1.07
2.500	1.15	8.500	2.40	14.500	2.66	20.50	1.07
2.583	1.15	8.583	2.40	14.583	2.66	20.58	1.07
2.667	1.15	8.667	2.40	14.667	2.66	20.67	1.07
2.750	1.15	8.750	2.40	14.750	2.66	20.75	1.07
2.833	1.15	8.833	2.40	14.833	2.66	20.83	1.07
2.917	1.15	8.917	2.40	14.917	2.66	20.92	1.07
3.000	1.15	9.000	2.40	15.000	2.66	21.00	1.07
3.083	1.15	9.083	2.84	15.083	2.66	21.08	1.07
3.167	1.15	9.167	2.84	15.167	2.66	21.17	1.07
3.250	1.15	9.250	2.84	15.250	2.66	21.25	1.07
3.333	1.15	9.333	2.84	15.333	2.66	21.33	1.07
3.417	1.15	9.417	2.84	15.417	2.66	21.42	1.07
3.500	1.15	9.500	2.84	15.500	2.66	21.50	1.07
3.583	1.15	9.583	3.20	15.583	2.66	21.58	1.07
3.667	1.15	9.667	3.20	15.667	2.66	21.67	1.07
3.750	1.15	9.750	3.20	15.750	2.66	21.75	1.07
3.833	1.15	9.833	3.20	15.833	2.66	21.83	1.07
3.917	1.15	9.917	3.20	15.917	2.66	21.92	1.07
4.000	1.15	10.000	3.20	16.000	2.66	22.00	1.07
4.083	1.42	10.083	4.08	16.083	1.60	22.08	1.07
4.167	1.42	10.167	4.09	16.167	1.60	22.17	1.07
4.250	1.42	10.250	4.09	16.250	1.60	22.25	1.07
4.333	1.42	10.333	4.08	16.333	1.60	22.33	1.07
4.417	1.42	10.417	4.09	16.417	1.60	22.42	1.07
4.500	1.42	10.500	4.09	16.500	1.60	22.50	1.07
4.583	1.42	10.583	5.51	16.583	1.60	22.58	1.07
4.667	1.42	10.667	5.51	16.667	1.60	22.67	1.07
4.750	1.42	10.750	5.51	16.750	1.60	22.75	1.07
4.833	1.42	10.833	5.51	16.833	1.60	22.83	1.07
4.917	1.42	10.917	5.51	16.917	1.60	22.92	1.07
5.000	1.42	11.000	5.51	17.000	1.60	23.00	1.07
5.083	1.42	11.083	8.52	17.083	1.60	23.08	1.07
5.167	1.42	11.167	8.52	17.167	1.60	23.17	1.07
5.250	1.42	11.250	8.52	17.250	1.60	23.25	1.07

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5.333	1.42	11.333	8.52	17.333	1.60	23.33	1.07
5.417	1.42	11.417	8.52	17.417	1.60	23.42	1.07
5.500	1.42	11.500	8.52	17.500	1.60	23.50	1.07
5.583	1.42	11.583	36.94	17.583	1.60	23.58	1.07
5.667	1.42	11.667	36.94	17.667	1.60	23.67	1.07
5.750	1.42	11.750	36.94	17.750	1.60	23.75	1.07
5.833	1.42	11.833	98.03	17.833	1.60	23.83	1.07
5.917	1.42	11.917	98.04	17.917	1.60	23.92	1.07
6.000	1.42	12.000	98.04	18.000	1.60	24.00	1.07

Max.Eff.Inten.(mm/hr)= 98.04 78.03
over (min) 5.00 15.00
Storage Coeff. (min)= 3.62 (ii) 11.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09

	TOTALS		
PEAK FLOW (cms)=	0.52	0.47	0.938 (iii)
TIME TO PEAK (hrs)=	12.00	12.08	12.00
RUNOFF VOLUME (mm)=	86.80	50.81	63.05
TOTAL RAINFALL (mm)=	88.80	88.80	88.80
RUNOFF COEFFICIENT =	0.98	0.57	0.71

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0050)| OVERFLOW IS OFF			
IN= 2---> OUT= 1 |			
DT= 5.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms) STORAGE (ha.m.)
	0.0000	0.0000	0.5800 0.1023
	0.2500	0.0493	0.6600 0.1189
	0.3700	0.0684	0.7600 0.1366
	0.4600	0.0822	0.7800 0.1400

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0220)	5.630	0.938	12.00	63.05
OUTFLOW: ID= 1 (0050)	5.630	0.459	12.17	63.04

PEAK FLOW REDUCTION [Qout/Qin](%)= 48.97
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.0831

ADD HYD (0002)|

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| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.

(ha) (cms) (hrs) (mm)
ID1= 1 (0225): 3.98 0.226 12.50 48.98
+ ID2= 2 (0025): 19.34 0.490 13.58 52.27

ID = 3 (0002): 23.32 0.610 13.08 51.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0002)|
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.

(ha) (cms) (hrs) (mm)
ID1= 3 (0002): 23.32 0.610 13.08 51.71
+ ID2= 2 (0050): 5.63 0.459 12.17 63.04

ID = 1 (0002): 28.95 0.900 12.50 53.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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

OOO TTTTT TTTTT H H Y Y M M OOO TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
OOO T T H H Y M M OOO
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***** DETAILED OUTPUT *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\b6441983-9ad7-4325-817d-7198a65d06d5\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\b6441983-9ad7-4325-817d-7198a65d06d5\scen

DATE: 03/11/2024 TIME: 11:39:28

USER:

COMMENTS: _____

****
** SIMULATION : SCS_25yr **
****

| READ STORM | Filename: C:\Users\nyokich\AppD
| | ata\Local\Temp\
| | 5e49fc0a-79f7-4237-8582-77f9360bb4e5\e33ebcda
| Ptotal=105.60 mm | Comments: SCS_25yr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	1.16	6.00	2.11	12.00	15.21	18.00	1.90
0.25	1.16	6.25	2.11	12.25	15.21	18.25	1.90
0.50	1.16	6.50	2.11	12.50	7.81	18.50	1.90
0.75	1.16	6.75	2.11	12.75	7.81	18.75	1.90
1.00	1.16	7.00	2.11	13.00	5.70	19.00	1.90
1.25	1.16	7.25	2.11	13.25	5.70	19.25	1.90
1.50	1.16	7.50	2.11	13.50	4.43	19.50	1.90
1.75	1.16	7.75	2.11	13.75	4.43	19.75	1.90
2.00	1.37	8.00	2.85	14.00	3.17	20.00	1.27
2.25	1.37	8.25	2.85	14.25	3.17	20.25	1.27
2.50	1.37	8.50	2.85	14.50	3.17	20.50	1.27
2.75	1.37	8.75	2.85	14.75	3.17	20.75	1.27
3.00	1.37	9.00	3.38	15.00	3.17	21.00	1.27
3.25	1.37	9.25	3.38	15.25	3.17	21.25	1.27
3.50	1.37	9.50	3.80	15.50	3.17	21.50	1.27
3.75	1.37	9.75	3.80	15.75	3.17	21.75	1.27
4.00	1.69	10.00	4.86	16.00	1.90	22.00	1.27
4.25	1.69	10.25	4.86	16.25	1.90	22.25	1.27
4.50	1.69	10.50	6.55	16.50	1.90	22.50	1.27
4.75	1.69	10.75	6.55	16.75	1.90	22.75	1.27
5.00	1.69	11.00	10.14	17.00	1.90	23.00	1.27
5.25	1.69	11.25	10.14	17.25	1.90	23.25	1.27
5.50	1.69	11.50	43.93	17.50	1.90	23.50	1.27
5.75	1.69	11.75	116.58	17.75	1.90	23.75	1.27

| CALIB |
| NASHYD (0210)| Area (ha)= 6.83 Curve Number (CN)= 83.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
--- U.H. Tp(hrs)= 0.54

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

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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90
0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27

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4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27
4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.585 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 66.308
TOTAL RAINFALL (mm)= 105.602
RUNOFF COEFFICIENT = 0.628

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

| CALIB |
| STANDHYD (0205)| Area (ha)= 7.90
|ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	229.49	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90

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0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27

4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Max.Eff.Inten.(mm/hr)= 116.58 71.20
over (min) 5.00 25.00
Storage Coeff. (min)= 3.21 (ii) 21.65 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.27 0.05

TOTALS

PEAK FLOW (cms)= 0.25 0.73 0.763 (iii)
TIME TO PEAK (hrs)= 12.00 12.25 12.25
RUNOFF VOLUME (mm)= 103.60 59.34 63.76
TOTAL RAINFALL (mm)= 105.60 105.60 105.60
RUNOFF COEFFICIENT = 0.98 0.56 0.60

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0205):	7.90	0.763	12.25	63.76
+ ID2= 2 (0210):	6.83	0.585	12.42	66.31
ID = 3 (0003):	14.73	1.313	12.25	64.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (0200)|	Area (ha)= 20.32 Curve Number (CN)= 80.0

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|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
---------- U.H. Tp(hrs)= 0.43

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90
0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27

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3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27
4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Unit Hyd Qpeak (cms)= 1.805

PEAK FLOW (cms)= 1.885 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 61.667
TOTAL RAINFALL (mm)= 105.602
RUNOFF COEFFICIENT = 0.584

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

CALIB	
NASHYD (0201)|	Area (ha)= 3.17 Curve Number (CN)= 77.0

|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
---------- U.H. Tp(hrs)= 0.16

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90

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0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27

4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Unit Hyd Qpeak (cms)= 0.757

PEAK FLOW (cms)= 0.309 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 57.092
TOTAL RAINFALL (mm)= 105.602
RUNOFF COEFFICIENT = 0.541

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

CALIB
STANDHYD (0202)| Area (ha)= 4.57
ID= 1 DT= 5.0 min | Total Imp(%)= 40.00 Dir. Conn.(%)= 32.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.83	2.74
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	5.00	5.00
Length (m)=	500.00	500.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90
0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90

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0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27
4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27

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5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Max.Eff.Inten.(mm/hr)= 116.58 46.37
over (min) 5.00 40.00
Storage Coeff. (min)= 3.89 (ii) 37.08 (ii)
Unit Hyd. Tpeak (min)= 5.00 40.00
Unit Hyd. peak (cms)= 0.25 0.03

	TOTALS		
PEAK FLOW (cms)=	0.47	0.21	0.555 (iii)
TIME TO PEAK (hrs)=	12.00	12.50	12.00
RUNOFF VOLUME (mm)=	103.60	55.62	70.97
TOTAL RAINFALL (mm)=	105.60	105.60	105.60
RUNOFF COEFFICIENT =	0.98	0.53	0.67

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 73.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0040)|				
1 + 2 = 3 |	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0201):	3.17	0.509	12.00	57.09
+ ID2= 2 (0202):	4.57	0.555	12.00	70.97
ID = 3 (0040):	7.74	1.064	12.00	65.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0032)| OVERFLOW IS OFF				
IN= 2---> OUT= 1 |				
DT= 5.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1020	0.2824
	0.0400	0.1208	0.1160	0.3268
	0.0640	0.1775	0.1330	0.3659
	0.0790	0.2218	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.

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	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	7.740	1.064	12.00	65.29
OUTFLOW: ID= 1 (0032)	7.740	0.101	14.00	65.19

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.54
TIME SHIFT OF PEAK FLOW (min)=120.00
MAXIMUM STORAGE USED (ha.m.)= 0.2811

ADD HYD (0001)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0200):	20.32	1.885	12.25	61.67
+ ID2= 2 (0032):	7.74	0.101	14.00	65.19
ID = 3 (0001):	28.06	1.955	12.25	62.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (0215)	Area (ha)= 15.80 Curve Number (CN)= 83.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.70

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90
0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27
4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Unit Hyd Qpeak (cms)= 0.862

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PEAK FLOW (cms)= 1.124 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 66.309
TOTAL RAINFALL (mm)= 105.602
RUNOFF COEFFICIENT = 0.628

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

CALIB	
NASHYD (0203)	Area (ha)= 1.61 Curve Number (CN)= 76.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.24

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90
0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27

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2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27
4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Unit Hyd Qpeak (cms)= 0.256

PEAK FLOW (cms)= 0.201 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 55.921
TOTAL RAINFALL (mm)= 105.602
RUNOFF COEFFICIENT = 0.530

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

CALIB	
STANDHYD (0204)	Area (ha)= 1.93

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|ID= 1 DT= 5.0 min | Total Imp(%)= 60.00 Dir. Conn.(%)= 48.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.16	0.77
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	1.00	1.00
Length (m)=	300.00	300.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90
0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27
4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Max.Eff.Inten.(mm/hr)=	116.58	50.65	
over (min)	5.00	45.00	
Storage Coeff. (min)=	4.64 (ii)	42.85 (ii)	
Unit Hyd. Tpeak (min)=	5.00	45.00	
Unit Hyd. peak (cms)=	0.22	0.03	
	TOTALS		
PEAK FLOW (cms)=	0.29	0.06	0.317 (iii)
TIME TO PEAK (hrs)=	12.00	12.58	12.00
RUNOFF VOLUME (mm)=	103.60	58.25	80.01
TOTAL RAINFALL (mm)=	105.60	105.60	105.60
RUNOFF COEFFICIENT =	0.98	0.55	0.76

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

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

ADD HYD (0042)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0203):	1.61	0.201	12.08	55.92
+ ID2= 2 (0204):	1.93	0.317	12.00	80.01
ID = 3 (0042):	3.54	0.495	12.00	69.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0042)					
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0042):	3.54	0.495	12.00	69.05
+ ID2= 2 (0215):	15.80	1.124	12.58	66.31
ID = 1 (0042):	19.34	1.300	12.50	66.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0025)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.6300	0.4548
	0.2600	0.1908	0.7100	0.5242
	0.3900	0.2842	0.8100	0.5932
	0.4900	0.3533	1.4000	1.1965

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0042)	19.340	1.300	12.50	66.81
OUTFLOW: ID= 1 (0025)	19.340	0.629	13.58	66.80

PEAK FLOW REDUCTION [Qout/Qin](%)= 48.41
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.4543

CALIB				
NASHYD (0225)| Area (ha)= 3.98 Curve Number (CN)= 81.0				
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00				
U.H. Tp(hrs)= 0.62				

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90
0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27

4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27
4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Unit Hyd Qpeak (cms)= 0.245

PEAK FLOW (cms)= 0.293 (i)
TIME TO PEAK (hrs)= 12.500
RUNOFF VOLUME (mm)= 63.181
TOTAL RAINFALL (mm)= 105.602
RUNOFF COEFFICIENT = 0.598

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

CALIB
STANDHYD (0220) | Area (ha)= 5.63
ID= 1 DT= 5.0 min | Total Imp(%)= 42.00 Dir. Conn.(%)= 34.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)= 2.36	3.27
Dep. Storage	(mm)= 2.00	5.00
Average Slope	(%)= 2.00	2.00
Length	(m)= 250.00	40.00
Mannings n	= 0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.16	6.083	2.11	12.083	15.22	18.08	1.90
0.167	1.16	6.167	2.11	12.167	15.21	18.17	1.90
0.250	1.16	6.250	2.11	12.250	15.21	18.25	1.90

0.333	1.16	6.333	2.11	12.333	15.21	18.33	1.90
0.417	1.16	6.417	2.11	12.417	15.21	18.42	1.90
0.500	1.16	6.500	2.11	12.500	15.21	18.50	1.90
0.583	1.16	6.583	2.11	12.583	7.81	18.58	1.90
0.667	1.16	6.667	2.11	12.667	7.81	18.67	1.90
0.750	1.16	6.750	2.11	12.750	7.81	18.75	1.90
0.833	1.16	6.833	2.11	12.833	7.81	18.83	1.90
0.917	1.16	6.917	2.11	12.917	7.81	18.92	1.90
1.000	1.16	7.000	2.11	13.000	7.81	19.00	1.90
1.083	1.16	7.083	2.11	13.083	5.70	19.08	1.90
1.167	1.16	7.167	2.11	13.167	5.70	19.17	1.90
1.250	1.16	7.250	2.11	13.250	5.70	19.25	1.90
1.333	1.16	7.333	2.11	13.333	5.70	19.33	1.90
1.417	1.16	7.417	2.11	13.417	5.70	19.42	1.90
1.500	1.16	7.500	2.11	13.500	5.70	19.50	1.90
1.583	1.16	7.583	2.11	13.583	4.44	19.58	1.90
1.667	1.16	7.667	2.11	13.667	4.43	19.67	1.90
1.750	1.16	7.750	2.11	13.750	4.43	19.75	1.90
1.833	1.16	7.833	2.11	13.833	4.43	19.83	1.90
1.917	1.16	7.917	2.11	13.917	4.43	19.92	1.90
2.000	1.16	8.000	2.11	14.000	4.43	20.00	1.90
2.083	1.37	8.083	2.85	14.083	3.17	20.08	1.27
2.167	1.37	8.167	2.85	14.167	3.17	20.17	1.27
2.250	1.37	8.250	2.85	14.250	3.17	20.25	1.27
2.333	1.37	8.333	2.85	14.333	3.17	20.33	1.27
2.417	1.37	8.417	2.85	14.417	3.17	20.42	1.27
2.500	1.37	8.500	2.85	14.500	3.17	20.50	1.27
2.583	1.37	8.583	2.85	14.583	3.17	20.58	1.27
2.667	1.37	8.667	2.85	14.667	3.17	20.67	1.27
2.750	1.37	8.750	2.85	14.750	3.17	20.75	1.27
2.833	1.37	8.833	2.85	14.833	3.17	20.83	1.27
2.917	1.37	8.917	2.85	14.917	3.17	20.92	1.27
3.000	1.37	9.000	2.85	15.000	3.17	21.00	1.27
3.083	1.37	9.083	3.38	15.083	3.17	21.08	1.27
3.167	1.37	9.167	3.38	15.167	3.17	21.17	1.27
3.250	1.37	9.250	3.38	15.250	3.17	21.25	1.27
3.333	1.37	9.333	3.38	15.333	3.17	21.33	1.27
3.417	1.37	9.417	3.38	15.417	3.17	21.42	1.27
3.500	1.37	9.500	3.38	15.500	3.17	21.50	1.27
3.583	1.37	9.583	3.80	15.583	3.17	21.58	1.27
3.667	1.37	9.667	3.80	15.667	3.17	21.67	1.27
3.750	1.37	9.750	3.80	15.750	3.17	21.75	1.27
3.833	1.37	9.833	3.80	15.833	3.17	21.83	1.27
3.917	1.37	9.917	3.80	15.917	3.17	21.92	1.27
4.000	1.37	10.000	3.80	16.000	3.17	22.00	1.27
4.083	1.69	10.083	4.86	16.083	1.90	22.08	1.27
4.167	1.69	10.167	4.86	16.167	1.90	22.17	1.27
4.250	1.69	10.250	4.86	16.250	1.90	22.25	1.27
4.333	1.69	10.333	4.86	16.333	1.90	22.33	1.27
4.417	1.69	10.417	4.86	16.417	1.90	22.42	1.27
4.500	1.69	10.500	4.86	16.500	1.90	22.50	1.27
4.583	1.69	10.583	6.55	16.583	1.90	22.58	1.27
4.667	1.69	10.667	6.55	16.667	1.90	22.67	1.27
4.750	1.69	10.750	6.55	16.750	1.90	22.75	1.27

4.833	1.69	10.833	6.55	16.833	1.90	22.83	1.27
4.917	1.69	10.917	6.55	16.917	1.90	22.92	1.27
5.000	1.69	11.000	6.55	17.000	1.90	23.00	1.27
5.083	1.69	11.083	10.14	17.083	1.90	23.08	1.27
5.167	1.69	11.167	10.14	17.167	1.90	23.17	1.27
5.250	1.69	11.250	10.14	17.250	1.90	23.25	1.27
5.333	1.69	11.333	10.14	17.333	1.90	23.33	1.27
5.417	1.69	11.417	10.14	17.417	1.90	23.42	1.27
5.500	1.69	11.500	10.14	17.500	1.90	23.50	1.27
5.583	1.69	11.583	43.93	17.583	1.90	23.58	1.27
5.667	1.69	11.667	43.93	17.667	1.90	23.67	1.27
5.750	1.69	11.750	43.93	17.750	1.90	23.75	1.27
5.833	1.69	11.833	116.57	17.833	1.90	23.83	1.27
5.917	1.69	11.917	116.58	17.917	1.90	23.92	1.27
6.000	1.69	12.000	116.58	18.000	1.90	24.00	1.27

Max.Eff.Inten.(mm/hr)= 116.58 99.30
over (min) 5.00 15.00
Storage Coeff. (min)= 3.38 (ii) 10.46 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.09

	TOTALS		
PEAK FLOW (cms)=	0.62	0.62	1.181 (iii)
TIME TO PEAK (hrs)=	12.00	12.08	12.00
RUNOFF VOLUME (mm)=	103.60	65.24	78.28
TOTAL RAINFALL (mm)=	105.60	105.60	105.60
RUNOFF COEFFICIENT =	0.98	0.62	0.74

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0050) | OVERFLOW IS OFF
IN= 2---> OUT= 1 |

DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.5800	0.1023
	0.2500	0.0493	0.6600	0.1189
	0.3700	0.0684	0.7600	0.1366
	0.4600	0.0822	0.7800	0.1400

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0220)	5.630	1.181	12.00	78.28
OUTFLOW: ID= 1 (0050)	5.630	0.581	12.17	78.27

PEAK FLOW REDUCTION [Qout/Qin](%)= 49.19
TIME SHIFT OF PEAK FLOW (min)= 10.00

MAXIMUM STORAGE USED (ha.m.)= 0.1038

ADD HYD (0002)
1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0225):	3.98	0.293	12.50	63.18
+ ID2= 2 (0025):	19.34	0.629	13.58	66.80
ID = 3 (0002):	23.32	0.788	13.08	66.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0002)
3 + 2 = 1 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0002):	23.32	0.788	13.08	66.18
+ ID2= 2 (0050):	5.63	0.581	12.17	78.27
ID = 1 (0002):	28.95	1.159	12.50	68.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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

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

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\c82dc5cf-60f0-46fb-b6b5-4027a005d6d8\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\c82dc5cf-60f0-46fb-b6b5-4027a005d6d8\scen

DATE: 03/11/2024 TIME: 11:39:28

USER:

COMMENTS: _____

****
** SIMULATION : SCS_2yr **
****

| READ STORM | Filename: C:\Users\nyokich\AppD
| | ata\Local\Temp\
| | 5e49fc0a-79f7-4237-8582-77f9360bb4e5\f5461c2b
| Ptotal= 60.00 mm | Comments: SCS_2yr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.66	6.00	1.20	12.00	8.64	18.00	1.08
0.25	0.66	6.25	1.20	12.25	8.64	18.25	1.08
0.50	0.66	6.50	1.20	12.50	4.44	18.50	1.08
0.75	0.66	6.75	1.20	12.75	4.44	18.75	1.08
1.00	0.66	7.00	1.20	13.00	3.24	19.00	1.08
1.25	0.66	7.25	1.20	13.25	3.24	19.25	1.08
1.50	0.66	7.50	1.20	13.50	2.52	19.50	1.08
1.75	0.66	7.75	1.20	13.75	2.52	19.75	1.08
2.00	0.78	8.00	1.62	14.00	1.80	20.00	0.72
2.25	0.78	8.25	1.62	14.25	1.80	20.25	0.72
2.50	0.78	8.50	1.62	14.50	1.80	20.50	0.72
2.75	0.78	8.75	1.62	14.75	1.80	20.75	0.72
3.00	0.78	9.00	1.92	15.00	1.80	21.00	0.72
3.25	0.78	9.25	1.92	15.25	1.80	21.25	0.72
3.50	0.78	9.50	2.16	15.50	1.80	21.50	0.72
3.75	0.78	9.75	2.16	15.75	1.80	21.75	0.72
4.00	0.96	10.00	2.76	16.00	1.08	22.00	0.72
4.25	0.96	10.25	2.76	16.25	1.08	22.25	0.72
4.50	0.96	10.50	3.72	16.50	1.08	22.50	0.72
4.75	0.96	10.75	3.72	16.75	1.08	22.75	0.72
5.00	0.96	11.00	5.76	17.00	1.08	23.00	0.72
5.25	0.96	11.25	5.76	17.25	1.08	23.25	0.72
5.50	0.96	11.50	24.96	17.50	1.08	23.50	0.72
5.75	0.96	11.75	66.24	17.75	1.08	23.75	0.72

| CALIB |
| NASHYD (0210)| Area (ha)= 6.83 Curve Number (CN)= 83.0

|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
---------- U.H. Tp(hrs)= 0.54

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72

3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72
4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.245 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 28.264
TOTAL RAINFALL (mm)= 60.000
RUNOFF COEFFICIENT = 0.471

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

| CALIB |
| STANDHYD (0205)| Area (ha)= 7.90
|ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	229.49	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72

4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Max.Eff.Inten.(mm/hr)= 66.24 22.13
over (min) 5.00 35.00
Storage Coeff. (min)= 4.03 (ii) 33.46 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.24 0.03

TOTALS

PEAK FLOW (cms)=	0.14	0.22	0.242 (iii)
TIME TO PEAK (hrs)=	12.00	12.42	12.00
RUNOFF VOLUME (mm)=	58.00	24.33	27.70
TOTAL RAINFALL (mm)=	60.00	60.00	60.00
RUNOFF COEFFICIENT =	0.97	0.41	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) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0205):	7.90	0.242	12.00	27.70	
+ ID2= 2 (0210):	6.83	0.245	12.42	28.26	
ID = 3 (0003):	14.73	0.487	12.42	27.96	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0200)| Area (ha)= 20.32 Curve Number (CN)= 80.0					
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00					
U.H. Tp(hrs)= 0.43					

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72

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3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72
4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Unit Hyd Qpeak (cms)= 1.805

PEAK FLOW (cms)= 0.762 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 25.525
TOTAL RAINFALL (mm)= 60.000
RUNOFF COEFFICIENT = 0.425

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

CALIB					
NASHYD (0201)| Area (ha)= 3.17 Curve Number (CN)= 77.0					
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00					
U.H. Tp(hrs)= 0.16					

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

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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72

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4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Unit Hyd Qpeak (cms)= 0.757

PEAK FLOW (cms)= 0.201 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 23.010
TOTAL RAINFALL (mm)= 60.000
RUNOFF COEFFICIENT = 0.384

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

CALIB
STANDHYD (0202) | Area (ha)= 4.57
ID= 1 DT= 5.0 min | Total Imp(%)= 40.00 Dir. Conn.(%)= 32.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.83	2.74
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	5.00	5.00
Length (m)=	500.00	500.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08

0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72
4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72

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4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Max.Eff.Inten.(mm/hr)=	66.24	13.36
over (min)	5.00	60.00
Storage Coeff. (min)=	4.88 (ii)	59.47 (ii)
Unit Hyd. Tpeak (min)=	5.00	60.00
Unit Hyd. peak (cms)=	0.22	0.02
	TOTALS	
PEAK FLOW (cms)=	0.26	0.06 0.277 (iii)
TIME TO PEAK (hrs)=	12.00	12.83 12.00
RUNOFF VOLUME (mm)=	58.00	22.31 33.73
TOTAL RAINFALL (mm)=	60.00	60.00 60.00
RUNOFF COEFFICIENT =	0.97	0.37 0.56

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 73.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0040)				
1 + 2 = 3 |	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0201):	3.17	0.201	12.00	23.01
+ ID2= 2 (0202):	4.57	0.277	12.00	33.73
ID = 3 (0040):	7.74	0.479	12.00	29.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0032) | OVERFLOW IS OFF				
IN= 2---> OUT= 1 |				
DT= 5.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1020	0.2824
	0.0400	0.1208	0.1160	0.3268
	0.0640	0.1775	0.1330	0.3659
	0.0790	0.2218	0.0000	0.0000

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	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0040)	7.740	0.479	12.00	29.34
OUTFLOW: ID= 1 (0032)	7.740	0.041	14.58	29.24

PEAK FLOW REDUCTION [Qout/Qin](%)= 8.46
TIME SHIFT OF PEAK FLOW (min)=155.00
MAXIMUM STORAGE USED (ha.m.)= 0.1220

ADD HYD (0001)				
1 + 2 = 3 |	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0200):	20.32	0.762	12.33	25.53
+ ID2= 2 (0032):	7.74	0.041	14.58	29.24
ID = 3 (0001):	28.06	0.792	12.33	26.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0215) | Area (ha)= 15.80 Curve Number (CN)= 83.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.70

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08

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1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72
4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72

5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Unit Hyd Qpeak (cms)= 0.862

PEAK FLOW (cms)= 0.470 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 28.264
TOTAL RAINFALL (mm)= 60.000
RUNOFF COEFFICIENT = 0.471

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

CALIB							
NASHYD (0203)	Area (ha)= 1.61		Curve Number (CN)= 76.0				
ID= 1 DT= 5.0 min	Ia (mm)= 5.00		# of Linear Res.(N)= 3.00				
	U.H. Tp(hrs)= 0.24						

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72

2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72
4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Unit Hyd Qpeak (cms)= 0.256

PEAK FLOW (cms)= 0.079 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 22.351
TOTAL RAINFALL (mm)= 60.000
RUNOFF COEFFICIENT = 0.373

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

CALIB							
STANDHYD (0204)	Area (ha)= 1.93						
ID= 1 DT= 5.0 min	Total Imp(%)= 60.00		Dir. Conn.(%)= 48.00				

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.16	0.77
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	1.00	1.00
Length (m)=	300.00	300.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72

2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72
4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Max.Eff.Inten.(mm/hr)= 66.24 15.61
over (min) 5.00 70.00
Storage Coeff. (min)= 5.82 (ii) 67.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 70.00
Unit Hyd. peak (cms)= 0.20 0.02

TOTALS

PEAK FLOW (cms)=	0.16	0.02	0.167 (iii)
TIME TO PEAK (hrs)=	12.00	13.00	12.00
RUNOFF VOLUME (mm)=	58.00	23.86	40.23
TOTAL RAINFALL (mm)=	60.00	60.00	60.00
RUNOFF COEFFICIENT =	0.97	0.40	0.67

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

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

ADD HYD (0042)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0203):	1.61	0.079	12.08	22.35
+ ID2= 2 (0204):	1.93	0.167	12.00	40.23
ID = 3 (0042):	3.54	0.235	12.00	32.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0042)					
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0042):	3.54	0.235	12.00	32.10
+ ID2= 2 (0215):	15.80	0.470	12.58	28.26
ID = 1 (0042):	19.34	0.533	12.50	28.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0025)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.6300	0.4548
	0.2600	0.1908	0.7100	0.5242
	0.3900	0.2842	0.8100	0.5932
	0.4900	0.3533	1.4000	1.1965

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0042)	19.340	0.533	12.50	28.97
OUTFLOW: ID= 1 (0025)	19.340	0.261	13.67	28.96

PEAK FLOW REDUCTION [Qout/Qin](%)= 48.98
TIME SHIFT OF PEAK FLOW (min)= 70.00
MAXIMUM STORAGE USED (ha.m.)= 0.1915

CALIB	
NASHYD (0225)| Area (ha)=	3.98 Curve Number (CN)= 81.0
ID= 1 DT= 5.0 min | Ia (mm)=	5.00 # of Linear Res.(N)= 3.00

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U.H. Tp(hrs)= 0.62

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72

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3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72
4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Unit Hyd Qpeak (cms)= 0.245

PEAK FLOW (cms)= 0.120 (i)
TIME TO PEAK (hrs)= 12.500
RUNOFF VOLUME (mm)= 26.400
TOTAL RAINFALL (mm)= 60.000
RUNOFF COEFFICIENT = 0.440

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

CALIB	
STANDHYD (0220)| Area (ha)=	5.63
ID= 1 DT= 5.0 min | Total Imp(%)=	42.00 Dir. Conn.(%)= 34.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.36	3.27
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	250.00	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

file:///V|...%20Updated%20EA%20Analysis/VO/Detailed%20Output/Proposed%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:44:24 AM]

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.66	6.083	1.20	12.083	8.65	18.08	1.08
0.167	0.66	6.167	1.20	12.167	8.64	18.17	1.08
0.250	0.66	6.250	1.20	12.250	8.64	18.25	1.08
0.333	0.66	6.333	1.20	12.333	8.64	18.33	1.08
0.417	0.66	6.417	1.20	12.417	8.64	18.42	1.08
0.500	0.66	6.500	1.20	12.500	8.64	18.50	1.08
0.583	0.66	6.583	1.20	12.583	4.44	18.58	1.08
0.667	0.66	6.667	1.20	12.667	4.44	18.67	1.08
0.750	0.66	6.750	1.20	12.750	4.44	18.75	1.08
0.833	0.66	6.833	1.20	12.833	4.44	18.83	1.08
0.917	0.66	6.917	1.20	12.917	4.44	18.92	1.08
1.000	0.66	7.000	1.20	13.000	4.44	19.00	1.08
1.083	0.66	7.083	1.20	13.083	3.24	19.08	1.08
1.167	0.66	7.167	1.20	13.167	3.24	19.17	1.08
1.250	0.66	7.250	1.20	13.250	3.24	19.25	1.08
1.333	0.66	7.333	1.20	13.333	3.24	19.33	1.08
1.417	0.66	7.417	1.20	13.417	3.24	19.42	1.08
1.500	0.66	7.500	1.20	13.500	3.24	19.50	1.08
1.583	0.66	7.583	1.20	13.583	2.52	19.58	1.08
1.667	0.66	7.667	1.20	13.667	2.52	19.67	1.08
1.750	0.66	7.750	1.20	13.750	2.52	19.75	1.08
1.833	0.66	7.833	1.20	13.833	2.52	19.83	1.08
1.917	0.66	7.917	1.20	13.917	2.52	19.92	1.08
2.000	0.66	8.000	1.20	14.000	2.52	20.00	1.08
2.083	0.78	8.083	1.62	14.083	1.80	20.08	0.72
2.167	0.78	8.167	1.62	14.167	1.80	20.17	0.72
2.250	0.78	8.250	1.62	14.250	1.80	20.25	0.72
2.333	0.78	8.333	1.62	14.333	1.80	20.33	0.72
2.417	0.78	8.417	1.62	14.417	1.80	20.42	0.72
2.500	0.78	8.500	1.62	14.500	1.80	20.50	0.72
2.583	0.78	8.583	1.62	14.583	1.80	20.58	0.72
2.667	0.78	8.667	1.62	14.667	1.80	20.67	0.72
2.750	0.78	8.750	1.62	14.750	1.80	20.75	0.72
2.833	0.78	8.833	1.62	14.833	1.80	20.83	0.72
2.917	0.78	8.917	1.62	14.917	1.80	20.92	0.72
3.000	0.78	9.000	1.62	15.000	1.80	21.00	0.72
3.083	0.78	9.083	1.92	15.083	1.80	21.08	0.72
3.167	0.78	9.167	1.92	15.167	1.80	21.17	0.72
3.250	0.78	9.250	1.92	15.250	1.80	21.25	0.72
3.333	0.78	9.333	1.92	15.333	1.80	21.33	0.72
3.417	0.78	9.417	1.92	15.417	1.80	21.42	0.72
3.500	0.78	9.500	1.92	15.500	1.80	21.50	0.72
3.583	0.78	9.583	2.16	15.583	1.80	21.58	0.72
3.667	0.78	9.667	2.16	15.667	1.80	21.67	0.72
3.750	0.78	9.750	2.16	15.750	1.80	21.75	0.72
3.833	0.78	9.833	2.16	15.833	1.80	21.83	0.72
3.917	0.78	9.917	2.16	15.917	1.80	21.92	0.72
4.000	0.78	10.000	2.16	16.000	1.80	22.00	0.72
4.083	0.96	10.083	2.76	16.083	1.08	22.08	0.72
4.167	0.96	10.167	2.76	16.167	1.08	22.17	0.72
4.250	0.96	10.250	2.76	16.250	1.08	22.25	0.72
4.333	0.96	10.333	2.76	16.333	1.08	22.33	0.72
4.417	0.96	10.417	2.76	16.417	1.08	22.42	0.72
4.500	0.96	10.500	2.76	16.500	1.08	22.50	0.72
4.583	0.96	10.583	3.72	16.583	1.08	22.58	0.72
4.667	0.96	10.667	3.72	16.667	1.08	22.67	0.72
4.750	0.96	10.750	3.72	16.750	1.08	22.75	0.72
4.833	0.96	10.833	3.72	16.833	1.08	22.83	0.72
4.917	0.96	10.917	3.72	16.917	1.08	22.92	0.72
5.000	0.96	11.000	3.72	17.000	1.08	23.00	0.72
5.083	0.96	11.083	5.76	17.083	1.08	23.08	0.72
5.167	0.96	11.167	5.76	17.167	1.08	23.17	0.72
5.250	0.96	11.250	5.76	17.250	1.08	23.25	0.72
5.333	0.96	11.333	5.76	17.333	1.08	23.33	0.72
5.417	0.96	11.417	5.76	17.417	1.08	23.42	0.72
5.500	0.96	11.500	5.76	17.500	1.08	23.50	0.72
5.583	0.96	11.583	24.96	17.583	1.08	23.58	0.72
5.667	0.96	11.667	24.96	17.667	1.08	23.67	0.72
5.750	0.96	11.750	24.96	17.750	1.08	23.75	0.72
5.833	0.96	11.833	66.24	17.833	1.08	23.83	0.72
5.917	0.96	11.917	66.24	17.917	1.08	23.92	0.72
6.000	0.96	12.000	66.24	18.000	1.08	24.00	0.72

Max.Eff.Inten.(mm/hr)= 66.24 43.26
over (min) 5.00 15.00
Storage Coeff. (min)= 4.24 (ii) 14.11 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

TOTALS

PEAK FLOW (cms)= 0.35 0.23 0.549 (iii)
TIME TO PEAK (hrs)= 12.00 12.08 12.00
RUNOFF VOLUME (mm)= 58.00 27.75 38.04
TOTAL RAINFALL (mm)= 60.00 60.00 60.00
RUNOFF COEFFICIENT = 0.97 0.46 0.63

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0050)| OVERFLOW IS OFF
| IN-> 2---> OUT= 1 |
| DT= 5.0 min | OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 0.5800 0.1023
0.2500 0.0493 | 0.6600 0.1189
0.3700 0.0684 | 0.7600 0.1366
0.4600 0.0822 | 0.7800 0.1400

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

INFLOW : ID= 2 (0220) 5.630 0.549 12.00 38.04
OUTFLOW: ID= 1 (0050) 5.630 0.251 12.25 38.03

PEAK FLOW REDUCTION [Qout/Qin](%)= 45.68
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.0498

| ADD HYD (0002)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0225): 3.98 0.120 12.50 26.40
+ ID2= 2 (0025): 19.34 0.261 13.67 28.96
ID = 3 (0002): 23.32 0.323 13.17 28.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0002)|
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0002): 23.32 0.323 13.17 28.52
+ ID2= 2 (0050): 5.63 0.251 12.25 38.03
ID = 1 (0002): 28.95 0.497 12.58 30.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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

OOO TTTTT TTTTT H H Y Y M M OOO TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
OOO T T H H Y M M OOO
Developed and Distributed by Smart City Water Inc

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\87bcda0a-5e6b-4127-8cd9-fd4e452cecad\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\87bcda0a-5e6b-4127-8cd9-fd4e452cecad\scen

DATE: 03/11/2024 TIME: 11:39:27

USER:

COMMENTS: _____

****
** SIMULATION : SCS_50yr **
****

| READ STORM | Filename: C:\Users\nyokich\AppD
| | ata\Local\Temp\
| | 5e49fc0a-79f7-4237-8582-77f9360bb4e5\dde6d18a
| Ptotal=115.20 mm | Comments: SCS_50yr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	1.27	6.00	2.30	12.00	16.59	18.00	2.07
0.25	1.27	6.25	2.30	12.25	16.59	18.25	2.07
0.50	1.27	6.50	2.30	12.50	8.52	18.50	2.07
0.75	1.27	6.75	2.30	12.75	8.52	18.75	2.07
1.00	1.27	7.00	2.30	13.00	6.22	19.00	2.07
1.25	1.27	7.25	2.30	13.25	6.22	19.25	2.07
1.50	1.27	7.50	2.30	13.50	4.84	19.50	2.07
1.75	1.27	7.75	2.30	13.75	4.84	19.75	2.07
2.00	1.50	8.00	3.11	14.00	3.46	20.00	1.38
2.25	1.50	8.25	3.11	14.25	3.46	20.25	1.38
2.50	1.50	8.50	3.11	14.50	3.46	20.50	1.38
2.75	1.50	8.75	3.11	14.75	3.46	20.75	1.38
3.00	1.50	9.00	3.69	15.00	3.46	21.00	1.38
3.25	1.50	9.25	3.69	15.25	3.46	21.25	1.38
3.50	1.50	9.50	4.15	15.50	3.46	21.50	1.38
3.75	1.50	9.75	4.15	15.75	3.46	21.75	1.38
4.00	1.84	10.00	5.30	16.00	2.07	22.00	1.38
4.25	1.84	10.25	5.30	16.25	2.07	22.25	1.38
4.50	1.84	10.50	7.14	16.50	2.07	22.50	1.38
4.75	1.84	10.75	7.14	16.75	2.07	22.75	1.38
5.00	1.84	11.00	11.06	17.00	2.07	23.00	1.38
5.25	1.84	11.25	11.06	17.25	2.07	23.25	1.38
5.50	1.84	11.50	47.92	17.50	2.07	23.50	1.38
5.75	1.84	11.75	127.18	17.75	2.07	23.75	1.38

CALIB	
NASHYD (0210)	Area (ha)= 6.83 Curve Number (CN)= 83.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.54

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.660 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 74.856
TOTAL RAINFALL (mm)= 115.199
RUNOFF COEFFICIENT = 0.650

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

CALIB	
STANDHYD (0205)	Area (ha)= 7.90
ID= 1 DT= 5.0 min	Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	229.49	250.00

Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)=	127.18	80.89	
over (min)	5.00	25.00	
Storage Coeff. (min)=	3.10 (ii)	20.63 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.27	0.05	
	TOTALS		
PEAK FLOW (cms)=	0.28	0.85	0.883 (iii)
TIME TO PEAK (hrs)=	12.00	12.25	12.25
RUNOFF VOLUME (mm)=	113.20	67.38	71.96
TOTAL RAINFALL (mm)=	115.20	115.20	115.20
RUNOFF COEFFICIENT =	0.98	0.58	0.62

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0205):	7.90	0.883	12.25	71.96
+ ID2= 2 (0210):	6.83	0.660	12.42	74.86
ID = 3 (0003):	14.73	1.506	12.25	73.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (0200)	Area (ha)= 20.32 Curve Number (CN)= 80.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.43

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 1.805

PEAK FLOW (cms)= 2.141 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 69.907
TOTAL RAINFALL (mm)= 115.199
RUNOFF COEFFICIENT = 0.607

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

CALIB	
NASHYD (0201)	Area (ha)= 3.17 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00

file:///V|...%20Updated%20EA%20Analysis/VO/Detailed%20Output/Proposed%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:44:24 AM]

U.H. Tp(hrs)= 0.16

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 0.757

PEAK FLOW (cms)= 0.580 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 64.971
TOTAL RAINFALL (mm)= 115.199
RUNOFF COEFFICIENT = 0.564

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

CALIB	
STANDHYD (0202)	Area (ha)= 4.57
ID= 1 DT= 5.0 min	Total Imp(%)= 40.00 Dir. Conn.(%)= 32.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.83	2.74
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	5.00	5.00
Length (m)=	500.00	500.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

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TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38

4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 53.00
over (min) 5.00 40.00
Storage Coeff. (min)= 3.76 (ii) 35.22 (ii)
Unit Hyd. Tpeak (min)= 5.00 40.00
Unit Hyd. peak (cms)= 0.25 0.03

TOTALS

PEAK FLOW (cms)= 0.51 0.25 0.615 (iii)
TIME TO PEAK (hrs)= 12.00 12.50 12.00
RUNOFF VOLUME (mm)= 113.20 63.37 79.31
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.98 0.55 0.69

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 73.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0040)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0201):	3.17	0.580	12.00	64.97	
+ ID2= 2 (0202):	4.57	0.615	12.00	79.31	
ID = 3 (0040):	7.74	1.194	12.00	73.44	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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RESERVOIR(0032)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.1020	0.2824
	0.0400	0.1208	0.1160	0.3268
	0.0640	0.1775	0.1330	0.3659
	0.0790	0.2218	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	7.740	1.194	12.00	73.44
OUTFLOW: ID= 1 (0032)	7.740	0.113	14.00	73.34

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.48
TIME SHIFT OF PEAK FLOW (min)=120.00
MAXIMUM STORAGE USED (ha.m.)= 0.3181

ADD HYD (0001)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0200):	20.32	2.141	12.25	69.91	
+ ID2= 2 (0032):	7.74	0.113	14.00	73.34	
ID = 3 (0001):	28.06	2.220	12.25	70.85	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (0215)| Area (ha)= 15.80 Curve Number (CN)= 83.0	
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00	
U.H. Tp(hrs)= 0.70	

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07

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0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38

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5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 0.862

PEAK FLOW (cms)= 1.269 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 74.858
TOTAL RAINFALL (mm)= 115.199
RUNOFF COEFFICIENT = 0.650

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

CALIB							
NASHYD (0203)	Area (ha)= 1.61		Curve Number (CN)= 76.0				
ID= 1 DT= 5.0 min	Ia (mm)= 5.00		# of Linear Res.(N)= 3.00				
	U.H. Tp(hrs)= 0.24						

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 0.256

PEAK FLOW (cms)= 0.230 (i)

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TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 63.718
TOTAL RAINFALL (mm)= 115.199
RUNOFF COEFFICIENT = 0.553

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

CALIB					
STANDHYD (0204)	Area (ha)= 1.93				
ID= 1 DT= 5.0 min	Total Imp(%)= 60.00		Dir. Conn.(%)= 48.00		
	IMPERVIOUS	PERVIOUS (i)			
Surface Area (ha)=	1.16	0.77			
Dep. Storage (mm)=	2.00	5.00			
Average Slope (%)=	1.00	1.00			
Length (m)=	300.00	300.00			
Mannings n =	0.013	0.250			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38

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2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)=	127.18	63.63	
over (min)	5.00	40.00	
Storage Coeff. (min)=	4.49 (ii)	39.36 (ii)	
Unit Hyd. Tpeak (min)=	5.00	40.00	
Unit Hyd. peak (cms)=	0.23	0.03	
		TOTALS	
PEAK FLOW (cms)=	0.32	0.08	0.353 (iii)
TIME TO PEAK (hrs)=	12.00	12.50	12.00
RUNOFF VOLUME (mm)=	113.20	66.19	88.74

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TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.98 0.57 0.77

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

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

| ADD HYD (0042)|

| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0203): 1.61 0.230 12.08 63.72
+ ID2= 2 (0204): 1.93 0.333 12.00 88.74
ID = 3 (0042): 3.54 0.557 12.00 77.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0042)|

| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0042): 3.54 0.557 12.00 77.36
+ ID2= 2 (0215): 15.80 1.269 12.58 74.86
ID = 1 (0042): 19.34 1.476 12.50 75.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0025)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 5.0 min | OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 0.6300 0.4548
0.2600 0.1908 | 0.7100 0.5242
0.3900 0.2842 | 0.8100 0.5932
0.4900 0.3533 | 1.4000 1.1965

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0042) 19.340 1.476 12.50 75.32
OUTFLOW: ID= 1 (0025) 19.340 0.700 13.58 75.31

PEAK FLOW REDUCTION [Qout/Qin](%)= 47.42
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.5156

| CALIB |
| NASHYD (0225)| Area (ha)= 3.98 Curve Number (CN)= 81.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.62

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38

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3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38
3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Unit Hyd Qpeak (cms)= 0.245

PEAK FLOW (cms)= 0.332 (i)
TIME TO PEAK (hrs)= 12.500
RUNOFF VOLUME (mm)= 71.525
TOTAL RAINFALL (mm)= 115.199
RUNOFF COEFFICIENT = 0.621

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

| CALIB |
| STANDHYD (0220)| Area (ha)= 5.63
|ID= 1 DT= 5.0 min | Total Imp(%)= 42.00 Dir. Conn.(%)= 34.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.36	3.27
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	250.00	40.00

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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	1.27	6.083	2.30	12.083	16.60	18.08	2.07
0.167	1.27	6.167	2.30	12.167	16.59	18.17	2.07
0.250	1.27	6.250	2.30	12.250	16.59	18.25	2.07
0.333	1.27	6.333	2.30	12.333	16.59	18.33	2.07
0.417	1.27	6.417	2.30	12.417	16.59	18.42	2.07
0.500	1.27	6.500	2.30	12.500	16.59	18.50	2.07
0.583	1.27	6.583	2.30	12.583	8.53	18.58	2.07
0.667	1.27	6.667	2.30	12.667	8.52	18.67	2.07
0.750	1.27	6.750	2.30	12.750	8.52	18.75	2.07
0.833	1.27	6.833	2.30	12.833	8.52	18.83	2.07
0.917	1.27	6.917	2.30	12.917	8.52	18.92	2.07
1.000	1.27	7.000	2.30	13.000	8.52	19.00	2.07
1.083	1.27	7.083	2.30	13.083	6.22	19.08	2.07
1.167	1.27	7.167	2.30	13.167	6.22	19.17	2.07
1.250	1.27	7.250	2.30	13.250	6.22	19.25	2.07
1.333	1.27	7.333	2.30	13.333	6.22	19.33	2.07
1.417	1.27	7.417	2.30	13.417	6.22	19.42	2.07
1.500	1.27	7.500	2.30	13.500	6.22	19.50	2.07
1.583	1.27	7.583	2.30	13.583	4.84	19.58	2.07
1.667	1.27	7.667	2.30	13.667	4.84	19.67	2.07
1.750	1.27	7.750	2.30	13.750	4.84	19.75	2.07
1.833	1.27	7.833	2.30	13.833	4.84	19.83	2.07
1.917	1.27	7.917	2.30	13.917	4.84	19.92	2.07
2.000	1.27	8.000	2.30	14.000	4.84	20.00	2.07
2.083	1.50	8.083	3.11	14.083	3.46	20.08	1.38
2.167	1.50	8.167	3.11	14.167	3.46	20.17	1.38
2.250	1.50	8.250	3.11	14.250	3.46	20.25	1.38
2.333	1.50	8.333	3.11	14.333	3.46	20.33	1.38
2.417	1.50	8.417	3.11	14.417	3.46	20.42	1.38
2.500	1.50	8.500	3.11	14.500	3.46	20.50	1.38
2.583	1.50	8.583	3.11	14.583	3.46	20.58	1.38
2.667	1.50	8.667	3.11	14.667	3.46	20.67	1.38
2.750	1.50	8.750	3.11	14.750	3.46	20.75	1.38
2.833	1.50	8.833	3.11	14.833	3.46	20.83	1.38
2.917	1.50	8.917	3.11	14.917	3.46	20.92	1.38
3.000	1.50	9.000	3.11	15.000	3.46	21.00	1.38
3.083	1.50	9.083	3.69	15.083	3.46	21.08	1.38
3.167	1.50	9.167	3.69	15.167	3.46	21.17	1.38
3.250	1.50	9.250	3.69	15.250	3.46	21.25	1.38
3.333	1.50	9.333	3.69	15.333	3.46	21.33	1.38
3.417	1.50	9.417	3.69	15.417	3.46	21.42	1.38
3.500	1.50	9.500	3.69	15.500	3.46	21.50	1.38
3.583	1.50	9.583	4.15	15.583	3.46	21.58	1.38
3.667	1.50	9.667	4.15	15.667	3.46	21.67	1.38
3.750	1.50	9.750	4.15	15.750	3.46	21.75	1.38
3.833	1.50	9.833	4.15	15.833	3.46	21.83	1.38

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3.917	1.50	9.917	4.15	15.917	3.46	21.92	1.38
4.000	1.50	10.000	4.15	16.000	3.46	22.00	1.38
4.083	1.84	10.083	5.30	16.083	2.07	22.08	1.38
4.167	1.84	10.167	5.30	16.167	2.07	22.17	1.38
4.250	1.84	10.250	5.30	16.250	2.07	22.25	1.38
4.333	1.84	10.333	5.30	16.333	2.07	22.33	1.38
4.417	1.84	10.417	5.30	16.417	2.07	22.42	1.38
4.500	1.84	10.500	5.30	16.500	2.07	22.50	1.38
4.583	1.84	10.583	7.14	16.583	2.07	22.58	1.38
4.667	1.84	10.667	7.14	16.667	2.07	22.67	1.38
4.750	1.84	10.750	7.14	16.750	2.07	22.75	1.38
4.833	1.84	10.833	7.14	16.833	2.07	22.83	1.38
4.917	1.84	10.917	7.14	16.917	2.07	22.92	1.38
5.000	1.84	11.000	7.14	17.000	2.07	23.00	1.38
5.083	1.84	11.083	11.06	17.083	2.07	23.08	1.38
5.167	1.84	11.167	11.06	17.167	2.07	23.17	1.38
5.250	1.84	11.250	11.06	17.250	2.07	23.25	1.38
5.333	1.84	11.333	11.06	17.333	2.07	23.33	1.38
5.417	1.84	11.417	11.06	17.417	2.07	23.42	1.38
5.500	1.84	11.500	11.06	17.500	2.07	23.50	1.38
5.583	1.84	11.583	47.92	17.583	2.07	23.58	1.38
5.667	1.84	11.667	47.92	17.667	2.07	23.67	1.38
5.750	1.84	11.750	47.92	17.750	2.07	23.75	1.38
5.833	1.84	11.833	127.17	17.833	2.07	23.83	1.38
5.917	1.84	11.917	127.18	17.917	2.07	23.92	1.38
6.000	1.84	12.000	127.18	18.000	2.07	24.00	1.38

Max.Eff.Inten.(mm/hr)= 127.18 111.64
over (min) 5.00 15.00
Storage Coeff. (min)= 3.27 (ii) 10.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.10

TOTALS

PEAK FLOW (cms)= 0.67 0.71 1.323 (iii)
TIME TO PEAK (hrs)= 12.00 12.08 12.00
RUNOFF VOLUME (mm)= 113.20 73.69 87.12
TOTAL RAINFALL (mm)= 115.20 115.20 115.20
RUNOFF COEFFICIENT = 0.98 0.64 0.76

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0050)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |

DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.5800	0.1023
	0.2500	0.0493	0.6600	0.1189
	0.3700	0.0684	0.7600	0.1366
	0.4600	0.0822	0.7800	0.1400

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0220)	5.630	1.323	12.00	87.12
OUTFLOW: ID= 1 (0050)	5.630	0.641	12.25	87.12

PEAK FLOW REDUCTION [Qout/Qin](%)= 48.45
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.1165

ADD HYD (0002)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0225):	3.98	0.332	12.50	71.53
+ ID2= 2 (0025):	19.34	0.700	13.58	75.31
ID = 3 (0002):	23.32	0.890	13.00	74.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0002)					
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0002):	23.32	0.890	13.00	74.66
+ ID2= 2 (0050):	5.63	0.641	12.25	87.12
ID = 1 (0002):	28.95	1.316	12.50	77.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 6.2.2015)
V V I SS U U AA 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

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

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\77e30e9a-44ea-421b-a4e6-9e6f2e47426b\scen
Summary filename: C:\Users\nyokich\AppData\Local\Civica\VH5\3783a080-e662-4500-89be-26df3e227620\77e30e9a-44ea-421b-a4e6-9e6f2e47426b\scen

DATE: 03/11/2024 TIME: 11:39:27

USER:

COMMENTS: _____

****
** SIMULATION : SCS_5yr **
****

READ STORM	Filename: C:\Users\nyokich\AppD ata\Local\Temp\ 5e49fc0a-79f7-4237-8582-77f9360bb4e5\f93665c7
Ptotal= 76.80 mm	Comments: SCS_5yr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.85	6.00	1.54	12.00	11.06	18.00	1.38
0.25	0.85	6.25	1.54	12.25	11.06	18.25	1.38
0.50	0.85	6.50	1.54	12.50	5.68	18.50	1.38
0.75	0.85	6.75	1.54	12.75	5.68	18.75	1.38
1.00	0.85	7.00	1.54	13.00	4.15	19.00	1.38
1.25	0.85	7.25	1.54	13.25	4.15	19.25	1.38
1.50	0.85	7.50	1.54	13.50	3.23	19.50	1.38
1.75	0.85	7.75	1.54	13.75	3.23	19.75	1.38
2.00	1.00	8.00	2.07	14.00	2.30	20.00	0.92
2.25	1.00	8.25	2.07	14.25	2.30	20.25	0.92
2.50	1.00	8.50	2.07	14.50	2.30	20.50	0.92
2.75	1.00	8.75	2.07	14.75	2.30	20.75	0.92
3.00	1.00	9.00	2.46	15.00	2.30	21.00	0.92
3.25	1.00	9.25	2.46	15.25	2.30	21.25	0.92
3.50	1.00	9.50	2.77	15.50	2.30	21.50	0.92
3.75	1.00	9.75	2.77	15.75	2.30	21.75	0.92
4.00	1.23	10.00	3.53	16.00	1.38	22.00	0.92
4.25	1.23	10.25	3.53	16.25	1.38	22.25	0.92
4.50	1.23	10.50	4.76	16.50	1.38	22.50	0.92
4.75	1.23	10.75	4.76	16.75	1.38	22.75	0.92
5.00	1.23	11.00	7.37	17.00	1.38	23.00	0.92
5.25	1.23	11.25	7.37	17.25	1.38	23.25	0.92
5.50	1.23	11.50	31.95	17.50	1.38	23.50	0.92
5.75	1.23	11.75	84.79	17.75	1.38	23.75	0.92

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CALIB					
NASHYD (0210)		Area (ha)=	6.83	Curve Number (CN)=	83.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.54			

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92

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2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.365 (i)
TIME TO PEAK (hrs)= 12.417
RUNOFF VOLUME (mm)= 41.633
TOTAL RAINFALL (mm)= 76.801
RUNOFF COEFFICIENT = 0.542

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

CALIB
STANDHYD (0205)| Area (ha)= 7.90
ID= 1 DT= 5.0 min | Total Imp(%)= 20.00 Dir. Conn.(%)= 10.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	6.32
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	5.00
Length (m)=	229.49	250.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92

3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)=	84.79	37.74	
over (min)	5.00	30.00	
Storage Coeff. (min)=	3.65 (ii)	27.42 (ii)	
Unit Hyd. Tpeak (min)=	5.00	30.00	
Unit Hyd. peak (cms)=	0.25	0.04	
	TOTALS		
PEAK FLOW (cms)=	0.18	0.38	0.408 (iii)
TIME TO PEAK (hrs)=	12.00	12.33	12.33
RUNOFF VOLUME (mm)=	74.80	36.44	40.28
TOTAL RAINFALL (mm)=	76.80	76.80	76.80
RUNOFF COEFFICIENT =	0.97	0.47	0.52

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0003)|				
1 + 2 = 3 |	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0205):	7.90	0.408	12.33	40.28
+ ID2= 2 (0210):	6.83	0.365	12.42	41.63
ID = 3 (0003):	14.73	0.767	12.33	40.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0200)| Area (ha)= 20.32 Curve Number (CN)= 80.0
ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.43

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92

2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 1.805

PEAK FLOW (cms)= 1.150 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 38.099
TOTAL RAINFALL (mm)= 76.801
RUNOFF COEFFICIENT = 0.496

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

CALIB							
NASHYD (0201)	Area (ha)= 3.17		Curve Number (CN)= 77.0				
ID= 1 DT= 5.0 min	Ia (mm)= 5.00		# of Linear Res.(N)= 3.00				
	U.H. Tp(hrs)= 0.16						

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92

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3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.757

PEAK FLOW (cms)= 0.307 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 34.754
TOTAL RAINFALL (mm)= 76.801
RUNOFF COEFFICIENT = 0.453

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

CALIB			
STANDHYD (0202)	Area (ha)= 4.57		
ID= 1 DT= 5.0 min	Total Imp(%)= 40.00	Dir. Conn.(%)= 32.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.83	2.74	
Dep. Storage (mm)=	2.00	5.00	
Average Slope (%)=	5.00	5.00	
Length (m)=	500.00	500.00	

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Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92

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3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 23.23
over (min) 5.00 50.00
Storage Coeff. (min)= 4.42 (ii) 48.17 (ii)
Unit Hyd. Tpeak (min)= 5.00 50.00
Unit Hyd. peak (cms)= 0.23 0.02

TOTALS

PEAK FLOW (cms)= 0.34 0.11 0.372 (iii)
TIME TO PEAK (hrs)= 12.00 12.67 12.00
RUNOFF VOLUME (mm)= 74.80 33.75 46.88
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.97 0.44 0.61

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 73.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0040)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0201):	3.17	0.307	12.00	34.75

+ ID2= 2 (0202): 4.57 0.372 12.00 46.88

ID = 3 (0040): 7.74 0.679 12.00 41.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0032)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.1020	0.2824
	0.0400	0.1208	0.1160	0.3268
	0.0640	0.1775	0.1330	0.3659
	0.0790	0.2218	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0040)	7.740	0.679	12.00	41.91
OUTFLOW: ID= 1 (0032)	7.740	0.063	14.25	41.81

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.33
TIME SHIFT OF PEAK FLOW (min)=135.00
MAXIMUM STORAGE USED (ha.m.)= 0.1761

ADD HYD (0001)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0200):	20.32	1.150	12.25	38.10
+ ID2= 2 (0032):	7.74	0.063	14.25	41.81
ID = 3 (0001):	28.06	1.193	12.33	39.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (0215)	Area (ha)= 15.80 Curve Number (CN)= 83.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.70

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38

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0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92

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4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.862

PEAK FLOW (cms)= 0.700 (i)
TIME TO PEAK (hrs)= 12.583
RUNOFF VOLUME (mm)= 41.634
TOTAL RAINFALL (mm)= 76.801
RUNOFF COEFFICIENT = 0.542

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

CALIB	
NASHYD (0203)	Area (ha)= 1.61 Curve Number (CN)= 76.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.24

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38

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1.417  0.85 | 7.417  1.54 |13.417  4.15 | 19.42  1.38
1.500  0.85 | 7.500  1.54 |13.500  4.15 | 19.50  1.38
1.583  0.85 | 7.583  1.54 |13.583  3.23 | 19.58  1.38
1.667  0.85 | 7.667  1.54 |13.667  3.23 | 19.67  1.38
1.750  0.85 | 7.750  1.54 |13.750  3.23 | 19.75  1.38
1.833  0.85 | 7.833  1.54 |13.833  3.23 | 19.83  1.38
1.917  0.85 | 7.917  1.54 |13.917  3.23 | 19.92  1.38
2.000  0.85 | 8.000  1.54 |14.000  3.23 | 20.00  1.38
2.083  1.00 | 8.083  2.07 |14.083  2.30 | 20.08  0.92
2.167  1.00 | 8.167  2.07 |14.167  2.30 | 20.17  0.92
2.250  1.00 | 8.250  2.07 |14.250  2.30 | 20.25  0.92
2.333  1.00 | 8.333  2.07 |14.333  2.30 | 20.33  0.92
2.417  1.00 | 8.417  2.07 |14.417  2.30 | 20.42  0.92
2.500  1.00 | 8.500  2.07 |14.500  2.30 | 20.50  0.92
2.583  1.00 | 8.583  2.07 |14.583  2.30 | 20.58  0.92
2.667  1.00 | 8.667  2.07 |14.667  2.30 | 20.67  0.92
2.750  1.00 | 8.750  2.07 |14.750  2.30 | 20.75  0.92
2.833  1.00 | 8.833  2.07 |14.833  2.30 | 20.83  0.92
2.917  1.00 | 8.917  2.07 |14.917  2.30 | 20.92  0.92
3.000  1.00 | 9.000  2.07 |15.000  2.30 | 21.00  0.92
3.083  1.00 | 9.083  2.46 |15.083  2.30 | 21.08  0.92
3.167  1.00 | 9.167  2.46 |15.167  2.30 | 21.17  0.92
3.250  1.00 | 9.250  2.46 |15.250  2.30 | 21.25  0.92
3.333  1.00 | 9.333  2.46 |15.333  2.30 | 21.33  0.92
3.417  1.00 | 9.417  2.46 |15.417  2.30 | 21.42  0.92
3.500  1.00 | 9.500  2.46 |15.500  2.30 | 21.50  0.92
3.583  1.00 | 9.583  2.76 |15.583  2.30 | 21.58  0.92
3.667  1.00 | 9.667  2.77 |15.667  2.30 | 21.67  0.92
3.750  1.00 | 9.750  2.77 |15.750  2.30 | 21.75  0.92
3.833  1.00 | 9.833  2.76 |15.833  2.30 | 21.83  0.92
3.917  1.00 | 9.917  2.77 |15.917  2.30 | 21.92  0.92
4.000  1.00 |10.000  2.77 |16.000  2.30 | 22.00  0.92
4.083  1.23 |10.083  3.53 |16.083  1.38 | 22.08  0.92
4.167  1.23 |10.167  3.53 |16.167  1.38 | 22.17  0.92
4.250  1.23 |10.250  3.53 |16.250  1.38 | 22.25  0.92
4.333  1.23 |10.333  3.53 |16.333  1.38 | 22.33  0.92
4.417  1.23 |10.417  3.53 |16.417  1.38 | 22.42  0.92
4.500  1.23 |10.500  3.53 |16.500  1.38 | 22.50  0.92
4.583  1.23 |10.583  4.76 |16.583  1.38 | 22.58  0.92
4.667  1.23 |10.667  4.76 |16.667  1.38 | 22.67  0.92
4.750  1.23 |10.750  4.76 |16.750  1.38 | 22.75  0.92
4.833  1.23 |10.833  4.76 |16.833  1.38 | 22.83  0.92
4.917  1.23 |10.917  4.76 |16.917  1.38 | 22.92  0.92
5.000  1.23 |11.000  4.76 |17.000  1.38 | 23.00  0.92
5.083  1.23 |11.083  7.37 |17.083  1.38 | 23.08  0.92
5.167  1.23 |11.167  7.37 |17.167  1.38 | 23.17  0.92
5.250  1.23 |11.250  7.37 |17.250  1.38 | 23.25  0.92
5.333  1.23 |11.333  7.37 |17.333  1.38 | 23.33  0.92
5.417  1.23 |11.417  7.37 |17.417  1.38 | 23.42  0.92
5.500  1.23 |11.500  7.37 |17.500  1.38 | 23.50  0.92
5.583  1.23 |11.583 31.95 |17.583  1.38 | 23.58  0.92
5.667  1.23 |11.667 31.95 |17.667  1.38 | 23.67  0.92
5.750  1.23 |11.750 31.95 |17.750  1.38 | 23.75  0.92
5.833  1.23 |11.833 84.78 |17.833  1.38 | 23.83  0.92
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5.917  1.23 |11.917 84.79 |17.917  1.38 | 23.92  0.92
6.000  1.23 |12.000 84.79 |18.000  1.38 | 24.00  0.92

Unit Hyd Qpeak  (cms)=  0.256

PEAK FLOW     (cms)=  0.121 (i)
TIME TO PEAK  (hrs)=  12.083
RUNOFF VOLUME  (mm)=  33.882
TOTAL RAINFALL  (mm)=  76.801
RUNOFF COEFFICIENT  =  0.441

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

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| CALIB              |
| STANDHYD (  0204)|  Area  (ha)=  1.93
|ID= 1 DT= 5.0 min |  Total Imp(%)=  60.00  Dir. Conn.(%)=  48.00
--------------------
                    IMPERVIOUS   PERVIOUS (i)
  Surface Area   (ha)=      1.16       0.77
  Dep. Storage   (mm)=      2.00       5.00
  Average Slope   (%)=      1.00       1.00
  Length         (m)=    300.00     300.00
  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  0.85 | 6.083  1.54 |12.083 11.07 | 18.08  1.38
 0.167  0.85 | 6.167  1.54 |12.167 11.06 | 18.17  1.38
 0.250  0.85 | 6.250  1.54 |12.250 11.06 | 18.25  1.38
 0.333  0.85 | 6.333  1.54 |12.333 11.06 | 18.33  1.38
 0.417  0.85 | 6.417  1.54 |12.417 11.06 | 18.42  1.38
 0.500  0.85 | 6.500  1.54 |12.500 11.06 | 18.50  1.38
 0.583  0.85 | 6.583  1.54 |12.583  5.68 | 18.58  1.38
 0.667  0.85 | 6.667  1.54 |12.667  5.68 | 18.67  1.38
 0.750  0.85 | 6.750  1.54 |12.750  5.68 | 18.75  1.38
 0.833  0.84 | 6.833  1.54 |12.833  5.68 | 18.83  1.38
 0.917  0.85 | 6.917  1.54 |12.917  5.68 | 18.92  1.38
 1.000  0.85 | 7.000  1.54 |13.000  5.68 | 19.00  1.38
 1.083  0.84 | 7.083  1.54 |13.083  4.15 | 19.08  1.38
 1.167  0.85 | 7.167  1.54 |13.167  4.15 | 19.17  1.38
 1.250  0.85 | 7.250  1.54 |13.250  4.15 | 19.25  1.38
 1.333  0.85 | 7.333  1.54 |13.333  4.15 | 19.33  1.38
 1.417  0.85 | 7.417  1.54 |13.417  4.15 | 19.42  1.38
 1.500  0.85 | 7.500  1.54 |13.500  4.15 | 19.50  1.38
 1.583  0.85 | 7.583  1.54 |13.583  3.23 | 19.58  1.38
 1.667  0.85 | 7.667  1.54 |13.667  3.23 | 19.67  1.38
 1.750  0.85 | 7.750  1.54 |13.750  3.23 | 19.75  1.38
 1.833  0.85 | 7.833  1.54 |13.833  3.23 | 19.83  1.38
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1.917  0.85 | 7.917  1.54 |13.917  3.23 | 19.92  1.38
2.000  0.85 | 8.000  1.54 |14.000  3.23 | 20.00  1.38
2.083  1.00 | 8.083  2.07 |14.083  2.30 | 20.08  0.92
2.167  1.00 | 8.167  2.07 |14.167  2.30 | 20.17  0.92
2.250  1.00 | 8.250  2.07 |14.250  2.30 | 20.25  0.92
2.333  1.00 | 8.333  2.07 |14.333  2.30 | 20.33  0.92
2.417  1.00 | 8.417  2.07 |14.417  2.30 | 20.42  0.92
2.500  1.00 | 8.500  2.07 |14.500  2.30 | 20.50  0.92
2.583  1.00 | 8.583  2.07 |14.583  2.30 | 20.58  0.92
2.667  1.00 | 8.667  2.07 |14.667  2.30 | 20.67  0.92
2.750  1.00 | 8.750  2.07 |14.750  2.30 | 20.75  0.92
2.833  1.00 | 8.833  2.07 |14.833  2.30 | 20.83  0.92
2.917  1.00 | 8.917  2.07 |14.917  2.30 | 20.92  0.92
3.000  1.00 | 9.000  2.07 |15.000  2.30 | 21.00  0.92
3.083  1.00 | 9.083  2.46 |15.083  2.30 | 21.08  0.92
3.167  1.00 | 9.167  2.46 |15.167  2.30 | 21.17  0.92
3.250  1.00 | 9.250  2.46 |15.250  2.30 | 21.25  0.92
3.333  1.00 | 9.333  2.46 |15.333  2.30 | 21.33  0.92
3.417  1.00 | 9.417  2.46 |15.417  2.30 | 21.42  0.92
3.500  1.00 | 9.500  2.46 |15.500  2.30 | 21.50  0.92
3.583  1.00 | 9.583  2.76 |15.583  2.30 | 21.58  0.92
3.667  1.00 | 9.667  2.77 |15.667  2.30 | 21.67  0.92
3.750  1.00 | 9.750  2.77 |15.750  2.30 | 21.75  0.92
3.833  1.00 | 9.833  2.76 |15.833  2.30 | 21.83  0.92
3.917  1.00 | 9.917  2.77 |15.917  2.30 | 21.92  0.92
4.000  1.00 |10.000  2.77 |16.000  2.30 | 22.00  0.92
4.083  1.23 |10.083  3.53 |16.083  1.38 | 22.08  0.92
4.167  1.23 |10.167  3.53 |16.167  1.38 | 22.17  0.92
4.250  1.23 |10.250  3.53 |16.250  1.38 | 22.25  0.92
4.333  1.23 |10.333  3.53 |16.333  1.38 | 22.33  0.92
4.417  1.23 |10.417  3.53 |16.417  1.38 | 22.42  0.92
4.500  1.23 |10.500  3.53 |16.500  1.38 | 22.50  0.92
4.583  1.23 |10.583  4.76 |16.583  1.38 | 22.58  0.92
4.667  1.23 |10.667  4.76 |16.667  1.38 | 22.67  0.92
4.750  1.23 |10.750  4.76 |16.750  1.38 | 22.75  0.92
4.833  1.23 |10.833  4.76 |16.833  1.38 | 22.83  0.92
4.917  1.23 |10.917  4.76 |16.917  1.38 | 22.92  0.92
5.000  1.23 |11.000  4.76 |17.000  1.38 | 23.00  0.92
5.083  1.23 |11.083  7.37 |17.083  1.38 | 23.08  0.92
5.167  1.23 |11.167  7.37 |17.167  1.38 | 23.17  0.92
5.250  1.23 |11.250  7.37 |17.250  1.38 | 23.25  0.92
5.333  1.23 |11.333  7.37 |17.333  1.38 | 23.33  0.92
5.417  1.23 |11.417  7.37 |17.417  1.38 | 23.42  0.92
5.500  1.23 |11.500  7.37 |17.500  1.38 | 23.50  0.92
5.583  1.23 |11.583 31.95 |17.583  1.38 | 23.58  0.92
5.667  1.23 |11.667 31.95 |17.667  1.38 | 23.67  0.92
5.750  1.23 |11.750 31.95 |17.750  1.38 | 23.75  0.92
5.833  1.23 |11.833 84.78 |17.833  1.38 | 23.83  0.92
5.917  1.23 |11.917 84.79 |17.917  1.38 | 23.92  0.92
6.000  1.23 |12.000 84.79 |18.000  1.38 | 24.00  0.92

Max.Eff.Inten.(mm/hr)=  84.79      26.39
      over (min)       5.00       55.00
Storage Coeff.  (min)=  5.28 (ii)  54.87 (ii)
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Unit Hyd. Tpeak (min)=      5.00      55.00
Unit Hyd. peak  (cms)=      0.21       0.02
                          *TOTALS*
PEAK FLOW     (cms)=      0.21       0.03       0.220 (iii)
TIME TO PEAK   (hrs)=     12.00      12.75      12.00
RUNOFF VOLUME   (mm)=     74.80      35.73      54.47
TOTAL RAINFALL  (mm)=     76.80      76.80      76.80
RUNOFF COEFFICIENT  =      0.97       0.47       0.71


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

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--------------------
| ADD HYD  (  0042)|
|  1 +  2 =  3   |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
     ID1= 1 (  0203):    1.61   0.121   12.08   33.88
   + ID2= 2 (  0204):    1.93   0.220   12.00   54.47
     ==========================================================
     ID = 3 (  0042):    3.54   0.326   12.00   45.11

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (  0042)|
|  3 +  2 =  1   |      AREA   QPEAK   TPEAK    R.V.
--------------------      (ha)   (cms)   (hrs)    (mm)
     ID1= 3 (  0042):    3.54   0.326   12.00   45.11
   + ID2= 2 (  0215):   15.80   0.700   12.58   41.63
     ==========================================================
     ID = 1 (  0042):   19.34   0.800   12.50   42.27

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
--------------------
| RESERVOIR(  0025)|   OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min   |   OUTFLOW   STORAGE  | OUTFLOW   STORAGE
--------------------      (cms)    (ha.m.)  |  (cms)    (ha.m.)
                    0.0000   0.0000  |  0.6300   0.4548
                    0.2600   0.1908  |  0.7100   0.5242
                    0.3900   0.2842  |  0.8100   0.5932
                    0.4900   0.3533  |  1.4000   1.1965


                      AREA    QPEAK    TPEAK     R.V.
                      (ha)    (cms)    (hrs)     (mm)
  INFLOW : ID= 2 (  0042)    19.340    0.800    12.50    42.27
```

OUTFLOW: ID= 1 (0025) 19.340 0.390 13.58 42.26

PEAK FLOW REDUCTION [Qout/Qin](%)= 48.71
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.2841

| CALIB |
| NASHYD (0225)| Area (ha)= 3.98 Curve Number (CN)= 81.0
|ID= 1 DT= 5.0 min | Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.62

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92
3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Unit Hyd Qpeak (cms)= 0.245

PEAK FLOW (cms)= 0.180 (i)
TIME TO PEAK (hrs)= 12.500
RUNOFF VOLUME (mm)= 39.239
TOTAL RAINFALL (mm)= 76.801
RUNOFF COEFFICIENT = 0.511

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

| CALIB |
| STANDHYD (0220)| Area (ha)= 5.63
|ID= 1 DT= 5.0 min | Total Imp(%)= 42.00 Dir. Conn.(%)= 34.00

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file:///V|...%20Updated%20EA%20Analysis/VO/Detailed%20Output/Proposed%20VO%20Detailed%20Output%20-%20All%20Storms.txt[3/11/2024 11:44:24 AM]

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.36	3.27
Dep. Storage (mm)=	2.00	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	250.00	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.85	6.083	1.54	12.083	11.07	18.08	1.38
0.167	0.85	6.167	1.54	12.167	11.06	18.17	1.38
0.250	0.85	6.250	1.54	12.250	11.06	18.25	1.38
0.333	0.85	6.333	1.54	12.333	11.06	18.33	1.38
0.417	0.85	6.417	1.54	12.417	11.06	18.42	1.38
0.500	0.85	6.500	1.54	12.500	11.06	18.50	1.38
0.583	0.85	6.583	1.54	12.583	5.68	18.58	1.38
0.667	0.85	6.667	1.54	12.667	5.68	18.67	1.38
0.750	0.85	6.750	1.54	12.750	5.68	18.75	1.38
0.833	0.84	6.833	1.54	12.833	5.68	18.83	1.38
0.917	0.85	6.917	1.54	12.917	5.68	18.92	1.38
1.000	0.85	7.000	1.54	13.000	5.68	19.00	1.38
1.083	0.84	7.083	1.54	13.083	4.15	19.08	1.38
1.167	0.85	7.167	1.54	13.167	4.15	19.17	1.38
1.250	0.85	7.250	1.54	13.250	4.15	19.25	1.38
1.333	0.85	7.333	1.54	13.333	4.15	19.33	1.38
1.417	0.85	7.417	1.54	13.417	4.15	19.42	1.38
1.500	0.85	7.500	1.54	13.500	4.15	19.50	1.38
1.583	0.85	7.583	1.54	13.583	3.23	19.58	1.38
1.667	0.85	7.667	1.54	13.667	3.23	19.67	1.38
1.750	0.85	7.750	1.54	13.750	3.23	19.75	1.38
1.833	0.85	7.833	1.54	13.833	3.23	19.83	1.38
1.917	0.85	7.917	1.54	13.917	3.23	19.92	1.38
2.000	0.85	8.000	1.54	14.000	3.23	20.00	1.38
2.083	1.00	8.083	2.07	14.083	2.30	20.08	0.92
2.167	1.00	8.167	2.07	14.167	2.30	20.17	0.92
2.250	1.00	8.250	2.07	14.250	2.30	20.25	0.92
2.333	1.00	8.333	2.07	14.333	2.30	20.33	0.92
2.417	1.00	8.417	2.07	14.417	2.30	20.42	0.92
2.500	1.00	8.500	2.07	14.500	2.30	20.50	0.92
2.583	1.00	8.583	2.07	14.583	2.30	20.58	0.92
2.667	1.00	8.667	2.07	14.667	2.30	20.67	0.92
2.750	1.00	8.750	2.07	14.750	2.30	20.75	0.92
2.833	1.00	8.833	2.07	14.833	2.30	20.83	0.92
2.917	1.00	8.917	2.07	14.917	2.30	20.92	0.92
3.000	1.00	9.000	2.07	15.000	2.30	21.00	0.92
3.083	1.00	9.083	2.46	15.083	2.30	21.08	0.92
3.167	1.00	9.167	2.46	15.167	2.30	21.17	0.92
3.250	1.00	9.250	2.46	15.250	2.30	21.25	0.92
3.333	1.00	9.333	2.46	15.333	2.30	21.33	0.92
3.417	1.00	9.417	2.46	15.417	2.30	21.42	0.92

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3.500	1.00	9.500	2.46	15.500	2.30	21.50	0.92
3.583	1.00	9.583	2.76	15.583	2.30	21.58	0.92
3.667	1.00	9.667	2.77	15.667	2.30	21.67	0.92
3.750	1.00	9.750	2.77	15.750	2.30	21.75	0.92
3.833	1.00	9.833	2.76	15.833	2.30	21.83	0.92
3.917	1.00	9.917	2.77	15.917	2.30	21.92	0.92
4.000	1.00	10.000	2.77	16.000	2.30	22.00	0.92
4.083	1.23	10.083	3.53	16.083	1.38	22.08	0.92
4.167	1.23	10.167	3.53	16.167	1.38	22.17	0.92
4.250	1.23	10.250	3.53	16.250	1.38	22.25	0.92
4.333	1.23	10.333	3.53	16.333	1.38	22.33	0.92
4.417	1.23	10.417	3.53	16.417	1.38	22.42	0.92
4.500	1.23	10.500	3.53	16.500	1.38	22.50	0.92
4.583	1.23	10.583	4.76	16.583	1.38	22.58	0.92
4.667	1.23	10.667	4.76	16.667	1.38	22.67	0.92
4.750	1.23	10.750	4.76	16.750	1.38	22.75	0.92
4.833	1.23	10.833	4.76	16.833	1.38	22.83	0.92
4.917	1.23	10.917	4.76	16.917	1.38	22.92	0.92
5.000	1.23	11.000	4.76	17.000	1.38	23.00	0.92
5.083	1.23	11.083	7.37	17.083	1.38	23.08	0.92
5.167	1.23	11.167	7.37	17.167	1.38	23.17	0.92
5.250	1.23	11.250	7.37	17.250	1.38	23.25	0.92
5.333	1.23	11.333	7.37	17.333	1.38	23.33	0.92
5.417	1.23	11.417	7.37	17.417	1.38	23.42	0.92
5.500	1.23	11.500	7.37	17.500	1.38	23.50	0.92
5.583	1.23	11.583	31.95	17.583	1.38	23.58	0.92
5.667	1.23	11.667	31.95	17.667	1.38	23.67	0.92
5.750	1.23	11.750	31.95	17.750	1.38	23.75	0.92
5.833	1.23	11.833	84.78	17.833	1.38	23.83	0.92
5.917	1.23	11.917	84.79	17.917	1.38	23.92	0.92
6.000	1.23	12.000	84.79	18.000	1.38	24.00	0.92

Max.Eff.Inten.(mm/hr)= 84.79 63.19
over (min) 5.00 15.00
Storage Coeff. (min)= 3.84 (ii) 12.32 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08

TOTALS

PEAK FLOW (cms)= 0.45 0.37 0.771 (iii)
TIME TO PEAK (hrs)= 12.00 12.08 12.00
RUNOFF VOLUME (mm)= 74.80 40.89 52.42
TOTAL RAINFALL (mm)= 76.80 76.80 76.80
RUNOFF COEFFICIENT = 0.97 0.53 0.68

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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```
| RESERVOIR(  0050)|    OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |    OUTFLOW    STORAGE   | OUTFLOW    STORAGE
-------------------        (cms)     (ha.m.)  |  (cms)     (ha.m.)
                        0.0000    0.0000    |  0.5800     0.1023
                        0.2500    0.0493    |  0.6600     0.1189
                        0.3700    0.0684    |  0.7600     0.1366
                        0.4600    0.0822    |  0.7800     0.1400

                            AREA     QPEAK     TPEAK      R.V.
                            (ha)     (cms)     (hrs)      (mm)
  INFLOW : ID= 2 (  0220)     5.630     0.771     12.00      52.42
  OUTFLOW: ID= 1 (  0050)     5.630     0.370     12.25      52.41

              PEAK   FLOW   REDUCTION [Qout/Qin](%)= 47.94
              TIME SHIFT OF PEAK FLOW        (min)= 15.00
              MAXIMUM  STORAGE   USED      (ha.m.)=  0.0690

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


-------------------
| ADD HYD  (  0002)|
|  1 +  2 =  3   |        AREA    QPEAK    TPEAK    R.V.
-------------------        (ha)    (cms)    (hrs)    (mm)
       ID1= 1 (  0225):    3.98   0.180    12.50    39.24
     + ID2= 2 (  0025):   19.34   0.390    13.58    42.26
       ==========================================================
       ID = 3 (  0002):   23.32   0.485    13.08    41.74

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


-------------------
| ADD HYD  (  0002)|
|  3 +  2 =  1   |        AREA    QPEAK    TPEAK    R.V.
-------------------        (ha)    (cms)    (hrs)    (mm)
       ID1= 3 (  0002):   23.32   0.485    13.08    41.74
     + ID2= 2 (  0050):    5.63   0.370    12.25    52.41
       ==========================================================
       ID = 1 (  0002):   28.95   0.725    12.50    43.82

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

APPENDIX C:
Stormwater Management Facility Calculations

Subject: **Water Quality Control Calculations**
Project: **Norval West**
Project No.: **165010598**
Client: **Halton Region**

Facility	Drainage Area (ha)[2]	Total % Imp.	Level	Facility Type	Water Quality Unit Volume Requirements [1]			Water Quality Volume Requirements		
					Total Unit Volume (m^3/ha)	Permanent Pool (m^3/ha)	Extended Detention (m^3/ha)	Permanent Pool (m^3)	Extended Detention (m^3)[3]	Total MOE Volume
Reservoir 1	19.3	11%	Enhanced	Wet Pond	80	40	40	772	772	1,544
Reservoir 2	5.6	42%	Enhanced	Wet Pond	158	118	40	658	224	882
Reservoir 3	7.7	30%	Enhanced	Wet Pond	128	88	40	674	308	982

[1] Water quality unit volume requirements based on Table 3.2, Stormwater Management Planning & Design Manual (MOE 2003), Protection Level "Enhanced" (formerly Level 1)
[2] Drainage Area for Quality control represents total drainage area to SWM Facility and includes the area of the SWM block itself
[3] Extended detention volume to draw down over 24 hours

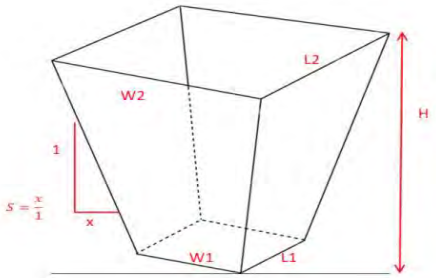
Subject: **SWM Footprint - Reservoir 1**
Project: **Norval West**
Project No.: **165010598**
Client: **Halton Region**

Volume Truncated Rectangular Pyramid

$$V = \frac{1}{3}H(A2 + \sqrt{A2 \times A1} + A1)$$

Where:

V =	Volume	(m^3)
H =	Height (active storage)	(m)
A1 = W1 x L1 =	Area at bottom	(m^2)
A2 = W2 x L2 =	Area at top	(m^2)
W =	Width	(m)
L =	Length	(m)
L1 =	Length bottom (estimated)	(m)
W1 =	Width bottom (estimated)	(m)
L2 = L1 x S =	Length top	(m)
W2 - W1 x S =	Width top	(m)
S =	Slope	m:m



Slope (s) =	5	:1
Depth of pond (H) =	3	m
Bottom Width (W1) =	34.58	m
Top Width (W2) =	64.58	m
L1:W1 =	2.00	:1
Bottom Length (L1) =	69.16	m
Top Length (L2) =	99.16	m
Required Volume =	12710	m^3
Provided Volume =	12710	m^3
Bottom Area (A1) =	2391.87	m^2
Area at top of Active (A2) =	6404.28	m^2
Freeboard =	0.30	m
Width at Freeboard =	67.58	m
Length at Freeboard =	102.16	m
Area at Freeboard =	6904.52	m^2
Add 30% for grading =	8975.88	m^2
=	0.90	ha

Therefore, pond footprint allowing for grading is: 0.90 ha

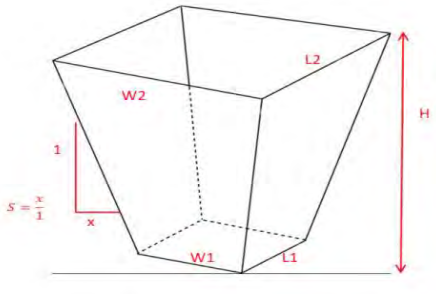
Subject: **SWM Footprint - Reservoir 2**
Project: **Norval West**
Project No.: **165010598**
Client: **Halton Region**

Volume Truncated Rectangular Pyramid

$$V = \frac{1}{3}H(A2 + \sqrt{A2 \times A1} + A1)$$

Where:

V =	Volume	(m^3)
H =	Height (active storage)	(m)
A1 = W1 x L1 =	Area at bottom	(m^2)
A2 = W2 x L2 =	Area at top	(m^2)
W =	Width	(m)
L =	Length	(m)
L1 =	Length bottom (estimated)	(m)
W1 =	Width bottom (estimated)	(m)
L2 = L1 x S =	Length top	(m)
W2 - W1 x S =	Width top	(m)
S =	Slope	m:m



Slope (s) =	5	:1
Depth of pond (H) =	3	m
Bottom Width (W1) =	6.58	m
Top Width (W2) =	36.58	m
L1:W1 =	2.00	:1
Bottom Length (L1) =	13.16	m
Top Length (L2) =	43.16	m
Required Volume =	2035	m^3
Provided Volume =	2035	m^3
Bottom Area (A1) =	86.58	m^2
Area at top of Active (A2) =	1578.72	m^2
Freeboard =	0.30	m
Width at Freeboard =	39.58	m
Length at Freeboard =	46.16	m
Area at Freeboard =	1826.94	m^2
Add 30% for grading =	2375.02	m^2
=	0.24	ha

Therefore, pond footprint allowing for grading is: 0.24 ha

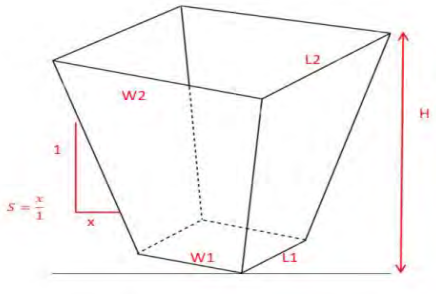
Subject: **SWM Footprint - Reservoir 3**
Project: **Norval West**
Project No.: **165010598**
Client: **Halton Region**

Volume Truncated Rectangular Pyramid

$$V = \frac{1}{3}H(A2 + \sqrt{A2 \times A1} + A1)$$

Where:

V =	Volume	(m^3)
H =	Height (active storage)	(m)
A1 = W1 x L1 =	Area at bottom	(m^2)
A2 = W2 x L2 =	Area at top	(m^2)
W =	Width	(m)
L =	Length	(m)
L1 =	Length bottom (estimated)	(m)
W1 =	Width bottom (estimated)	(m)
L2 = L1 x S =	Length top	(m)
W2 - W1 x S =	Width top	(m)
S =	Slope	m:m



Slope (s) =	5	:1
Depth of pond (H) =	3	m
Bottom Width (W1) =	15.26	m
Top Width (W2) =	45.26	m
L1:W1 =	2.00	:1
Bottom Length (L1) =	30.51	m
Top Length (L2) =	60.51	m
Required Volume =	4333	m^3
Provided Volume =	4333	m^3
Bottom Area (A1) =	465.48	m^2
Area at top of Active (A2) =	2738.50	m^2
Freeboard =	0.30	m
Width at Freeboard =	48.26	m
Length at Freeboard =	63.51	m
Area at Freeboard =	3064.80	m^2
Add 30% for grading =	3984.24	m^2
=	0.40	ha

Therefore, pond footprint allowing for freeboard and grading is: 0.40 ha

APPENDIX D:
Hydraulic Model Files

Worksheet for Silver Creek (North)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Roughness Coefficient	0.055	
Channel Slope	0.050	m/m
Left Side Slope	2.000	H:V
Right Side Slope	2.000	H:V
Discharge	524.00	L/s

Results		
Normal Depth	437.3	mm
Flow Area	0.4	m²
Wetted Perimeter	2.0	m
Hydraulic Radius	195.6	mm
Top Width	1.75	m
Critical Depth	425.8	mm
Critical Slope	0.058	m/m
Velocity	1.37	m/s
Velocity Head	0.10	m
Specific Energy	0.53	m
Froude Number	0.935	
Flow Type	Subcritical	

GVF Input Data		
Downstream Depth	0.0	mm
Length	0.0	m
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	mm
Profile Description	N/A	
Profile Headloss	0.00	m
Downstream Velocity	Infinity	m/s
Upstream Velocity	Infinity	m/s
Normal Depth	437.3	mm
Critical Depth	425.8	mm
Channel Slope	0.050	m/m
Critical Slope	0.058	m/m

Worksheet for Levi's Creek (South)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Roughness Coefficient	0.035	
Channel Slope	0.010	m/m
Left Side Slope	2.000	H:V
Right Side Slope	2.000	H:V
Discharge	229.00	L/s

Results		
Normal Depth	366.0	mm
Flow Area	0.3	m²
Wetted Perimeter	1.6	m
Hydraulic Radius	163.7	mm
Top Width	1.46	m
Critical Depth	305.8	mm
Critical Slope	0.026	m/m
Velocity	0.85	m/s
Velocity Head	0.04	m
Specific Energy	0.40	m
Froude Number	0.638	
Flow Type	Subcritical	

GVF Input Data		
Downstream Depth	0.0	mm
Length	0.0	m
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	mm
Profile Description	N/A	
Profile Headloss	0.00	m
Downstream Velocity	Infinity	m/s
Upstream Velocity	Infinity	m/s
Normal Depth	366.0	mm
Critical Depth	305.8	mm
Channel Slope	0.010	m/m
Critical Slope	0.026	m/m